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Impact Evaluation of California Statewide Critical-Peak Pricing Rate and Demand Bidding Program for Commercial and Industrial Customers – Program-year 2007

Part 1. Final Report

CALMAC Study ID SEC0258.01

Steven D. Braithwait
Dan Hansen
Michael Welsh

August 15, 2008

Christensen Associates Energy Consulting, LLC
4610 University Avenue, Suite 700
Madison, WI 53705-2164

Voice 608.231.2266 Fax 608.231.2108

Acknowledgements

We would to thank several members of the Demand Response Monitoring and Evaluation Committee for helpful comments and suggestions on previous drafts. They include Ed Lovelace of SCE, Leslie Willoughby and Kathryn Smith of SDG&E, and Bruce Perlstein and Sara Margaret Gilbert of PG&E.

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Abstract

This report documents the results of an ex-post *load impact evaluation* for program-year 2007 of two of the California statewide day-ahead demand response programs for commercial and industrial customers. These programs were the critical-peak pricing (CPP) rate and the demand-bidding program (DBP) operated by the three investor-owned utilities (IOUs), San Diego Gas and Electric (SDG&E), Southern California Edison (SCE), and Pacific Gas and Electric (PG&E).

Estimates of overall program load impacts were for the most part developed using regression analysis applied to data aggregated across all participating customer accounts, for each utility. Estimating load impacts for 2007 was complicated by the fact that several events were called on days just prior to and following the two summer holidays, Independence Day (July 4) and Labor Day (September 3). These are days on which many customers' usage levels tend to diverge considerably from "normal" summer weekdays, which complicates estimation of their reference load on those event days. We modified estimation methods to attempt to control for "near-holiday" load effects. For CPP, estimated load reductions averaged about 5.5 to 11 MW at SDG&E, 5.7 to 9.1 MW at SCE, and 8.5 to 15 MW at PG&E. For DBP, estimated load reductions averaged about 0.4 MW at SDG&E, 10.7 to 18.4 MW at SCE, and 20.3 to 58.6 MW at PG&E. As in 2006, only a small minority (*e.g.*, less than 20 percent) of DBP participants submitted bids on a consistent basis.

Executive Summary

This report documents the results of an ex-post *load impact evaluation* for program-year 2007 of two of the California statewide day-ahead demand response programs for commercial and industrial customers. These programs were the critical-peak pricing (CPP) rate and the demand-bidding program (DBP) operated by the three investor-owned utilities (IOUs), San Diego Gas and Electric (SDG&E), Southern California Edison (SCE), and Pacific Gas and Electric (PG&E).

Customers enrolled in the CPP program of an IOU received a discount from the otherwise applicable rates they pay for energy on non-critical days, in return for paying a "critical peak" price (*e.g.*, $0.30 to $1.80/kWh) for energy used in certain hours on a limited number of critical peak pricing "event" days. Customers enrolled in a CPP program were notified one day before a CPP event was called.

Each of the IOUs split the critical peak pricing period into two parts (seven hours—11 a.m. to 6 p.m.—for SDG&E, and six hours—12 p.m. to 6 p.m.—for SCE and PG&E). Enrolled customers are charged a "moderate" price for energy used during the first three (or four) hours of that period, and a "high" price for energy used in the last three hours of that period. SCE also offered a second CPP option that charged the same price for all event hours.

Customers enrolled in an IOU's DBP were notified one day before a DBP event was called, and given the opportunity to submit bids for load reductions relative to a baseline load calculated by the utility, based on usage patterns on specified previous days. If a customer that submitted a bid successfully curtailed usage by at least 50 percent of its submitted bid in each hour of a DBP event, that customer received an incentive payment. Customers that submitted bids were not penalized if they curtailed usage by less than the amount needed to qualify for a payment. DBP events may extend for up to eight hours, from 12 noon to 8 p.m., though utilities have the option of designating shorter events.

ES.1 Evaluation methodology

We developed direct estimates of aggregate program-level impacts for CPP and DBP for SDG&E, SCE, and PG&E from the coefficients of a set of aggregate regression equations. These equations were estimated over the summer months for 2007, primarily by using data aggregated across all customer accounts enrolled in each program. In some cases we also estimated aggregate equations for a limited number of industry types, primarily for diagnosing apparent problems with the aggregate models for some event days. For example, typical load patterns for schools can vary substantially depending on whether schools are in session, but the dates for which most schools end and begin sessions are not typically known.

The aggregate regression equations were based on models of hourly loads as functions of a list of variables designed to control for factors such as:

- Seasonal and hourly time patterns (*e.g.*, month, day-of-week, and hour, plus various hour/day-type interactions)
- Weather (*e.g.*, daily CDD)

- Event indicators—Event indicators were interacted with hourly indicator variables to allow estimation of hourly load impacts for each event.

The resulting equations provide the capability of simulating hourly load profiles for various day-types and weather conditions, as well as measuring hourly load changes on event days. Finally, uncertainty-adjusted load impacts were estimated to illustrate the degree of statistical confidence that exists around the estimated load impacts.

ES.2 Program enrollment

Program enrollment at each utility was characterized by the number of customer accounts and amount of load, in terms of maximum demand,[1] both in total and by industry group. Table ES.1 summarizes the industry groups and the corresponding North American Industry Classification System (NAICS) codes.

Table ES-1: Industry group definitions

	NAICS Codes
Agriculture, Mining, Construction	11, 21, 23
Manufacturing	31, 32, 33
Wholesale, transportation, utilities	22, 42, 48-49
Retail	44, 45
Offices, hotel, services	51-56, 62, 72
Schools	61
Institutions, government	71, 81, 92

Compared to 2006, SDG&E substantially expanded the number of participants and amount of load in both CPP and DBP. CPP essentially doubled, from 120 enrollees and 90 MW of maximum demand to 233 enrollees representing 200 MW of maximum demand, while DBP grew even more, from 51 enrollees and 43 MW to 181 enrollees representing 78 MW. Two industry groups – Wholesale, transportation and utilities, and Offices, hotels and services – dominated the CPP enrollment, while Manufacturing, Offices, etc. and Schools made up most of the DBP enrollment. Overall participation rates relative to the target population were 9 percent of accounts and 7 percent of load for CPP, and 7 percent of accounts and 5 percent of load for DBP.

SCE expanded the number of DBP participant accounts, from 703 in 2005, and 1,079 in 2006, to 1,222 in 2007, accounting for 1,500 MW. SCE also tripled enrollment in CPP, from 15 to 44, relative to 2006. Manufacturers made up the bulk of CPP enrollment, while DBP enrollees were spread across several industry groups. Overall participation rates relative to the target population were negligible for CPP, but were nearly 9 percent of accounts and 19 percent of load for DBP.

[1] The IOUs have been working toward a common definition of "load" based on available billing determinant data. For this evaluation, SDG&E provided "Average maximum demand," SCE provided "12 Month maximum demand," and PG&E provided "Maximum (annual) demand" and "Maximum summer demand." The single maximum demand value for the year will necessarily be no less than any average of monthly maximum demands. However, the differences are likely to be minor.

For PG&E, enrollment in CPP nearly doubled, from 337 in 2006 to 656 in 2007.[2] Enrollees in DBP alone increased from 726 to 893, while those enrolled in both CPP and DBP rose from 142 to 170. Total load in CPP and DBP-only amounted to 500 MW and 1,100 MW respectively. Manufacturers, Offices, etc. and Schools made up the bulk of CPP enrollment, while DBP enrollees were spread across several industry groups. Overall participation rates relative to the target population were nearly 8 percent of accounts and load for CPP, and were 10 percent of accounts and 17 percent of load for DBP-only accounts.

ES.3 CPP load impacts

For SDG&E, hourly CPP load impacts averaged across events ranged from 5.5 MW to nearly 11 MW, representing load reductions of about 10 percent during the Moderate-price period and nearly 14 percent during the High-price period relative to the estimated baseline load of 70 to 75 MW. Hourly estimated load reductions were typically largest in the first hour of the "Moderate-price" period. However, *average* hourly load reductions were somewhat larger in the "High-price" than in the "Moderate-price" period.

For SCE, hourly average event-day CPP load reductions ranged from about 6 MW to 9 MW, with the largest reduction occurring in the first event hour. These load impacts represent approximately 40 percent reductions in each event hour relative to estimated baseline loads averaging 15 to 20 MW. Note that most of the SCE CPP customers faced a substantially higher CPP price in all event hours than did customers at the other two utilities.

For PG&E, hourly average event-day CPP load reductions ranged from about 8.5 to 15 MW, with the largest reductions occurring in the last three event hours. The load impacts represented percentage reductions ranging from about 2.5 to 5 percent of the estimated reference load of 300 to 340 MW.

ES 3.1 Individual CPP customer price response

In addition to the aggregate regressions used to estimate overall CPP program impacts, individual regressions were estimated for each CPP participant. These were used to investigate the range of responsiveness across CPP customers – that is, what share of the participants is providing the CPP load impacts? The findings differed somewhat by utility, in large part due to the types of enrollees that predominate at each of the utilities.

For SDG&E, nearly two-thirds of the CPP customers exhibited negative coefficients on the event variables (indicating load *reductions*), and approximately half of those were significant. Very large negative load response coefficients were estimated for several customers, typically those with an NAICS code indicating a water utility, some of which have the technical ability to reduce load to nearly zero during event periods by storing water prior to events and shutting off pumps during events.

[2] Enrollment in CPP includes both enrollees in CPP alone, and those enrolled in both CPP and DBP.

For SCE, nearly two-thirds of the coefficients were negative and significant, while only one coefficient was positive and significant. Approximately half of the coefficients for PG&E's CPP customers, were negative, but only about 15 to 20 percent were statistically significant at the 95 percent level.

ES.4 DBP load impacts

ES 4.1 DBP bidding patterns

For SDG&E, the same 50 customer accounts (out of 181 enrollees) submitted bids for each DBP event. Bidders were concentrated in the three industry groups that contained the bulk of the DBP enrollees (Manufacturing, Offices, etc., and Schools).

For SCE, Bidders were divided into three approximately equal groups of customers by the frequency of their bidding behavior. As indicated in Table ES-1, approximately 20 percent of SCE's DBP enrollees, representing 42 percent of the total DBP load, bid in at least one event.

Table ES-2a: DBP Bidding Activity by Industry group – *SCE*

	DBP Bidders (at least 1 bid)			Active Bidders (18 - 22 bids)			Frequent Bidders (9 - 17 bids)			Occasional Bidders (1 - 8 bids)		
	Count	Sum of max demands (kW)	% of bidding load	Count	Sum of max demands	% of bidding load	Count	Sum of max demands (kW)	% of bidding load	Count	Sum of max demands (kW)	% of bidding load
Ag, Min, Const	7	11,704	2%	6	8,306	1%	1	3,398	1%	0	-	0%
Manuf	74	382,724	59%	17	107,937	17%	26	127,632	20%	31	147,155	23%
Wholes, transp, util	54	62,443	10%	11	4,893	1%	13	17,616	3%	30	39,934	6%
Retail	19	17,250	3%	7	5,743	1%	8	6,770	1%	4	4,737	1%
Off, hotel, serv	35	44,807	7%	16	26,187	4%	11	9,911	2%	8	8,709	1%
Schools	47	42,937	7%	23	15,119	2%	15	20,260	3%	9	7,558	1%
Inst., govt	17	81,607	13%	8	55,458	9%	6	20,253	3%	3	5,896	1%
TOTAL	253	643,472		88	223,643		80	205,840		85	213,989	
% of Total Enrolled in DBP	21%	42%		7%	14%		7%	13%		7%	14%	

PG&E called only a single test event, in which only 8 percent of the DBP enrollees, representing 13 percent of the total DBP load submitted a bid, as illustrated in Table ES-2.

Table ES-2b: Characteristics of DBP Bidders – *PG&E*

	Definitions	All DBP Enrollees			Bidders in Test Event		
	NAICS	Count	Sum of max demands (MW)	% of load	Count	Sum of max demands (MW)	% of total DBP load
Ag, Min, Const	11,21,23	108	108	8%	1	1	0%
Manuf	31,32,33	288	551	42%	28	109	8%
Wholes, transp, util	22,42,48-49	164	231	18%	19	42	3%
Retail	44,45	15	14	1%	2	1	0%
Off, hotel, serv	51-56,62,72	342	264	20%	18	12	1%
Schools	61	54	51	4%	9	6	0%
Inst., govt	71,81,92	69	84	6%	5	4	0%
TOTAL		1,040	1,304	100%	82	176	13%
Percent of total					8%	13%	

ES 4.2 DBP load impacts

SDG&E DBP events typically lasted four hours, from 2 to 6 p.m. Total load impacts for the average DBP event day were about 0.4 MW, or about 2.5 to 3.5 percent of the total DBP bidders load. However, the range of uncertainty around the average load impact was fairly wide, and the largest load reduction was obtained on an unusual late-October event on which several other emergency events were also called due to brush fires.

Hourly DBP load impacts for SCE averaged about 21 to 30 MW across all events. However, the range of load impacts across events was quite large, due in part to the fact that several DBP events occurred just before or after the Independence Day and Labor Day holidays. An average across "good" events other than those near holidays produced load impact values of 10.7 to 18.4 MW, which we would judge to be more representative of a typical event. As confirmation, we also estimated a separate load impact model for the aggregated load of 21 of the largest and most consistent bidders, which produced average hourly load impacts over the "good" events ranging from 10 to 15 MW.

In 2007, PG&E conducted only a test DBP event, on August 30. As noted above, only 8 percent of the DBP enrollees, representing 13 percent of the total DBP load submitted bids for load reductions. However, we estimated hourly load reductions ranging from 25 MW in the last hour of the four-hour event to nearly 60 MW in the first two hours.

ES 5 Summary

Table ES-3 summarizes the range of hourly load impacts that were estimated for PY 2007 for the three utilities. We show a range of impacts in part because the hourly values are somewhat non-comparable. That is, in some cases the largest values tended to occur in the first hour of an event, while in others they tended to occur late in the event. In addition, the events may cover different hours.

Table ES-3: Summary of CPP and DBP Load Impacts (MW) – 2007

Rate/Program	SDG&E	SCE	PG&E	Total
CPP	5.5 to 11	5.7 to 9.1	8.5 to 15.0	24.2 to 32.1
DBP	0.4	10.7 to 18.4	20.3 to 58.6	35.8 to 77
Total	5.9 to 11.4	19 to 25	36 to 72	51 to 107

1. Introduction and purpose of the study

This report documents the results of an ex-post *load impact evaluation* for program-year 2007 of two of the California statewide day-ahead demand response programs for commercial and industrial customers. These programs were the critical-peak pricing (CPP) rate and the demand-bidding program (DBP) operated by the three investor-owned utilities (IOUs), San Diego Gas and Electric (SDG&E), Southern California Edison (SCE), and Pacific Gas and Electric (PG&E).[3]

The primary purpose of the study was to estimate the load impacts achieved on each event day, and to summarize the nature of the customers enrolled and how enrollment has evolved over recent years.

Customers enrolled in the CPP program of an IOU received a discount from the otherwise applicable rates they pay for energy on non-critical days, in return for paying a "critical peak" price (*e.g.*, $0.30 to $1.80/kWh) for energy used in certain hours on a limited number of critical peak pricing "event" days. Customers enrolled in a CPP program were notified one day before a CPP event was called.

Each of the IOUs split the critical peak pricing period into two parts (seven hours—11 a.m. to 6 p.m.—for SDG&E, and six hours—12 p.m. to 6 p.m.—for SCE and PG&E). Enrolled customers are charged a "moderate" price for energy used during the first three (or four) hours of that period, and a "high" price for energy used in the last three hours of that period. SCE also offered a second CPP option that charged the same price for all event hours.

Customers enrolled in an IOU's DBP were notified one day before a DBP event was called, and given the opportunity to submit bids for load reductions relative to a baseline load calculated by the utility, based on usage patterns on specified previous days. If a customer that submitted a bid successfully curtailed usage by at least 50 percent of its submitted bid in each hour of a DBP event, that customer received an incentive payment. Customers that submitted bids were not penalized if they curtailed usage by less than the amount needed to qualify for a payment. DBP events may extend for up to eight hours, from 12 noon to 8 p.m., though utilities have the option of designating shorter events.

After this introductory section, Section 2 describes the CPP rate and DBP programs, including the characteristics of the enrolled customer accounts. Section 3 discusses evaluation methodology. Section 4 presents CPP load impacts. Section 5 describes DBP bidding patterns and load impacts. Section 6 discusses validity assessment, and Section 7 offers recommendations.

2. Description of resources covered in the study

This section provides additional detail on the CPP rates and DBP programs, including the nature of the CPP prices and the characteristics of the participants in the programs.

[3] Previous evaluations of these programs are listed in the References section.

2.1 CPP rates

Table 2.1 summarizes the CPP rates at the three utilities. With one exception, they have a similar structure, with a Moderate price for the first three hours (four hours for SDG&E) and a High price for the last three hours of the summer peak period. SDG&E sets CPP prices that differ slightly by voltage level. The values shown in the table are commodities rates for Secondary service. PG&E's rate is tied to customers' otherwise applicable tariff (*e.g.*, by providing credits in non-CPP on-peak and part-peak hours, and charges on CPP days), and thus takes on different values for different rate classes and subclasses. The table shows the rates for PG&E's medium (500–1,000 kW) commercial customers at the secondary voltage level (E-19S). SCE offers two CPP rates, one similar to the other utilities, and one aimed at large (> 500 kW) customers that involves a single high CPP price for the entire six-hour period on event days in return for a Generation Capacity Charge Discount (*i.e.*, a lower summer on-peak demand charge).[4]

Table 2.1 CPP Rates and Time Periods

		Energy price ($/kWh)			
CPP Type	Hours-ending*	SDG&E	SCE TOU-8 CPP-GCCD	SCE TOU-8 CPP	PG&E (E-19S)**
Moderate	13 - 15	$ 0.52	$ 1.77	$ 0.30	$ 0.41
High	16 - 18	$ 1.16	$ 1.77	$ 0.62	$ 0.80

* E.g., hour ending 13 is 12 p.m. to 1 p.m.
Note: SDG&E's Moderate period begins at 11 a.m.
** Includes allocation of summer peak demand charge

2.2 Participant characteristics

The following sets of tables summarize the characteristics of the target populations and participating customer accounts, including industry type and size (using maximum demand), for DBP and CPP, for each of the utilities. Note that the maximum demand values are derived from utility billing determinant data, and represent maximum "non-coincident" demand.[5] Thus, while they serve as useful indicators of the amount of enrolled load in each industry group, they should not necessarily be interpreted as the amount of load that is coincident with the system peak demand and that is available to be curtailed during an event. The load impact tables in the report present values of an hourly estimated baseline, or reference load for each event.

Tables 2.2a through 2.2e show participation information for SDG&E. Table 2.2a shows the target population. Tables 2.2b and 2.2c show the breakdown of CPP enrollees by

[4] SCE's rates were calculated under the assumption of 30 percent of energy provided by lower-cost DWR contracts.
[5] The utilities were not completely consistent in the billing determinants provided. In some cases the values were labeled "annual maximum demand" and in others "average maximum demand".

number and load, and their share in the target population, respectively. Tables 2.2d and 2.2e show similar results for DBP participants. Compared to 2006, SDG&E substantially expanded the number of participants and amount of load in both CPP and DBP. CPP essentially doubled, from 120 enrollees and 90 MW of maximum demand to 233 enrollees representing 200 MW, while DBP grew even more, from 51 enrollees and 43 MW to 181 enrollees representing 78 MW.

Two industry groups – Wholesale, transportation and utilities, and Offices, hotels and services – dominated the CPP enrollment, while Manufacturing, Offices, etc. and Schools made up most of the DBP enrollment. Overall participation rates relative to the target population were 9 percent of accounts and 7 percent of load for CPP, and 7 percent of accounts and 5 percent of load for DBP.

Table 2.2a: Target Population by Industry group and Size – *SDG&E*

	Definitions	All Accounts			Accounts < 1000 kW			Accounts > 1000 kW		
	NAICS	Count	Sum of max demands (MW)	% of load	Count	Sum of max demands (MW)	% of total load	Count	Sum of max demands (MW)	% of total load
Ag, Min, Const	11,21,23	43	25.4	1%	38	14.1	1%	5	11.3	2%
Manuf	31,32,33	421	268.1	15%	373	172.2	15%	48	95.9	14%
Wholes, transp, util	22,42,48-49	245	169.4	9%	224	127.8	11%	21	41.6	6%
Retail	44,45	465	186.5	10%	460	180.7	16%	5	5.8	1%
Off, hotel, serv	51-56,62,72	1,007	589.8	32%	909	366.2	33%	98	223.6	32%
Schools	61	433	220.8	12%	416	153.0	14%	17	67.8	10%
Inst., govt	71,81,92	316	359.5	20%	276	98.9	9%	40	260.6	37%
Other/unknown		11	2.6	0%	11	2.6	0%		0.0	0%
TOTAL		2,941	1,822.0	100%	2,707	1,115.4	100%	234	706.6	100%
Percent of total					92%	61%		8%	39%	

Table 2.2b: CPP Enrollees by Industry group and Size – *SDG&E*

	Definitions	All Enrolled CPP Accounts			Accounts < 1000 kW			Accounts > 1000 kW		
	NAICS	Count	Sum of max demands (MW)	% of load	Count	Sum of max demands (MW)	% of total load	Count	Sum of max demands (MW)	% of total load
Ag, Min, Const	11,21,23	4	7.2	6%	1	0.6	1%	3	6.6	6%
Manuf	31,32,33	14	10.4	9%	11	3.4	3%	3	7.1	6%
Wholes, transp, util	22,42,48-49	114	43.9	38%	100	30.2	26%	14	13.6	12%
Retail	44,45	21	8.9	8%	21	8.9	8%		0.0	0%
Off, hotel, serv	51-56,62,72	58	36.0	31%	48	14.8	13%	10	21.2	18%
Schools	61	2	0.9	1%	2	0.9	1%		0.0	0%
Inst., govt	71,81,92	20	9.4	8%	16	4.8	4%	4	4.6	4%
Other/unknown		0	-	0%	0	0.0	0%	0	0.0	0%
TOTAL		233	116.6	100%	199	63.5	54%	34	53.1	46%
Percent of total					85%	54%		15%	46%	

Table 2.2c: CPP Enrollees – Percent of Target Population – *SDG&E*

	Definitions	All Enrolled CPP Accounts			Accounts < 1000 kW			Accounts > 1000 kW		
	NAICS	Count	% of Target Population	% of Target population load	Count	% of Target Population	% of Target population load	Count	% of Target Population	% of Target population load
Ag, Min, Const	11,21,23	4	10%	29%	1	3%	4%	3	60%	58%
Manuf	31,32,33	14	4%	4%	12	3%	2%	2	6%	7%
Wholes, transp, util	22,42,48-49	114	68%	46%	108	68%	55%	6	67%	34%
Retail	44,45	21	5%	5%	21	5%	5%	0	0%	0%
Off, hotel, serv	51-56,62,72	58	6%	7%	50	6%	4%	8	10%	10%
Schools	61	2	0%	0%	2	1%	1%	0	0%	0%
Inst., govt	71,81,92	20	7%	3%	16	6%	5%	4	10%	2%
TOTAL		233	9%	7%	210	8%	7%	23	15%	8%

Table 2.2d: DBP Enrollees by Industry group and Size – *SDG&E*

	Definitions	All Enrolled DBP Accounts			Accounts < 1000 kW			Accounts > 1000 kW		
	NAICS	Count	Sum of max demands (MW)	% of load	Count	Sum of max demands (MW)	% of total load	Count	Sum of max demands (MW)	% of total load
Ag, Min, Const	11,21,23	3	5.0	6%	1	0.1	0%	2	4.9	6%
Manuf	31,32,33	27	26.0	33%	23	6.5	8%	4	19.5	25%
Wholes, transp, util	22,42,48-49	6	4.6	6%	6	2.1	3%	0	2.5	3%
Retail	44,45	5	1.3	2%	5	1.3	2%	0	-	0%
Off, hotel, serv	51-56,62,72	36	19.2	25%	35	13.0	17%	1	6.2	8%
Schools	61	92	20.5	26%	92	20.5	26%	0	-	0%
Inst., govt	71,81,92	12	1.4	2%	12	1.4	2%	0	-	0%
TOTAL		181	77.9	100%	174	44.9	58%	7	33.0	42%
Percent of total					96%	58%		4%	42%	

Table 2.2e: DBP Enrollees – Percent of Target Population – *SDG&E*

	Definitions	All Enrolled DBP Accounts			Accounts < 1000 kW			Accounts > 1000 kW		
	NAICS	Count	% of Target Population	% of Target population load	Count	% of Target Population	% of Target population load	Count	% of Target Population	% of Target population load
Ag, Min, Const	11,21,23	3	8%	20%	1	3%	0%	2	40%	43%
Manuf	31,32,33	27	7%	11%	23	7%	5%	4	8%	21%
Wholes, transp, util	22,42,48-49	6	4%	5%	6	4%	4%	0	0%	6%
Retail	44,45	5	1%	1%	5	1%	1%	0	0%	0%
Off, hotel, serv	51-56,62,72	36	4%	3%	35	4%	4%	1	1%	3%
Schools	61	92	23%	11%	92	24%	15%	0	0%	0%
Inst., govt	71,81,92	12	4%	0%	12	5%	2%	0	0%	0%
TOTAL		181	7%	5%	174	7%	5%	7	3%	5%

Tables 2.3a through 2.3e show comparable information on enrollment for SCE. SCE tripled enrollment in CPP, from 15 to 44, relative to 2006, and expanded enrollment in DBP from 1,079 to 1,222, accounting for 1,500 MW. Manufacturers made up the bulk of CPP enrollment, while DBP enrollees were spread across several of the industry groups. Overall participation rates relative to the target population were negligible for CPP, but were nearly 9 percent of accounts and 19 percent of load for DBP.

Table 2.3a: Target Population by Industry group and Size – *SCE*

	Definitions	All Accounts			Accounts <1000 kW			Accounts >= 1000 kW		
	NAICS	Count	Sum of max demands (MW)	% of load	Count	Sum of max demands (MW)	% of total load	Count	Sum of max demands (MW)	% of total load
Ag, Min, Const	11,21,23	892	399	5%	819	175	4%	73	224	6%
Manuf	31,32,33	2,916	2,667	32%	2,427	1,003	22%	489	1,664	44%
Wholes, transp, util	22,42,48-49	2,073	959	11%	1,915	551	12%	158	408	11%
Retail	44,45	2,066	869	10%	1,989	749	16%	77	120	3%
Off, hotel, serv	51-56,62,72	3,476	1,976	24%	3,130	1,212	26%	346	764	20%
Schools	61	1,792	904	11%	1,660	617	13%	132	287	8%
Inst., govt	71,81,92	897	586	7%	798	282	6%	99	304	8%
TOTAL		14,114	8,361	100%	12,740	4,589	100%	1,374	3,772	100%
Percent of total					90%	55%		10%	45%	

Table 2.3b: CPP Enrollees by Industry group and Size – *SCE*

	Definitions	All Enrolled CPP Accounts			Accounts < 1000 kW			Accounts > 1000 kW		
	SIC 2	Count	Sum of max demands (MW)	% of load	Count	Sum of max demands (MW)	% of total load	Count	Sum of max demands (MW)	% of total load
Ag, Min, Const	<20	2	1.4	4%	2	1.4	7%	0	0.0	0%
Manuf	20-39	34	30.0	75%	24	15.5	78%	10	14.5	72%
Wholes, transp, util	40-51	4	3.7	9%	3	2.0	10%	1	1.7	9%
Retail	52-59	2	1.8	4%	1	0.6	3%	1	1.2	6%
Off, hotel, serv	60-81	1	2.8	7%	0	0.0	0%	1	2.8	14%
Schools	82	0		0%	0		0%	0		0%
Inst., govt	>82	0		0%	0		0%	0		0%
TOTAL		44	40.1	100%	31	19.9	100%	13	20.2	100%
Percent of total					70%	50%		30%	50%	

Table 2.3c: CPP Enrollees – Percent of Target Population – *SCE*

	Definitions	All Enrolled CPP Accounts			Accounts < 1000 kW			Accounts > 1000 kW		
	SIC 2	Count	% of Target Population	% of Target population load	Count	% of Target Population	% of Target population load	Count	% of Target Population	% of Target population load
Ag, Min, Const	<20	2	0.2%	0.4%	2	0.2%	0.8%	0	0.0%	0.0%
Manuf	20-39	34	1.2%	1.1%	24	1.0%	1.5%	10	2.0%	0.9%
Wholes, transp, util	40-51	4	0.2%	0.4%	3	0.2%	0.4%	1	0.6%	0.4%
Retail	52-59	2	0.1%	0.2%	1	0.1%	0.1%	1	1.3%	1.0%
Off, hotel, serv	60-81	1	0.0%	0.1%	0	0.0%	0.0%	1	0.3%	0.4%
Schools	82	0	0.0%	0.0%	0	0.0%	0.0%	0	0.0%	0.0%
Inst., govt	>82	0	0.0%	0.0%	0	0.0%	0.0%	0	0.0%	0.0%
TOTAL		44	0.3%	0.5%	31	0.2%	0.4%	13	0.9%	0.5%

Table 2.3d: DBP Enrollees by Industry group and Size – *SCE*

	Definitions	All Enrolled DBP Accounts			Accounts < 1000 kW			Accounts > 1000 kW		
	SIC 2	Count	Sum of max demands (MW)	% of load	Count	Sum of max demands (MW)	% of total load	Count	Sum of max demands (MW)	% of total load
Ag, Min, Const	<20	36	60.0	4%	20	12.4	1%	16	47.6	3%
Manuf	20-39	284	730.1	47%	156	94.8	6%	128	635.3	41%
Wholes, transp, util	40-51	221	145.2	9%	198	72.9	5%	23	72.3	5%
Retail	52-59	268	113.3	7%	256	86.2	6%	12	27.1	2%
Off, hotel, serv	60-81	208	223.7	14%	150	73.6	5%	58	150.0	10%
Schools	82	128	116.4	8%	108	44.9	3%	20	71.5	5%
Inst., govt	>82	75	157.6	10%	52	20.4	1%	23	137.2	9%
TOTAL		1,222	1,546.5	100%	942	405.4	26%	280	1,141.0	74%
Percent of total					77%	26%		23%	74%	

Table 2.3e: DBP Enrollees – Percent of Target Population – *SCE*

	Definitions	All Enrolled DBP Accounts			Accounts < 1000 kW			Accounts > 1000 kW		
	SIC 2	Count	% of Target Population	% of Target population load	Count	% of Target Population	% of Target population load	Count	% of Target Population	% of Target population load
Ag, Min, Const	<20	36	4%	15%	20	2%	7%	16	22%	21%
Manuf	20-39	284	10%	27%	156	6%	9%	128	26%	38%
Wholes, transp, util	40-51	221	11%	15%	198	10%	13%	23	15%	18%
Retail	52-59	268	13%	13%	256	13%	12%	12	16%	23%
Off, hotel, serv	60-81	208	6%	11%	150	5%	6%	58	17%	20%
Schools	82	128	7%	13%	108	7%	7%	20	15%	25%
Inst., govt	>82	75	8%	27%	52	7%	7%	23	23%	45%
TOTAL		1,222	9%	18%	942	7%	9%	280	20%	30%

Tables 2.4a through 2.4g show information on enrollment for PG&E. Enrollment in CPP nearly doubled, from 337 in 2006 to 656 in 2007.[6] Enrollees in DBP alone increased from 726 to 893, while those enrolled in both CPP and DBP rose from 142 to 170. Total load in CPP and DBP-only amounted to 500 MW and 1,100 MW respectively. Manufacturers, Offices, etc. and Schools made up the bulk of CPP enrollment, while DBP enrollees were spread across several of the industry groups. Overall participation rates relative to the target population were nearly 8 percent of accounts and load for CPP, and were 10 percent of accounts and 17 percent of load for DBP-only accounts.

Table 2.4a: Target Population by Industry group and Size – *PG&E*

	Definitions	All Accounts			Accounts <1000 kW			Accounts >= 1000 kW		
	NAICS	Count	Sum of max demands (MW)	% of load	Count	Sum of max demands (MW)	% of total load	Count	Sum of max demands (MW)	% of total load
Ag, Min, Const	11,21,23	1,295	657	10%	1,128	291	4%	167	366	6%
Manuf	31,32,33	1,546	1,952	30%	1,114	514	8%	432	1,437	22%
Wholes, transp, util	22,42,48-49	991	899	14%	776	347	5%	215	552	8%
Retail	44,45	1,113	478	7%	1,090	443	7%	23	36	1%
Off, hotel, serv	51-56,62,72	2,406	1,785	27%	2,041	894	14%	365	891	14%
Schools	61	662	400	6%	604	242	4%	58	158	2%
Inst., govt	71,81,92	465	378	6%	390	163	2%	75	215	3%
Other/unknown		74	28	0%	72	26	0%	2	3	0%
TOTAL		8,552	6,575	100%	7,215	2,918	44%	1,337	3,657	56%
Percent of total					84%	44%		16%	56%	

Table 2.4b: CPP Enrollees by Industry group and Size – *PG&E*

	Definitions	All CPP Enrollees			Accounts <1000 kW			Accounts >= 1000 kW		
	NAICS	Count	Sum of max demands (MW)	% of load	Count	Sum of max demands (MW)	% of total load	Count	Sum of max demands (MW)	% of total load
Ag, Min, Const	11,21,23	43	35	7%	32	15	3%	11	19	4%
Manuf	31,32,33	183	165	33%	137	74	15%	46	91	18%
Wholes, transp, util	22,42,48-49	65	42	8%	50	20	4%	15	23	4%
Retail	44,45	53	23	4%	50	19	4%	3	3	1%
Off, hotel, serv	51-56,62,72	130	139	28%	100	45	9%	30	93	19%
Schools	61	150	76	15%	136	59	12%	14	17	3%
Inst., govt	71,81,92	32	24	5%	26	10	2%	6	14	3%
TOTAL		656	503	100%	531	243	48%	125	260	52%
Percent of total					81%	48%		19%	52%	

Table 2.4c: CPP Enrollees – Percent of Target Population – *PG&E*

	Definitions	All CPP Enrollees			Accounts <1000 kW			Accounts >= 1000 kW		
	NAICS	Count	% of Target Population	% of Target population load	Count	% of Target Population	% of Target population load	Count	% of Target Population	% of Target population load
Ag, Min, Const	11,21,23	43	3%	5%	32	3%	5%	11	7%	5%
Manuf	31,32,33	183	12%	8%	137	12%	14%	46	11%	6%
Wholes, transp, util	22,42,48-49	65	7%	5%	50	6%	6%	15	7%	4%
Retail	44,45	53	5%	5%	50	5%	4%	3	13%	9%
Off, hotel, serv	51-56,62,72	130	5%	8%	100	5%	5%	30	8%	10%
Schools	61	150	23%	19%	136	23%	24%	14	24%	11%
Inst., govt	71,81,92	32	7%	6%	26	7%	6%	6	8%	6%
TOTAL		656	8%	8%	531	7%	8%	125	9%	7%

[6] Enrollment in CPP includes both enrollees in CPP alone, and those enrolled in both CPP and DBP.

Table 2.4d: DBP Enrollees by Industry group and Size – *PG&E*

	Definitions	Enrollees in DBP only			Accounts <1000 kW			Accounts >= 1000 kW		
	NAICS	Count	Sum of max demands (MW)	% of load	Count	Sum of max demands (MW)	% of total load	Count	Sum of max demands (MW)	% of total load
Ag, Min, Const	11,21,23	106	107	10%	68	30	3%	38	77	7%
Manuf	31,32,33	207	450	40%	111	53	5%	96	396	35%
Wholes, transp, util	22,42,48-49	142	204	18%	92	42	4%	50	162	14%
Retail	44,45	13	13	1%	11	4	0%	2	9	1%
Off, hotel, serv	51-56,62,72	298	216	19%	244	102	9%	54	113	10%
Schools	61	45	42	4%	35	12	1%	10	30	3%
Inst., govt	71,81,92	63	78	7%	44	17	2%	19	61	5%
Other/unknown		19	10	1%	16	5	0%	3	5	0%
TOTAL		893	1,119	100%	621	267	24%	272	853	76%
Percent of total					70%	24%		30%	76%	

Table 2.4e: DBP Enrollees – Percent of Target Population – *PG&E*

	Definitions	Enrollees in DBP only			Accounts <1000 kW			Accounts >= 1000 kW		
	NAICS	Count	% of Target Population	% of Target population load	Count	% of Target Population	% of Target population load	Count	% of Target Population	% of Target population load
Ag, Min, Const	11,21,23	106	8%	16%	68	6%	10%	38	23%	21%
Manuf	31,32,33	207	13%	23%	111	10%	10%	96	22%	28%
Wholes, transp, util	22,42,48-49	142	14%	23%	92	12%	12%	50	23%	29%
Retail	44,45	13	1%	3%	11	1%	1%	2	9%	24%
Off, hotel, serv	51-56,62,72	298	12%	12%	244	12%	11%	54	15%	13%
Schools	61	45	7%	11%	35	6%	5%	10	17%	19%
Inst., govt	71,81,92	63	14%	21%	44	11%	10%	19	25%	28%
TOTAL		893	10%	17%	621	9%	9%	272	20%	23%

Table 2.4f: Enrollees in Both CPP & DBP, by Industry group and Size – *PG&E*

	Definitions	Enrollees in DBP and CPP			Accounts <1000 kW			Accounts >= 1000 kW		
	NAICS	Count	Sum of max demands (MW)	% of load	Count	Sum of max demands (MW)	% of total load	Count	Sum of max demands (MW)	% of total load
Ag, Min, Const	11,21,23	2	1	1%	2	1	1%		-	0%
Manuf	31,32,33	81	102	51%	43	26	13%	38	75	38%
Wholes, transp, util	22,42,48-49	22	27	14%	13	7	4%	9	20	10%
Retail	44,45	2	2	1%	1	0	0%	1	2	1%
Off, hotel, serv	51-56,62,72	44	48	24%	29	16	8%	15	32	16%
Schools	61	9	8	4%	8	3	1%	1	6	3%
Inst., govt	71,81,92	6	6	3%	3	1	0%	3	5	3%
Other/unknown		4	3	2%	3	1	1%	1	2	1%
TOTAL		170	197	100%	102	56	28%	68	142	72%
Percent of total					60%	28%		40%	72%	

Table 2.4g: Enrollees in Both CPP & DBP – Percent of Target Population – *PG&E*

	Definitions	Enrollees in DBP and CPP			Accounts <1000 kW			Accounts >= 1000 kW		
	NAICS	Count	% of Target Population	% of Target population load	Count	% of Target Population	% of Target population load	Count	% of Target Population	% of Target population load
Ag, Min, Const	11,21,23	2	0.2%	0.2%	2	0.2%	0.5%		0.0%	0.0%
Manuf	31,32,33	81	5.2%	5.2%	43	3.9%	5.1%	38	8.8%	5.2%
Wholes, transp, util	22,42,48-49	22	2.2%	3.0%	13	1.7%	2.0%	9	4.2%	3.6%
Retail	44,45	2	0.2%	0.4%	1	0.1%	0.0%	1	4.3%	4.6%
Off, hotel, serv	51-56,62,72	44	1.8%	2.7%	29	1.4%	1.8%	15	4.1%	3.6%
Schools	61	9	1.4%	2.1%	8	1.3%	1.1%	1	1.7%	3.6%
Inst., govt	71,81,92	6	1.3%	1.7%	3	0.8%	0.5%	3	4.0%	2.6%
TOTAL		170	2.0%	3.0%	102	1.4%	1.9%	68	5.1%	3.9%

2.3 Program events

Table 2.5 lists the days of CPP and DBP events for each of the three utilities. Note that several events for SCE and PG&E were called near Independence Day (July 4), and several others called immediately before and after Labor Day (September 3). Finally, the last DBP event at SDG&E (October 24) was called during a period in which schools were cancelled (and presumably other businesses were affected) due to brush fires.

These features of several of the events created difficult issues in measuring CPP and DBP load impacts. This is the case due to the fact that many C&I customers' usage patterns on days near holidays differ substantially from those on typical non-holiday weekdays (*e.g.*, many manufacturing customers' loads are lower than normal during the entire week of July 4). Our evaluation approaches used to address these issues are described in the methodology and results sections below. In some cases, we report average-event results across only "typical," or "good" events that did not occur near holidays.

Table 2.5: DBP and CPP Events – 2007

	DBP			CPP		
	SDG&E	SCE	PG&E	SDG&E	SCE	PG&E
June 7					X (Test)	
June 13						X
June 19		X				
June 22		X			X	
July 3		X			X	X
July 5		X			X	X
July 6		X			X	X
July 9		X				X
July 10		X				
July 16		X				
July 23		X				
July 27		X				
August 1						X
August 14		X				
August 15	X	X		X	X	
August 16	X	X		X	X	
August 17	X	X		X	X	
August 20		X				
August 21	X	X		X	X	X
August 22						X
August 28		X				X
August 29	X	X		X	X	X
August 30	X	X	X (Test)	X	X	X
August 31	X	X		X	X	X
Sept 4	X	X		X		
Sept 5				X		
Sept 6		X				
October 24	X					
TOTAL	9	22	1	9	12	12

3. Study methodology

We developed direct estimates of program-level impacts for CPP and DBP for SDG&E, SCE and PG&E from utility- and program-specific aggregate regression equations. These equations were estimated over the summer months of 2007, primarily using hourly load data aggregated across all customer accounts in each program. In some cases we also estimated aggregate equations for a limited number of customer types (*e.g.*, certain industry groups).[7]

[7] An important but relatively minor factor that required attention with the load data was the issue of accounting for the change from standard time to daylight savings time. Each of the utilities used somewhat different conventions in maintaining their load data. SCE in particular leaves its data in standard time throughout the year. This simplifies the problem of dealing with two special days of either 23 or 25 hours, but requires the analyst to adjust the data to ensure consistency with the definition of specific event hours during the summer period.

3.1 Primary regression equation specifications

The aggregate regression equations were based on models of hourly loads as functions of a list of variables designed to control for factors affecting consumers' hourly usage levels, such as:

- Seasonal and hourly time patterns (*e.g.*, month, day-of-week, and hour, plus various hour/day-type interactions)
- Weather (*e.g.*, daily cooling degree-days (CDD))
- Event indicators—Hourly indicator variables interacted with event indicators, in order to provide estimates of the hourly load impacts during each event.

A typical DR program-level regression equation may be written as follows (the example below references a CPP program; but the same equation applies to DBP programs):

$$Q_t = a + \sum_{Evt=1}^{E}\sum_{i=1}^{24}(b_{i,Evt}^{CPP} \times h_{i,t} \times CPP_t) + b_t^{MornLoad} \times MornLoad_t + \sum_{i=1}^{24}(b_i^{CDD} \times h_{i,t} \times CDD_t)$$
$$+ \sum_{i=2}^{24}(b_i^{MON} \times h_{i,t} \times MON_t) + \sum_{i=2}^{24}(b_i^{FRI} \times h_{i,t} \times FRI_t) + \sum_{i=2}^{24}(b_i^{h} \times h_{i,t}) + \sum_{i=2}^{5}(b_i^{DTYPE} \times DTYPE_{i,t})$$
$$+ \sum_{i=6}^{10}(b_i^{MONTH} \times MONTH_{i,t}) + e_t$$

In this equation, Q_t represents the aggregated hourly usage for the customers enrolled in the program prior to the last event date; the b's are estimated parameters; $h_{i,t}$ is a dummy variable for hour i; CPP_t is an indicator variable for program event days; CDD_t is cooling degree days;[8] E is the number of event days that occurred during the program year; $MornLoad_t$ is a variable equal to the average of the day's load in hours 1 through 10; MON_t is a dummy variable for Monday; FRI_t is a dummy variable for Friday; $DTYPE_{i,t}$ is a series of dummy variables for each day of the week; $MONTH_{i,t}$ is a series of dummy variables for each month; and e_t is the error term. The "morning load" variable was used in lieu of a more formal autoregressive structure in order to adjust the model to account for the level of load on a particular day. This was a particularly useful variable to use for the 2007 program year, which had a number of event days near holidays. The morning load variable appeared to help account for the lower load levels that occur near holidays (independent of the effects of event days), and thereby avoiding an overstatement of what the load would have been had events not been called.[9] Because of the autoregressive nature of the morning load variable, no further correction for serial correlation was performed in these models.

[8] Cooling degree days (CDD) was defined as MAX[0, (maxT + minT) / 2 – 65], where maxT is the maximum daily temperature in degrees Fahrenheit and minT is the minimum daily temperature. Customer-specific CDD values are calculated using data from the most appropriate weather station. The aggregate CDD value is the load-weighted average CDDs for the individual customers, where the load weights are the average summer maximum demands.

[9] In previous evaluations of demand response programs we have often excluded days contiguous with holidays on the basis that, like weekends, they are unusual days that do not contribute to explaining customers' normal load patterns, and events are rarely called near holidays.

Although each equation typically had over 250 variables (and their associated coefficients), the large number of hourly observations provided sufficient degrees of freedom to estimate the coefficients, many of which are estimated with high degrees of statistical significance.

SDG&E requested that separate hourly regression equations be estimated rather than combining all hours into a single equation and using interaction terms to allow separate hourly effects. The two approaches are quite similar in principle. Furthermore, tests involving estimating load impacts with both approaches produced similar results. The form of the equations used for SDG&E is as follows:[10]

$$Q_t = a + \sum_{Evt=1}^{E}(b_{i,Evt}^{CPP} \times CPP_t) + b^{CDD} \times CDDBLD_t + \sum_{i=2}^{5}(b_i^{DTYPE} \times DTYPE_{i,t})$$

$$+ \sum_{i=7}^{9}(b_i^{MONTH} \times MONTH_{i,t}) + e_t$$

One of these equations is specified for each hour of the day. The error terms (e_t) are assumed to be auto-correlated and the models are therefore estimated using the Prais-Winsten method. For the DBP models, two variables are added to account for the load reductions that occurred in late October because of brush fires. One is an indicator variable for October 23rd and 24th, which experienced particularly steep load reductions relative to similar days prior to the brush fires. (October 24th was an event day.) The other is an indicator variable for October 22nd and October 25th through 31st.

3.2 Uncertainty-Adjusted Load Impacts

The Load Impact Protocols require the estimation of uncertainty-adjusted load impacts. In the case of *ex post* load impacts, the parameters that constitute the load impact estimates are not estimated with certainty. Therefore, we base the uncertainty-adjusted load impacts on the variance-covariance matrices associated with the estimated load impacts.

The scenarios of program impacts for each event day are generated through a Monte Carlo simulation that uses the Cholesky decomposition of the portion of the variance-covariance matrix containing the event variables (*e.g.*, if there are 12 events, this would be a 288x288 matrix to include all 24 hours for every). The Cholesky decomposition is multiplied by a vector (*e.g.*, 288x1) of random draws from the standard normal distribution, and then the estimated coefficients for each hour of the event day are added to the result. This produces correlated random draws that have the variances and covariances estimated from the data. One thousand random draws are taken for each cell, and the draws are ranked using the average impact across the program's event hours. The 10th, 30th, 50th, 70th, and 90th percentile scenarios are equal to the coefficients in the 100th, 300th, 500th, 700th, and 900th ranked draws.

The method used to estimate the uncertainty-adjusted load impacts for SDG&E's programs differed slightly because of the use of hour-specific models. That is, because each hour has

[10] The cooling degree day (*CDDBLD*) variable uses a 65 degree threshold and includes a buildup component, such that $CDDBLD_d$ = (40/75) x CDD_d + (20/75) x CDD_{d-1} + (10/75) x CDD_{d-2} + (5/75) x CDD_{d-3}. The *d* index refers to days, so that the lagged values refer to CDDs from the previous days.

its own model, there is no variance-covariance matrix that contains information regarding the correlation of the uncertainty across hours. The mean and variance of the hourly load impacts were directly estimated (*i.e.*, they are the estimated event-day coefficient and the square of the associated standard error) and used in the Monte Carlo analysis. The covariances (which could not be directly estimated) were based on a correlation matrix for loads across the 24 hours of the day. Other than this change, the methods used to estimate uncertainty-adjusted load impacts for SDG&E did not differ from those used for SCE and PG&E.

An alternative method was used to generate the uncertainty-adjusted load impacts for the *average* event day by program and utility. In this case, we assumed that the load impacts for each event day were known with certainty, and based the 10th through 90th percentile scenarios on the standard deviation of the load impacts across the event days. Specifically, we assumed that the hourly load impacts for an average event day were normally distributed, with the mean and standard deviation of the distribution calculated across the event days.

4. Detailed study findings -- CPP

The primary objective of this task was to estimate the aggregate and per-customer CPP event-day load impacts for each utility. Hourly load impacts for an *average event*, including risk-adjusted load impacts at different probability levels, are shown in tables in this section, and illustrated in figures. All regression coefficients and statistics for each equation are presented in Appendix 1, while additional figures showing load impacts for *each event* are shown in Appendix 2.

4.1 SDG&E

As shown in Table 2.1, SDG&E's CPP rate applied during a seven-hour period on CPP event days, with a Moderate price applying from 11 a.m. to 3 p.m. and a High price applying during hours-ending 4 p.m. through 6 p.m. SDG&E called nine CPP events in 2007, as shown in Table 4.1.

Table 4.1: SDG&E CPP Event Days in 2007

Event Days	Event Time
August 15, 2007	11 a.m. to 6 p.m.
August 16, 2007	11 a.m. to 6 p.m.
August 17, 2007	11 a.m. to 6 p.m.
August 21, 2007	11 a.m. to 6 p.m.
August 29, 2007	11 a.m. to 6 p.m.
August 30, 2007	11 a.m. to 6 p.m.
August 31, 2007	11 a.m. to 6 p.m.
September 4, 2007	11 a.m. to 6 p.m.
September 5, 2007	11 a.m. to 6 p.m.

4.1.1 Load impact models

Separate regression equations were estimated for each hour of the day, with each model having the specification shown in Section 3.1. Weekends, holidays, and some "near-holiday" days were excluded from the sample. ("Near-holiday" days were defined as May 25, July 3, and July 5, 2007. Days near Labor Day were not excluded because they were event days.)

Load data for participating customers were combined into an aggregate load profile prior to estimating the models. CDDs were combined across customers using a load-weighted average of the Zone 1 and Zone 4 CDDs, where the load weights were based on the average of the customers' summer non-coincident demands. The adjusted R-squared values for the 24 regression equations ranged from 0.565 to 0.797, with an average of 0.653. All of the models had 102 observations.

4.1.2 Load impact results

Table 4.2 displays the estimated hourly load impact results for a typical event day (represented by the average across all individual event days). The average hourly load impacts ranged from 5.5 MW to nearly 11 MW, representing load reductions of about 10 percent during the Moderate-price period and nearly 14 percent during the High-price period. Figure 4.1 shows the fairly tight range of uncertainty-adjusted load impacts for the average event. Figure 4.2 illustrates the hourly implied reference load, actual load and load impacts shown in the table. Figure 4.3 shows the estimated load impacts for each event.

Table 4.2: CPP Aggregate Load Impacts – Average Event Day – *SDG&E*

Hour Ending	Estimated Reference Load (kWh)	Actual Event Day Load (kWh)	Estimated Load Impact (kWh/hour)	Weighted Average Temperature (°F)	Uncertainty Adjusted Impact (kWh/hr)- Percentiles				
					10th%ile	30th%ile	50th%ile	70th%ile	90th%ile
1	59,439	61,518	2,078	70.5	4,196	2,945	2,078	1,212	-40
2	57,355	59,225	1,870	70.2	3,948	2,720	1,870	1,019	-209
3	55,611	57,233	1,622	69.6	3,937	2,569	1,622	674	-694
4	54,710	56,014	1,304	69.5	3,635	2,258	1,304	350	-1,028
5	57,339	58,829	1,491	69.3	4,019	2,525	1,491	456	-1,038
6	62,128	63,658	1,530	69.8	4,332	2,677	1,530	384	-1,271
7	68,272	69,993	1,721	72.6	4,206	2,738	1,721	703	-765
8	73,116	73,976	860	75.6	3,059	1,760	860	-40	-1,340
9	75,178	75,763	586	79.2	2,836	1,507	586	-335	-1,665
10	77,028	76,153	-874	81.8	1,535	111	-874	-1,860	-3,283
11	78,119	74,949	-3,170	83.1	-434	-2,050	-3,170	-4,290	-5,906
12	76,846	66,550	-10,296	82.6	-7,425	-9,121	-10,296	-11,471	-13,168
13	72,675	65,307	-7,368	82.5	-4,306	-6,115	-7,368	-8,621	-10,430
14	69,731	63,505	-6,226	82.2	-3,350	-5,049	-6,226	-7,403	-9,103
15	69,639	64,098	-5,542	81.9	-3,098	-4,542	-5,542	-6,542	-7,986
16	72,763	63,342	-9,421	80.4	-6,551	-8,247	-9,421	-10,596	-12,292
17	74,021	63,094	-10,927	78.8	-8,024	-9,739	-10,927	-12,115	-13,830
18	71,126	61,668	-9,458	75.9	-7,342	-8,592	-9,458	-10,324	-11,574
19	68,740	63,943	-4,797	72.9	-1,933	-3,625	-4,797	-5,970	-7,662
20	66,992	64,936	-2,056	71.7	-155	-1,279	-2,056	-2,834	-3,958
21	66,096	64,933	-1,163	71.1	912	-314	-1,163	-2,012	-3,239
22	64,655	64,448	-207	70.5	2,645	960	-207	-1,373	-3,058
23	64,079	64,441	362	70.0	4,045	1,869	362	-1,145	-3,321
24	62,277	63,081	803	71.0	4,966	2,507	803	-900	-3,360
	Reference Energy Use (kWh)	Actual Event Day Energy Use (kWh)	Change in Energy Use (kWh)	Cooling Degree Hours (Base 75 °F)	Uncertainty Adjusted Impact (kWh/hour) - Percentiles				
					10th	30th	50th	70th	90th
Daily	1,617,936	1,560,655	-57,281	59.2	5,655	-31,528	-57,281	-83,034	-120,217

Figure 4.1: CPP Uncertainty-Adjusted Load Impacts – Average Event – *SDG&E*

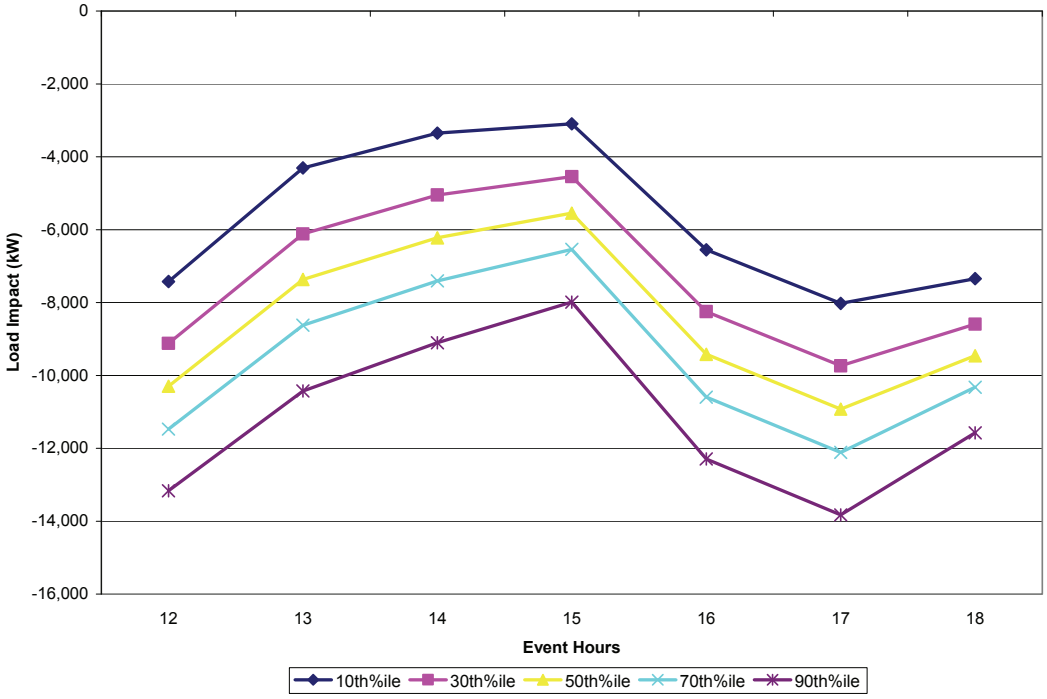


Figure 4.2: Total CPP Load Impact – Average Event in 2007 – *SDG&E*

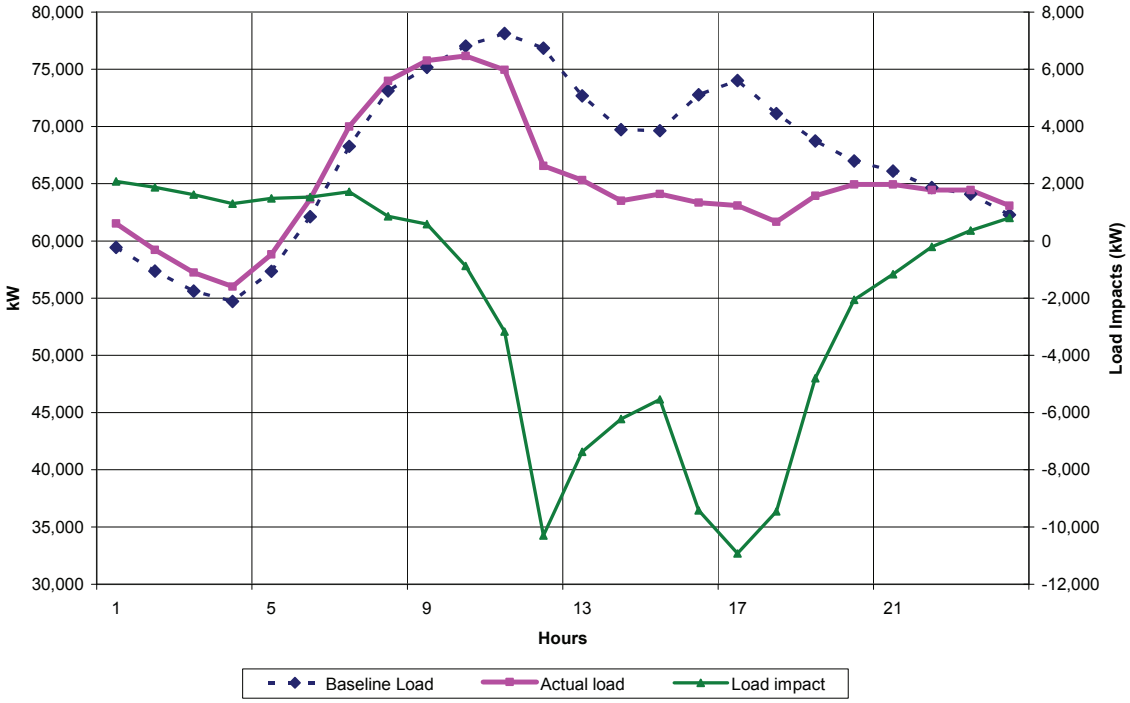
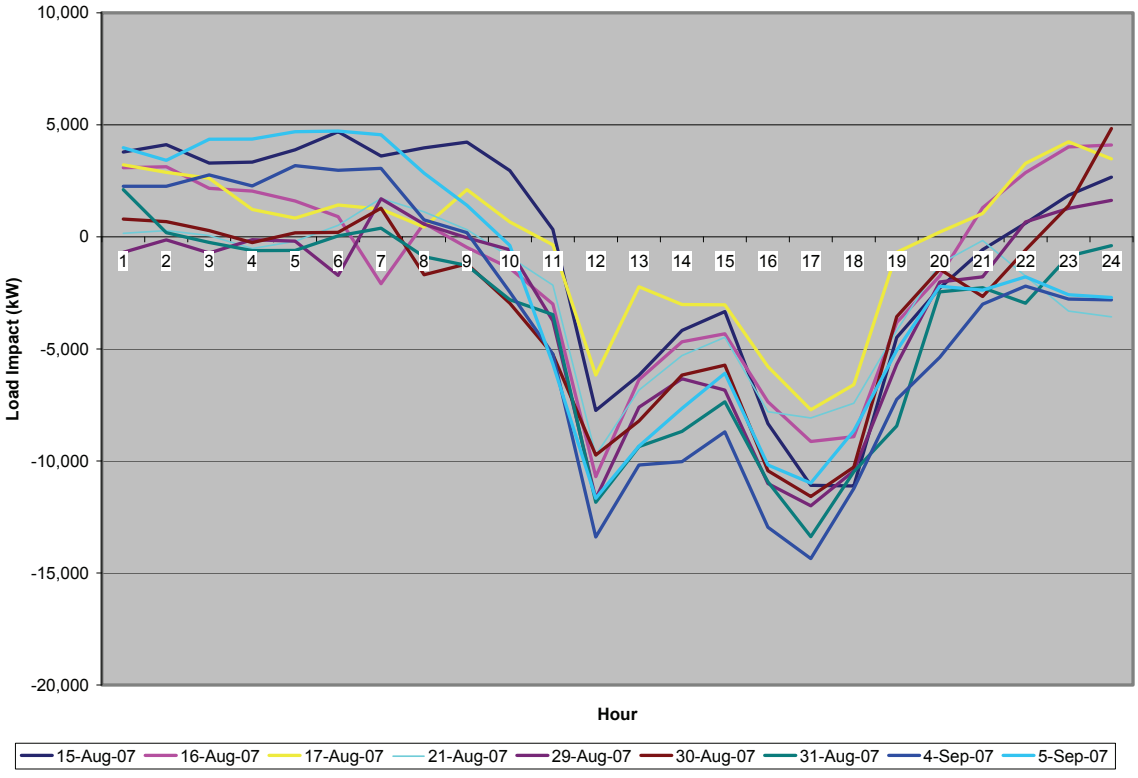


Figure 4.3: CPP Event-Specific Load Impacts – *SDG&E*



Notice that the load reductions tend to be largest in the first hour of the event period (hour 12), moderate in hours 13 through 15, and then increase again through the end of the event window. The reduction in the load impact in the middle of the event window appears to be related to the behavior of customers in NAICS industry group 22 (specifically, water utilities). A large percentage of the participating CPP load belongs to this group. An examination of the aggregate load profile for the 49 customers in this group shows that their load on *non-event* days typically falls during hours 14 and 15 (and, to a lesser extent, in the surrounding hours), likely as a result of their response to the summer on-peak demand charge that applies on non-event days. It appears that event-day behavior for these customers consists of reducing and maintaining load at this low level for the duration of the CPP event window. Therefore, significant load reductions relative to the baseline load are estimated for most event hours, except those hours in which their load would have been low anyway.

4.2 SCE

SCE called twelve CPP event days in 2007, as shown in the table below. In each case, the event was called a day ahead and was six hours in duration, from 12:00 noon to 6:00 p.m.

Table 4.3: SCE CPP Event Days in 2007

Event Days	Event Trigger
June 6, 2007	Measurement & Verification
June 21, 2007	Heat Rate Exceed 15,000 BTU
July 2, 2007	Heat Rate Exceed 15,000 BTU
July 3, 2007	Heat Rate Exceed 15,000 BTU
July 5, 2007	Heat Rate Exceed 15,000 BTU
August 14, 2007	Heat Rate Exceed 15,000 BTU
August 15, 2007	Heat Rate Exceed 15,000 BTU
August 16, 2007	Heat Rate Exceed 15,000 BTU
August 20, 2007	Heat Rate Exceed 15,000 BTU
August 28, 2007	Heat Rate Exceed 15,000 BTU
August 29, 2007	Heat Rate Exceed 15,000 BTU
August 30, 2007	Heat Rate Exceed 15,000 BTU

As indicated in Table 2.3b, the majority of SCE's CPP customer accounts were manufacturing customers. All CPP customers' loads were aggregated into one total load, and the regression equation described in Section 3.1 was estimated on the aggregate load data. Weekends and holidays were excluded from the estimation database.[11] In addition, we shifted the SCE hourly load data by one hour to account for Daylight Savings Time. (The load data were provided in Standard Time.)

The model used the program-level hourly usage as the dependent variable. This allows for the direct estimation of the load impacts by event day and hour. For example, a CPP event hour 14 coefficient of -500 would mean that participating customers reduced load by 500 kWh in that hour relative to their reference load (as estimated by the regression equation).

In addition to estimating the *ex post* load impacts, we developed the *risk-adjusted* program impacts, which show the expected range of load impacts given the estimated coefficients, using the parameter values and the associated variance-covariance matrix.

The regression statistics for the SCE CPP load impact model were the following:

- Adjusted R-squared = 0.981; and
- Number of observations = 2,016.

Table 4.4 summarizes the hourly load impacts for the average CPP event (*e.g.*, averaged over all individual events). The hourly average event-day load reductions ranged from 5.7 MW to 9.1 MW, with the largest reduction occurring in the first event hour. These load impacts represent approximately 40 percent reductions in each event hour. Note that most

[11] The inclusion of weekends and holidays would require the addition of variables to capture the fact that load levels and patterns on weekends and holidays can differ greatly from those of non-holiday weekdays. Because event days do not occur on weekends or holidays, the exclusion of these data does not affect the model's ability to estimate ex post load impacts.

of the SCE CPP customers faced a substantially higher CPP price in all event hours than did customers at the other two utilities. Figure 4.4 shows the rather tight range of uncertainty-adjusted load impacts, given the highly significant coefficients estimated for SCE's CPP customers. Figure 4.5 illustrates the load impacts for the average event day, while Figure 4.6 illustrates the estimated event-specific load impacts.

Table 4.4: CPP Total Load Impacts for Average Event Day -- *SCE*

Hour Ending	Estimated Reference Load (kWh)	Actual Event Day Load (kWh)	Estimated Load Impact (kWh/hour)	Weighted Average Temperature (°F)	Uncertainty Adjusted Impact (kWh/hr)- Percentiles				
					10th%ile	30th%ile	50th%ile	70th%ile	90th%ile
1	13,256	12,852	-404	70.8	773	78	-404	-885	-1,581
2	13,438	13,566	128	70.0	1,437	664	128	-407	-1,180
3	13,402	13,697	295	69.2	1,510	792	295	-202	-920
4	13,691	14,429	737	68.5	1,640	1,107	737	368	-165
5	16,093	17,496	1,403	67.9	2,587	1,888	1,403	919	219
6	19,714	20,100	386	67.5	1,764	950	386	-177	-991
7	22,166	21,858	-308	67.8	1,223	319	-308	-935	-1,839
8	23,451	22,566	-884	70.4	701	-235	-884	-1,533	-2,470
9	23,185	22,216	-969	74.6	316	-443	-969	-1,495	-2,254
10	23,368	22,289	-1,079	78.8	375	-484	-1,079	-1,674	-2,533
11	23,848	22,413	-1,435	82.7	7	-845	-1,435	-2,025	-2,877
12	22,946	19,678	-3,268	85.7	-1,865	-2,694	-3,268	-3,841	-4,670
13	21,261	12,137	-9,123	88.1	-7,946	-8,642	-9,123	-9,605	-10,300
14	20,442	11,625	-8,817	89.6	-7,543	-8,296	-8,817	-9,338	-10,091
15	18,364	10,882	-7,481	89.7	-6,320	-7,006	-7,481	-7,956	-8,643
16	17,083	10,398	-6,685	89.6	-5,465	-6,186	-6,685	-7,184	-7,904
17	15,811	9,591	-6,220	88.4	-4,762	-5,623	-6,220	-6,817	-7,678
18	14,899	9,193	-5,706	86.7	-4,305	-5,133	-5,706	-6,279	-7,107
19	15,849	12,723	-3,126	84.1	-1,414	-2,425	-3,126	-3,826	-4,838
20	16,333	14,720	-1,612	80.1	330	-818	-1,612	-2,407	-3,554
21	16,081	15,402	-680	76.7	1,129	60	-680	-1,420	-2,488
22	15,725	15,155	-571	74.5	1,222	163	-571	-1,304	-2,363
23	13,956	14,035	79	73.2	1,419	627	79	-470	-1,262
24	13,464	13,851	387	72.3	1,638	899	387	-125	-863
	Reference Energy Use (kWh)	Actual Event Day Energy Use (kWh)	Change in Energy Use (kWh)	Cooling Degree Hours (Base 75 °F)	Uncertainty Adjusted Impact (kWh/hour) - Percentiles				
					10th	30th	50th	70th	90th
Daily	427,824	372,872	-54,952	120.1	-21,551	-41,285	-54,952	-68,620	-88,353

Figure 4.4: CPP Uncertainty-Adjusted Load Impacts – Average Event-- *SCE*

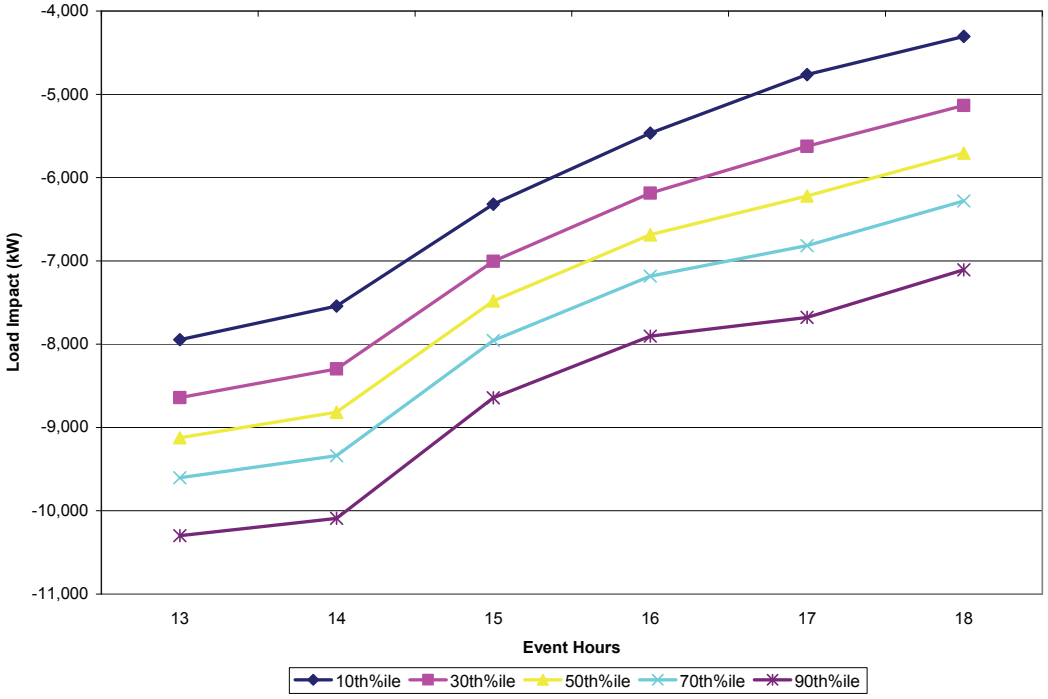


Figure 4.5: Total CPP Load Impacts – Average Event in 2007-- *SCE*

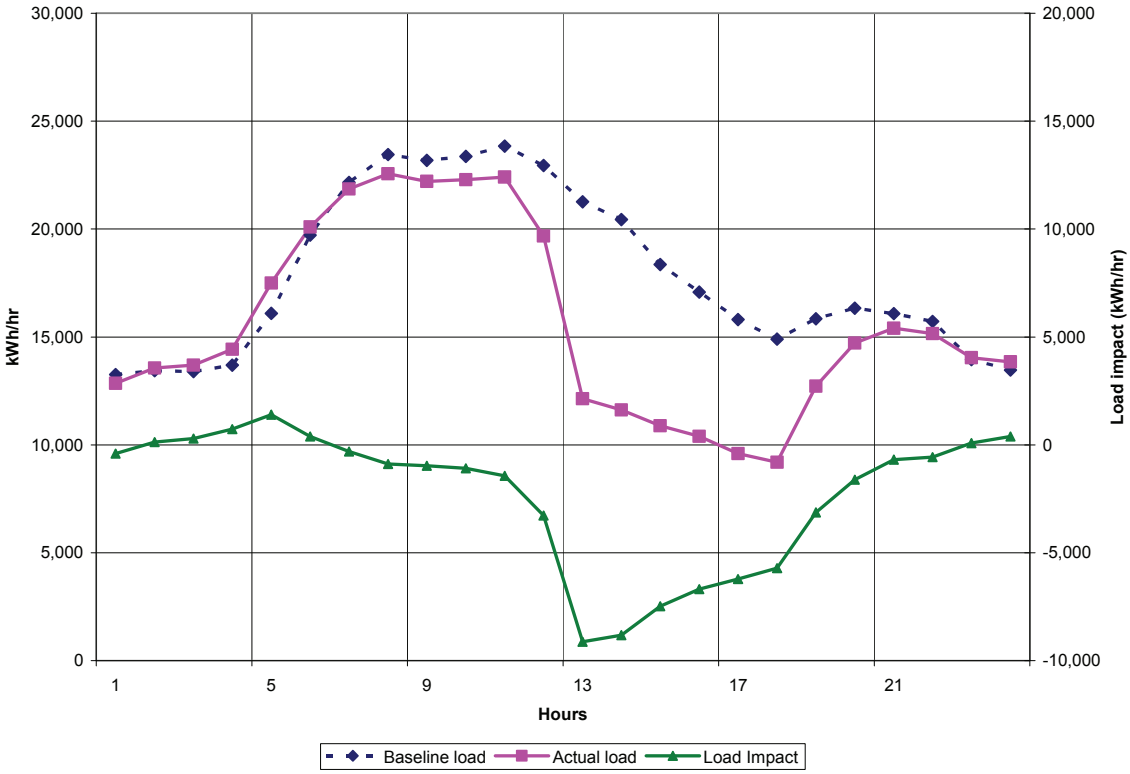
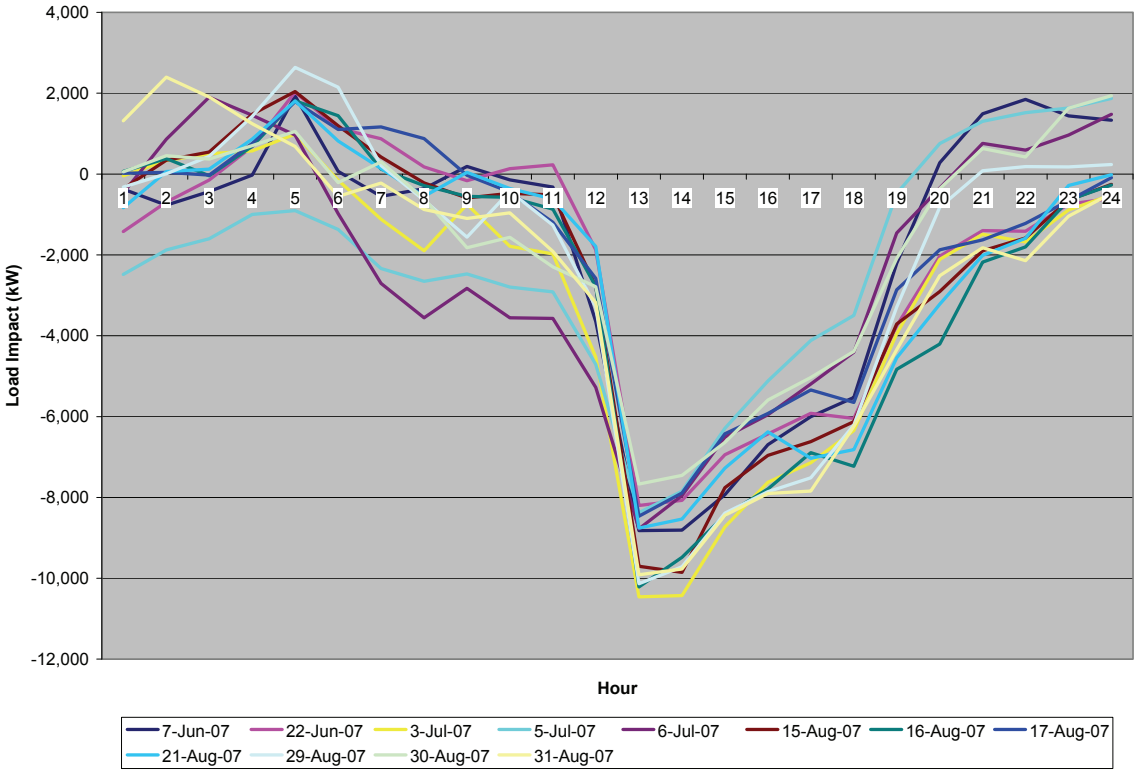


Figure 4.6: CPP Event-Specific Load Impacts – *SCE*



4.3 PG&E

PG&E called twelve CPP event days in 2007, as shown in the table below. In each case, the event was called a day ahead and was six hours in duration, from 12:00 noon to 6:00 p.m.

Table 4.5: PG&E CPP Event Days in 2007

Date	Event Time
June 13, 2007	12 p.m. to 6 p.m.
July 3, 2007	12 p.m. to 6 p.m.
July 5, 2007	12 p.m. to 6 p.m.
July 6, 2007	12 p.m. to 6 p.m.
July 9, 2007	12 p.m. to 6 p.m.
August 1, 2007	12 p.m. to 6 p.m.
August 21, 2007	12 p.m. to 6 p.m.
August 22, 2007	12 p.m. to 6 p.m.
August 28, 2007	12 p.m. to 6 p.m.
August 29, 2007	12 p.m. to 6 p.m.
August 30, 2007	12 p.m. to 6 p.m.
August 31, 2007	12 p.m. to 6 p.m.

Aggregate CPP load impacts for PG&E were estimated on the basis of an aggregate regression equation using data for all CPP participants, as for the other utilities. Table 4.6 summarizes the total hourly load impacts for the average CPP event (*e.g.*, averaged over all individual events). The hourly average event-day load reductions ranged from about 8.5 to 15 MW, with the largest reductions occurring in the last three event hours. The load impacts represented percentage reductions ranging from about 2.5 to 5 percent. Figure 4.7 shows the somewhat wide range of uncertainty-adjusted load impacts. Figure 4.8 illustrates the baseline and actual load, and the hourly load impacts for the average event. Figure 4.9 shows event-specific estimated load impacts. The event-specific load impacts, both in magnitude and hourly pattern range more widely than for the CPP load impacts at SDG&E and SCE. It is possible that some of this effect is due to differences in customer load changes on near-holiday event days.

Table 4.6: CPP Total Load Impacts for Average Event Day in 2007 – *PG&E*

Hour Ending	Estimated Reference Load (kWh)	Actual Event Day Load (kWh)	Estimated Load Impact (kWh/hour)	Weighted Average Temperature (°F)	Uncertainty Adjusted Impact (kWh/hr)- Percentiles				
					10th%ile	30th%ile	50th%ile	70th%ile	90th%ile
1	229,690	225,817	-3,873	68.9	5,042	-225	-3,873	-7,521	-12,789
2	225,869	222,281	-3,588	67.9	4,706	-194	-3,588	-6,982	-11,883
3	224,012	220,440	-3,572	66.9	3,127	-831	-3,572	-6,313	-10,271
4	225,418	223,224	-2,194	66.0	3,197	12	-2,194	-4,400	-7,584
5	235,574	234,204	-1,370	65.2	5,170	1,306	-1,370	-4,046	-7,910
6	256,166	255,714	-452	64.6	4,200	1,452	-452	-2,355	-5,103
7	280,417	281,998	1,580	64.6	4,114	2,617	1,580	543	-954
8	304,409	305,571	1,162	66.6	7,444	3,732	1,162	-1,409	-5,121
9	322,552	325,181	2,629	69.9	14,097	7,321	2,629	-2,064	-8,840
10	337,643	339,294	1,651	73.4	13,735	6,596	1,651	-3,293	-10,432
11	349,332	349,219	-113	77.2	10,474	4,219	-113	-4,445	-10,700
12	349,057	348,381	-676	80.8	9,571	3,517	-676	-4,869	-10,922
13	340,889	332,363	-8,526	83.6	-462	-5,226	-8,526	-11,825	-16,589
14	343,652	332,567	-11,086	85.6	-802	-6,878	-11,086	-15,293	-21,369
15	338,421	327,208	-11,213	86.9	-574	-6,860	-11,213	-15,566	-21,852
16	324,814	310,986	-13,828	87.3	-6,616	-10,877	-13,828	-16,779	-21,041
17	310,772	295,808	-14,965	86.9	-6,848	-11,643	-14,965	-18,286	-23,081
18	295,138	281,086	-14,052	85.7	-4,315	-10,068	-14,052	-18,037	-23,789
19	281,982	276,158	-5,824	83.3	5,131	-1,341	-5,824	-10,306	-16,778
20	271,521	271,080	-442	79.6	9,319	3,552	-442	-4,436	-10,202
21	263,479	263,963	484	75.6	9,834	4,310	484	-3,342	-8,866
22	254,530	253,583	-947	73.1	8,817	3,049	-947	-4,942	-10,711
23	243,866	242,492	-1,374	71.4	8,232	2,557	-1,374	-5,305	-10,981
24	237,692	235,720	-1,972	69.9	7,685	1,979	-1,972	-5,924	-11,629
	Reference Energy Use (kWh)	Actual Event Day Energy Use (kWh)	Change in Energy Use (kWh)	Cooling Degree Hours (Base 75 °F)	Uncertainty Adjusted Impact (kWh/hour) - Percentiles				
					10th	30th	50th	70th	90th
Daily	6,846,897	6,754,338	-92,560	87.3	114,278	-7,924	-92,560	-177,196	-299,397

Figure 4.7: CPP Uncertainty-Adjusted Load Impacts – Average Event Day – *PG&E*

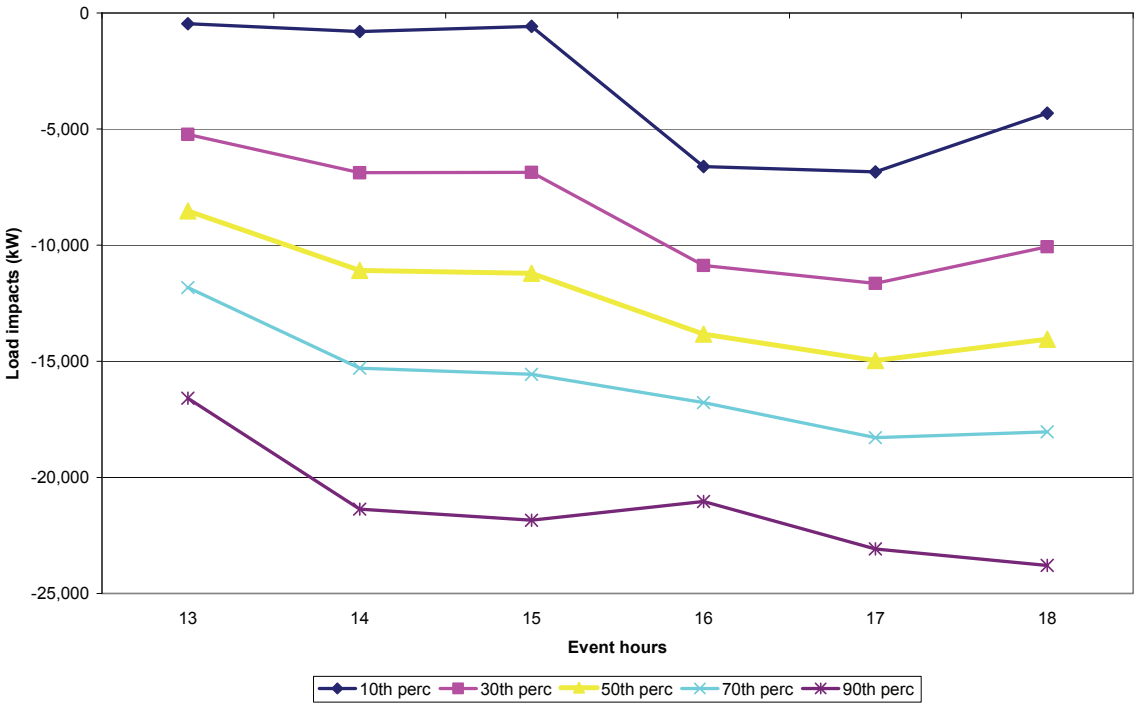


Figure 4.8: CPP Total Load Impacts – Average Event Day in 2007 – *PG&E*

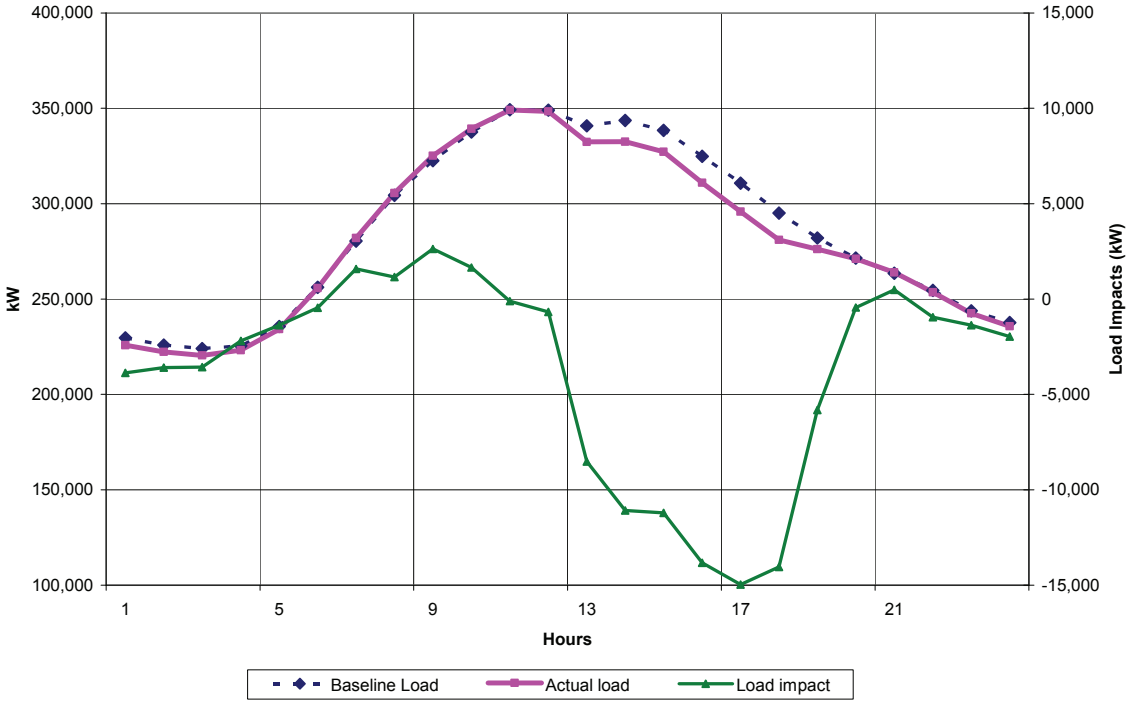
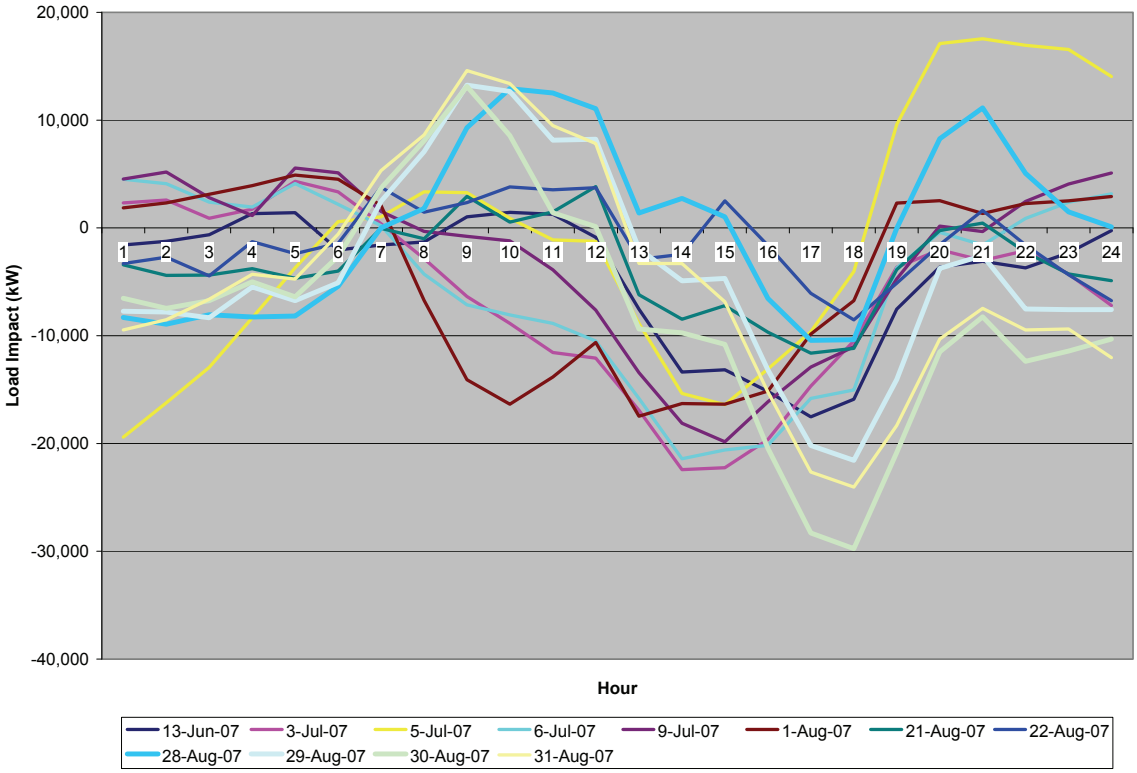


Figure 4.9: CPP Event-Specific Load Impacts – *PG&E*



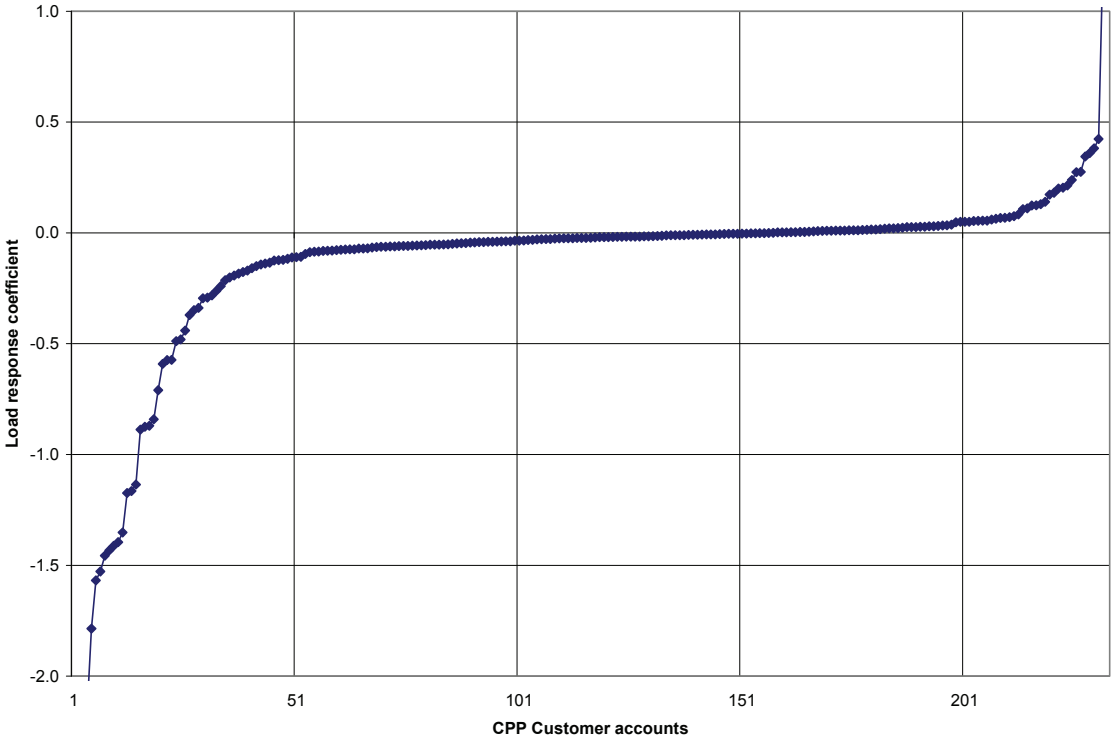
4.4 Customer-level regression analysis

To better understand the nature of the aggregate CPP load impacts, and to investigate the range of price responsiveness across CPP participants, we estimated customer-specific load impact regressions and examined the event coefficients. To simplify comparisons across customers, the equations were estimated in log form, such that the coefficient on the event variables represents a percentage load impact (*e.g.*, a coefficient of – 0.10 indicates a 10 percent load reduction. Separate variables were included for the first three hours and last three hours of the event period (note that most SCE CPP participants faced a single CPP price during all 6 event hours).

4.4.1 SDG&E

Figure 4.8 shows the distribution of estimated coefficients across SDG&E's CPP customer accounts for the moderate-price period. Nearly two-thirds of the coefficients were negative, and approximately half of those were significant. The very large negative load-response coefficients typically indicated customers with an NAICS code indicating water utility, who have the ability to reduce load to nearly zero during event periods.

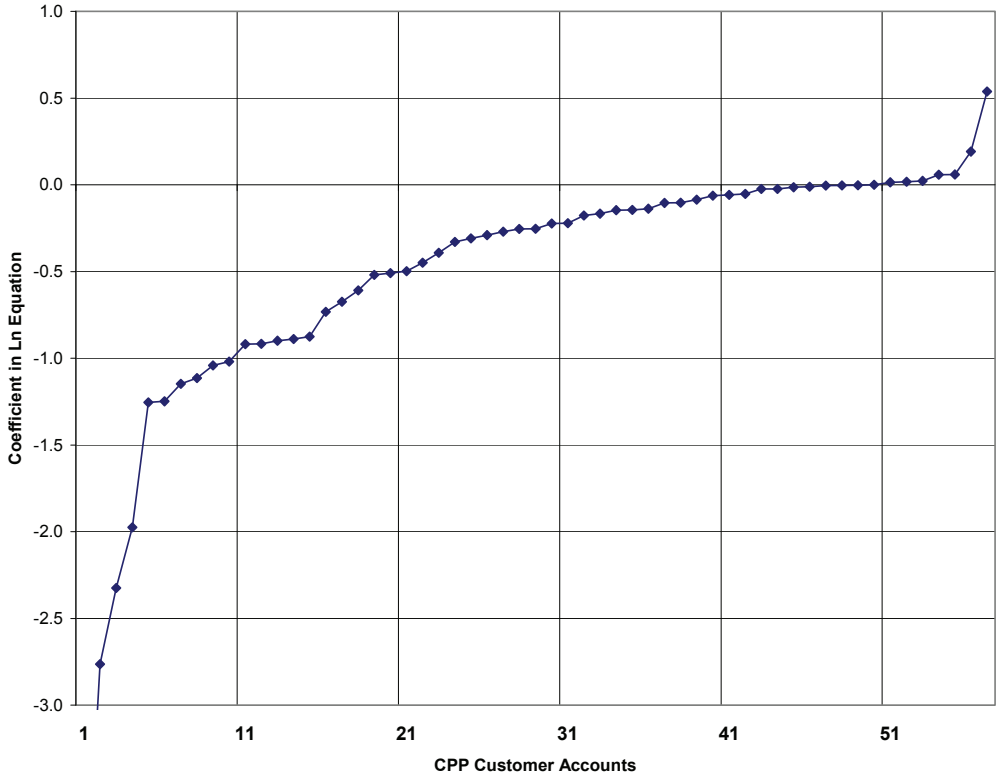
Figure 4.10: Distribution of CPP Customer-Specific Load Response Estimates – *SDG&E*



4.4.2 SCE

Figure 4.9 shows the distribution of estimated coefficients for SCE's CPP customers during the first three hours of the event period. Nearly two-thirds of the coefficients were negative and significant, while only one coefficient was positive and significant.

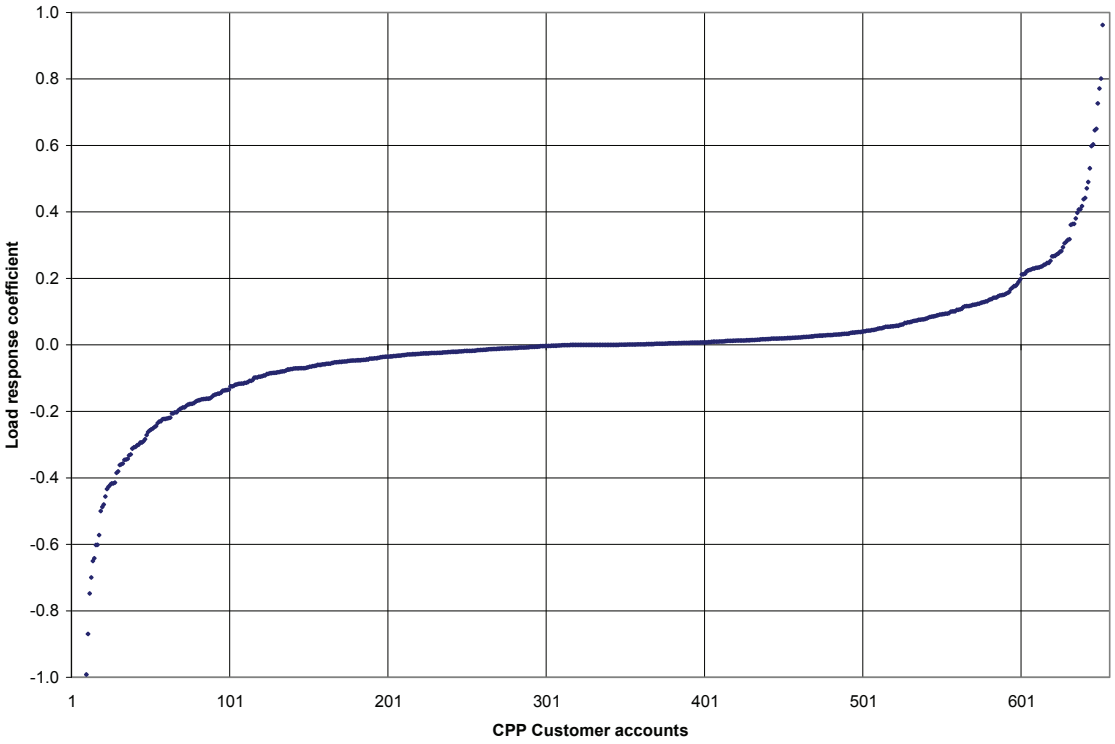
Figure 4.11: Distribution of Customer-Specific Load Response Estimates -- *SCE*



4.4.3 PG&E

Figure 4.10 shows the distribution of estimated load response coefficients across PG&E's CPP customer accounts for the moderate-price period. Approximately half of the coefficients were negative, but only about 15 to 20 percent were statistically significant at the 95 percent level.

Figure 4.12: Distribution of Customer-Specific Load Response Estimates – *PG&E*



5. Detailed study findings – DBP load impacts

All regression coefficients and statistics for each DBP equation are presented in Appendix 1. This section summarizes DBP bidding patterns and estimated load impacts for each of the utilities.

5.1 SDG&E

5.1.1 Bidding patterns

Tables 5.1a and 5.1b summarize the characteristics of SDG&E's DBP enrollees and bidders. According to the program data, 50 customer accounts (out of 181 enrollees) submitted standing bids for each event (no information was available on bidding for the last event (October 24). The bulk of DBP customers who did not submit a standing bid were also participants in the Peak Day (CI2020) program. When events are called on the same day, Peak Day dominates DBP for these customers. As indicated in the first table, DBP bidders were concentrated in the three industry groups that contained the bulk of the DBP enrollees (Manufacturing, Offices, etc., and Schools). According to the second table, the bulk of DBP enrollees were less than 1,000 kW in size.

Table 5.1a: DBP Bidding Activity by Industry group – *SDG&E*

	Definitions	All DBP Enrollees			Bidders			Non-Bidders		
	NAICS	Count	Sum of max demands (MW)	% of load	Count	Sum of max demands (MW)	% of total load	Count	Sum of max demands (MW)	% of total load
Ag, Min, Const	11,21,23	3	5	7%	-	-	0%	3	5	7%
Manuf	31,32,33	27	24	36%	14	7	10%	13	17	26%
Wholes, transp, util	22,42,48-49	6	3	5%	6	3	5%	-	-	0%
Retail	44,45	5	1	2%	-	-	0%	5	1	2%
Off, hotel, serv	51-56,62,72	36	15	23%	12	8	12%	24	7	11%
Schools	61	92	16	25%	18	4	6%	74	12	19%
Inst., govt	71,81,92	12	1	2%		-	0%	12	1	2%
TOTAL		181	66	100%	50	22	34%	131	43	66%
Percent of total					28%	34%		72%	66%	

Table 5.1b DBP Bidding Activity by Size – *SDG&E*

	All DBP Enrollees			Bidders			Non-Bidders		
	Count	Sum of max demands (MW)	% of load	Count	Sum of max demands (MW)	% of total load	Count	Sum of max demands (MW)	% of total load
Less than 1,000kW	174	41	62%	47	17	26%	127	24	36%
Greater than 1,000kW	7	25	38%	3	5	7%	4	20	30%
TOTAL	181	66	100%	50	22	34%	131	43	66%
Percent of total				28%	34%		72%	66%	

5.1.2 Load impacts

SDG&E DBP events are listed in the following table:

Table 5.2: SDG&E DBP Event Days in 2007

Event Days	Event Time
August 15, 2007	2 p.m. to 6 p.m.
August 16, 2007	2 p.m. to 6 p.m.
August 17, 2007	2 p.m. to 6 p.m.
August 21, 2007	2 p.m. to 6 p.m.
August 29, 2007	2 p.m. to 6 p.m.
August 30, 2007	2 p.m. to 6 p.m.
August 31, 2007	2 p.m. to 6 p.m.
September 4, 2007	1 p.m. to 6 p.m.
October 24, 2007	12 p.m. to 8 p.m.

Events typically lasted four hours, from 2 to 6 p.m. (hours-ending 15 through 18). A notable exception was the last event, on October 24, which was called for eight hours, from hour-ending 13 through 20, in conjunction with a number of other emergency programs, due to a series of brush fires in hot weather conditions. The program load impacts were estimated from a regression equation of the form described in Section 3 applied to hourly load data for the 50 DBP bidders. Table 5.3 shows total load impacts for the average DBP

event day, including October 24. The average hourly load impact was about 0.4 MW, or about 2.5 to 3.5 percent of the total DBP bidders load.

Table 5.3a: DBP Load Impacts for Average Event Day in 2007 – *SDG&E*

Hour Ending	Estimated Reference Load (kWh)	Actual Event Day Load (kWh)	Estimated Load Impact (kWh/hour)	Weighted Average Temperature (°F)	Uncertainty Adjusted Impact (kWh/hr)- Percentiles				
					10th%ile	30th%ile	50th%ile	70th%ile	90th%ile
1	9,159	8,805	-354	70.2	125	-158	-354	-550	-833
2	8,936	8,593	-343	70.1	125	-151	-343	-534	-810
3	8,628	8,291	-337	69.6	66	-172	-337	-502	-740
4	8,728	8,438	-290	69.1	195	-91	-290	-488	-775
5	8,846	8,721	-125	68.9	363	75	-125	-325	-613
6	9,946	10,158	212	69.5	1,045	553	212	-129	-621
7	10,696	10,695	-1	72.3	372	151	-1	-154	-375
8	11,379	11,399	20	75.7	358	158	20	-119	-318
9	12,075	12,063	-12	79.4	418	164	-12	-188	-442
10	12,657	12,662	5	82.2	286	120	5	-110	-276
11	12,892	12,710	-182	83.5	107	-64	-182	-300	-470
12	12,603	12,567	-37	83.3	397	141	-37	-214	-471
13	12,807	12,427	-380	83.2	197	-144	-380	-616	-957
14	12,869	12,458	-411	82.7	360	-96	-411	-726	-1,182
15	12,709	12,398	-311	82.4	599	61	-311	-684	-1,222
16	12,638	12,221	-417	80.7	407	-80	-417	-754	-1,240
17	12,235	11,909	-325	79.3	358	-46	-325	-604	-1,008
18	11,477	11,204	-272	76.0	342	-21	-272	-524	-887
19	10,769	10,608	-161	73.5	361	52	-161	-375	-683
20	10,775	10,725	-51	72.4	342	110	-51	-211	-443
21	10,796	10,684	-112	71.9	257	39	-112	-263	-481
22	10,522	10,334	-188	71.0	144	-52	-188	-324	-521
23	10,120	9,958	-162	70.5	173	-25	-162	-299	-497
24	9,535	9,370	-164	71.3	143	-38	-164	-290	-472
	Reference Energy Use (kWh)	Actual Event Day Energy Use (kWh)	Change in Energy Use (kWh)	Cooling Degree Hours (Base 75 °F)	Uncertainty Adjusted Impact (kWh/hour) - Percentiles				
					10th	30th	50th	70th	90th
Daily	263,796	259,397	-4,400	63.4	7,539	486	-4,400	-9,285	-16,339

Figure 5.1a shows the uncertainty-adjusted range of potential load impacts, which is fairly wide, and Figure 5.1b illustrates the average load impacts, along with the baseline load and actual load.

Note that Schools, which constituted 25 percent of the enrolled load, were excluded from the results presented in this section. Because many of the event days occurred around the time that schools were returning to session (and one event day occurred when school was cancelled because of brush fires), the statistical models did not produce reliable load impacts for most event days. Our examination of the raw data for this customer group did not provide any indication that definitive load impacts could be found by fine-tuning the models. Therefore, we believed that excluding the dubious results for Schools from the aggregate results produces a more accurate assessment of the program-level load impacts.

Figure 5.1a: DBP Uncertainty-Adjusted Load Impacts – Average Event Day – *SDG&E*

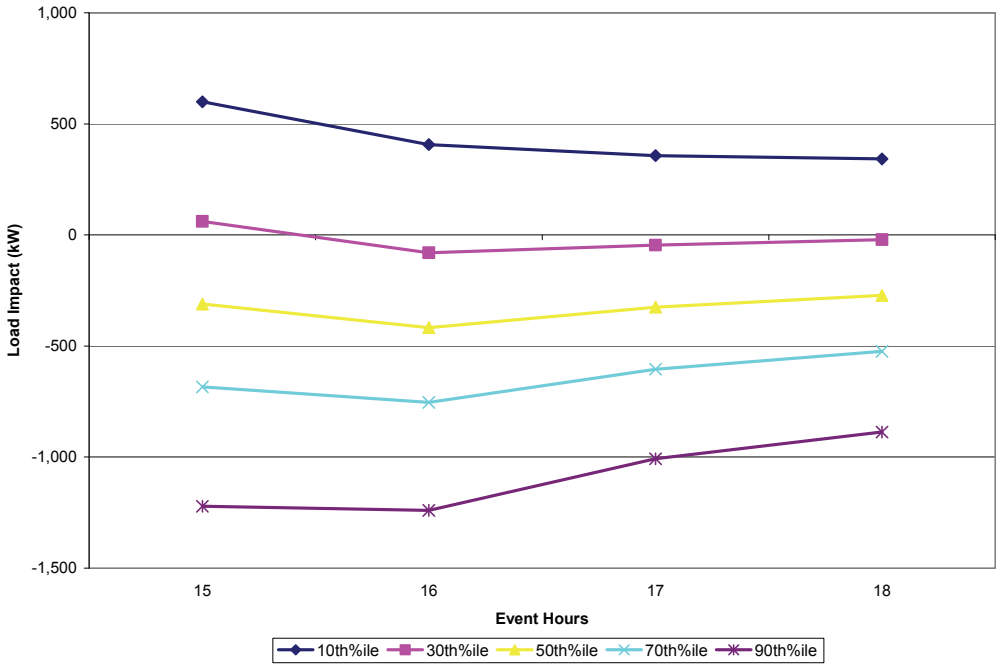
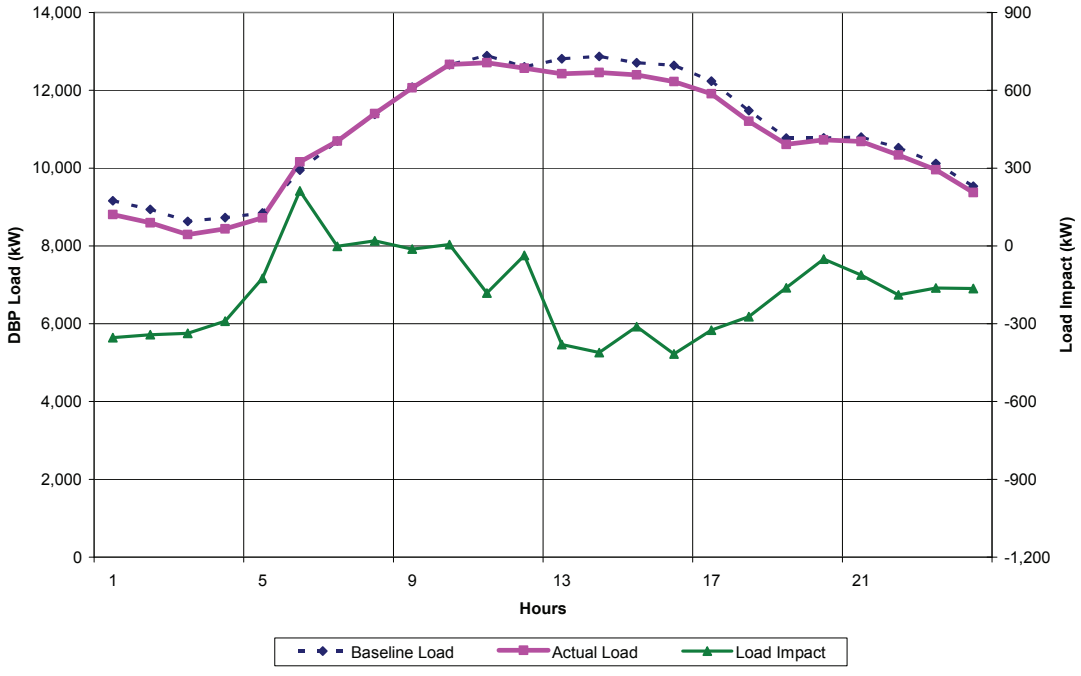
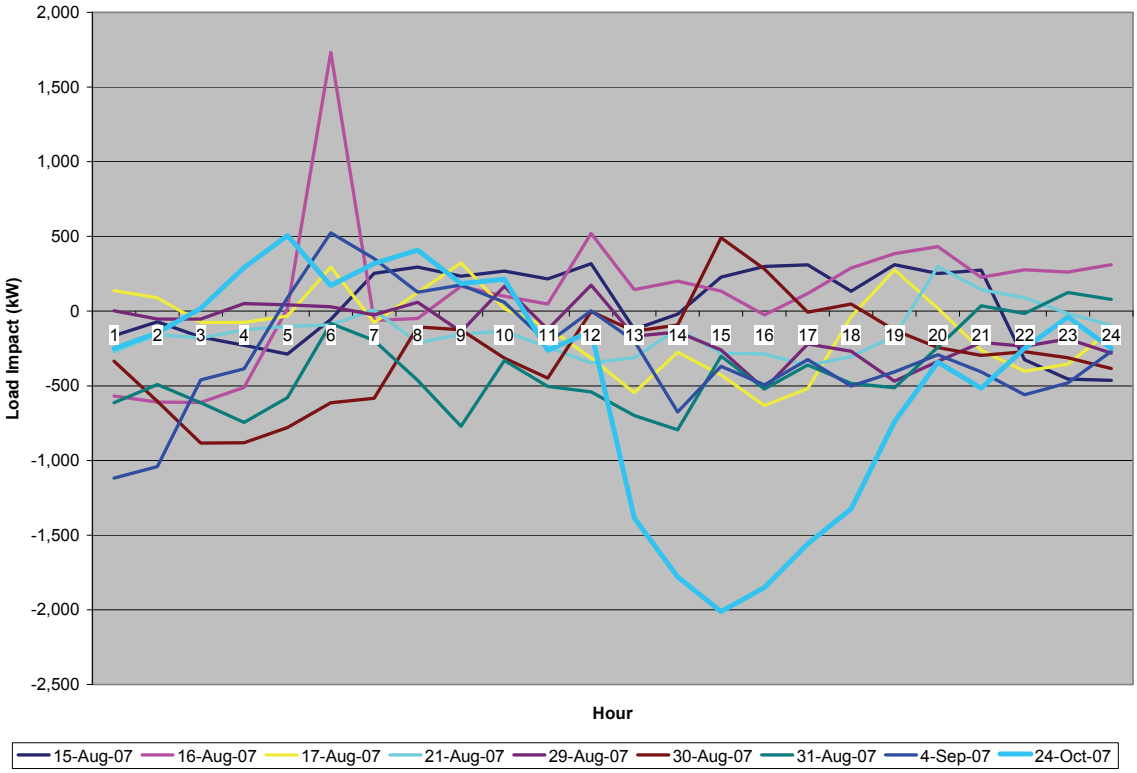


Figure 5.1b: SDG&E DBP Load Impacts – Average Event Day in 2007



Finally, Figure 5.1c shows estimated load impacts for each event. Note that the load impacts for the October 24 event, which was called in conjunction with other emergency programs, were much larger than on the other event days.

Figure 5.1c: DBP Event-Specific Load Impacts – *SDG&E*



As a result, we calculated a second set of average event day load impacts, which exclude the non-representative October 24 event. Table 5.3b provides detailed information on hourly loads and load impacts, Figure 5.2a shows the uncertainty-adjusted range of potential load impacts, which is again fairly wide, and Figure 5.2b illustrates the average load impacts, along with the baseline load and actual load. The average hourly load impact excluding October 24 was about 0.24 MW, or less than 2 percent of the total DBP bidders load.

Table 5.3b: DBP Load Impacts for Average Event Day in 2007 (Excluding October 24) – *SDG&E*

Hour Ending	Estimated Reference Load (kWh)	Actual Event Day Load (kWh)	Estimated Load Impact (kWh/hour)	Weighted Average Temperature (°F)	Uncertainty Adjusted Impact (kWh/hr)- Percentiles				
					10th%ile	30th%ile	50th%ile	70th%ile	90th%ile
1	9,460	9,093	-367	70.9	143	-158	-367	-575	-876
2	9,245	8,878	-367	70.6	123	-167	-367	-568	-857
3	8,935	8,553	-381	70.1	9	-222	-381	-541	-772
4	9,079	8,716	-363	70.0	61	-189	-363	-536	-786
5	9,198	8,994	-204	69.7	205	-36	-204	-371	-613
6	10,310	10,527	217	70.2	1,107	581	217	-148	-674
7	11,090	11,049	-41	72.8	322	107	-41	-190	-405
8	11,817	11,789	-29	75.8	273	95	-29	-152	-331
9	12,571	12,534	-36	79.1	412	147	-36	-220	-485
10	13,164	13,143	-21	81.5	260	94	-21	-136	-302
11	13,376	13,204	-172	82.7	134	-47	-172	-297	-478
12	13,086	13,062	-24	82.4	437	164	-24	-213	-485
13	13,303	13,048	-255	82.4	84	-116	-255	-393	-593
14	13,353	13,113	-240	82.2	190	-64	-240	-416	-670
15	13,125	13,026	-99	81.9	332	77	-99	-275	-529
16	13,074	12,836	-238	80.5	244	-40	-238	-435	-719
17	12,686	12,515	-171	79.2	192	-23	-171	-320	-534
18	11,895	11,754	-141	76.5	233	12	-141	-294	-515
19	11,141	11,053	-89	73.6	383	104	-89	-282	-561
20	11,176	11,162	-14	72.6	377	146	-14	-175	-406
21	11,195	11,133	-62	72.1	274	76	-62	-199	-398
22	10,930	10,749	-181	71.4	173	-36	-181	-325	-535
23	10,506	10,328	-178	70.8	175	-34	-178	-322	-530
24	9,845	9,691	-154	71.7	172	-20	-154	-287	-480
	Reference Energy Use (kWh)	Actual Event Day Energy Use (kWh)	Change in Energy Use (kWh)	Cooling Degree Hours (Base 75 °F)	Uncertainty Adjusted Impact (kWh/hour) - Percentiles				
					10th	30th	50th	70th	90th
Daily	273,561	269,952	-3,609	59.0	6,315	452	-3,609	-7,669	-13,532

Figure 5.2a: DBP Uncertainty-Adjusted Load Impacts – Average Event Day (Excluding October 24) – *SDG&E*

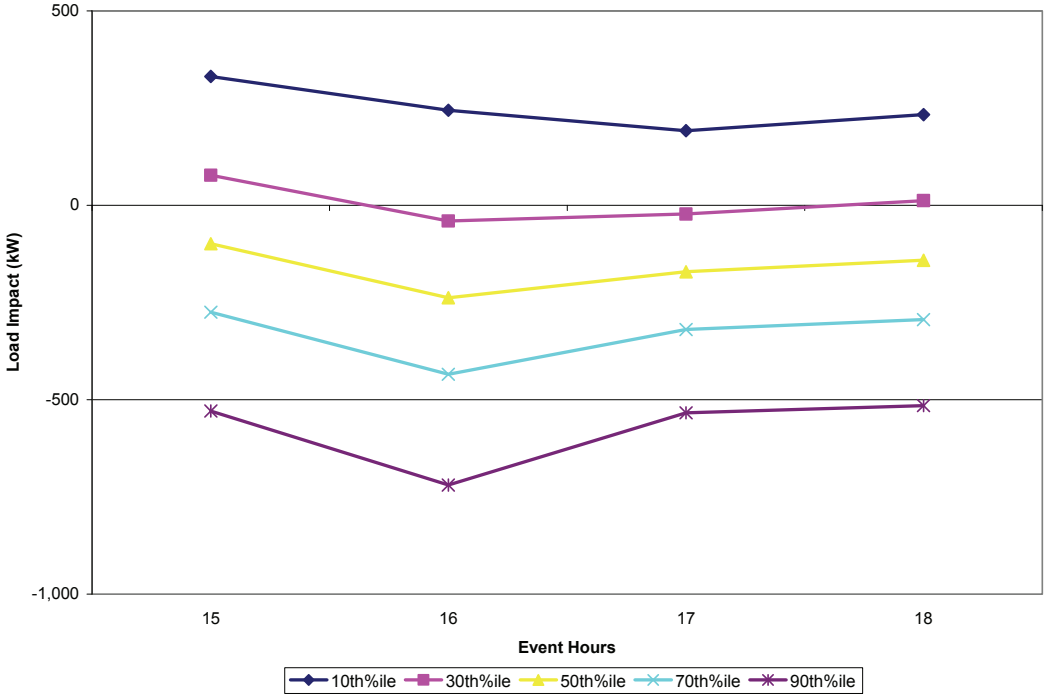
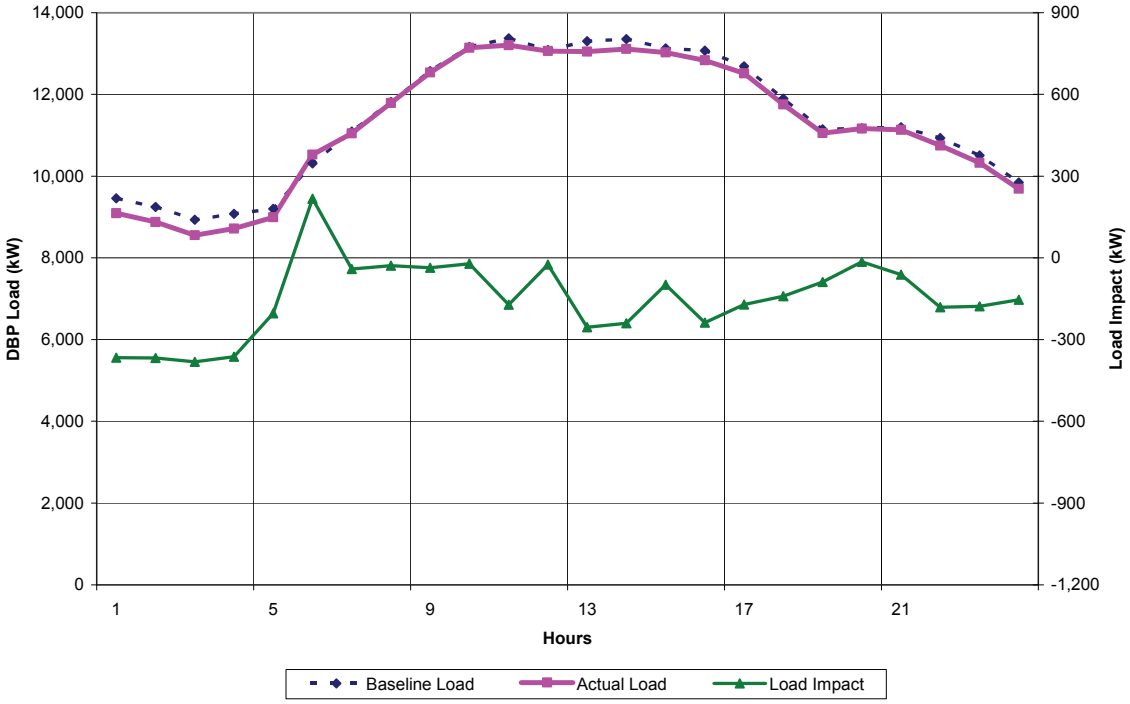


Figure 5.2b: SDG&E DBP Load Impacts – Average Event Day in 2007 (Excluding October 24)



5.2 SCE

This section summarizes the bidding patterns of SCE's DBP customer accounts, and then reports on program-level load impacts.

5.2.1 Bidding patterns

Tables 5.4a through 5.4c summarize patterns of bidding behavior by SCE's DBP enrollees. Bidders are divided into three approximately equal groups of customers by frequency of their bidding behavior. As indicated in the first table, approximately 20 percent of SCE's DBP enrollees, representing 42 percent of the total DBP load, bid in at least one event.

Table 5.4a: DBP Bidding Activity by Industry group – *SCE*

	DBP Bidders (at least 1 bid)			Active Bidders (18 - 22 bids)			Frequent Bidders (9 - 17 bids)			Occasional Bidders (1 - 8 bids)		
	Count	Sum of max demands (kW)	% of bidding load	Count	Sum of max demands	% of bidding load	Count	Sum of max demands (kW)	% of bidding load	Count	Sum of max demands (kW)	% of bidding load
Ag, Min, Const	7	11,704	2%	6	8,306	1%	1	3,398	1%	0	-	0%
Manuf	74	382,724	59%	17	107,937	17%	26	127,632	20%	31	147,155	23%
Wholes, transp, util	54	62,443	10%	11	4,893	1%	13	17,616	3%	30	39,934	6%
Retail	19	17,250	3%	7	5,743	1%	8	6,770	1%	4	4,737	1%
Off, hotel, serv	35	44,807	7%	16	26,187	4%	11	9,911	2%	8	8,709	1%
Schools	47	42,937	7%	23	15,119	2%	15	20,260	3%	9	7,558	1%
Inst., govt	17	81,607	13%	8	55,458	9%	6	20,253	3%	3	5,896	1%
TOTAL	253	643,472		88	223,643		80	205,840		85	213,989	
% of Total Enrolled in DBP	21%	42%		7%	14%		7%	13%		7%	14%	

Table 5.4b: DBP Bidding Activity by Size – *SCE*

	DBP Bidders (at least 1 bid)			Active Bidders (18 - 22 bids)			Frequent Bidders (9 - 17 bids)			Occasional Bidders (1 - 8 bids)		
Size	Count	Sum of max demands (kW)	% of bidding load	Count	Sum of max demands	% of bidding load	Count	Sum of max demands (kW)	% of bidding load	Count	Sum of max demands (kW)	% of bidding load
< 1,000 kW	147	75,501	12%	53	28,884	4%	46	22,031	3%	48	24,586	4%
> 1,000 kW	106	567,971	88%	35	194,759	30%	34	183,809	29%	37	189,403	29%
TOTAL	253	643,472		88	223,643		80	205,840		85	213,989	

Table 5.4c: DBP Bidding Activity – Percent of Enrolled DBP, by Size – *SCE*

	DBP Bidders (at least 1 bid)		Active Bidders (18 - 22 bids)		Frequent Bidders (9 - 17 bids)		Occasional Bidders (1 - 8 bids)	
Size	Count	Sum of max demands (kW)	Count	Sum of max demands	Count	Sum of max demands (kW)	Count	Sum of max demands (kW)
< 1,000 kW	16%	19%	6%	7%	5%	5%	5%	6%
> 1,000 kW	38%	50%	13%	17%	12%	16%	13%	17%

5.2.2 Load impacts

SCE's twenty-two DBP events are listed in the following table, along with the event trigger:

Table 5.5: SCE DBP Event Days in 2007

Event Days	Event Trigger
June 19, 2007	Heat Rate Exceed 14,000 BTU
June 22, 2007	Heat Rate Exceed 14,000 BTU
July 3, 2007	Heat Rate Exceed 15,000 BTU
July 5, 2007	Heat Rate Exceed 15,000 BTU
July 6, 2007	Heat Rate Exceed 15,000 BTU
July 9, 2007	Heat Rate Exceed 15,000 BTU
July 10, 2007	Heat Rate Exceed 15,000 BTU
July 16, 2007	Heat Rate Exceed 15,000 BTU
July 23, 2007	Heat Rate Exceed 15,000 BTU
July 27, 2007	Heat Rate Exceed 15,000 BTU
August 14, 2007	Heat Rate Exceed 15,000 BTU
August 15, 2007	Heat Rate Exceed 15,000 BTU

August 16, 2007	Heat Rate Exceed 15,000 BTU
August 17, 2007	Heat Rate Exceed 15,000 BTU
August 20, 2007	Heat Rate Exceed 15,000 BTU
August 21, 2007	Heat Rate Exceed 15,000 BTU
August 28, 2007	Heat Rate Exceed 15,000 BTU
August 29, 2007	Heat Rate Exceed 15,000 BTU
August 30, 2007	Heat Rate Exceed 15,000 BTU
August 31, 2007	Heat Rate Exceed 15,000 BTU
September 4, 2007	Heat Rate Exceed 15,000 BTU
September 6, 2007	Heat Rate Exceed 15,000 BTU

Load impacts for events around holidays are problematic in terms of estimating baseline, or reference loads. This issue is most serious for a program such as DBP, since some customers could conceivably bid (and be paid for) load reductions on event days on which they were already planning to reduce consumption due to near-holiday operations (and the program baseline method, which would use days prior to the holidays, would likely overstate those customers' "true" baseline). As a result of so many of the events occurring near holidays, we modified our usual regression model, as described in Section 3, by adding a "morning usage" variable designed to adjust the model based on the actual level of average hourly usage in the morning hours of each day. The goal is to avoid potentially over-stating customer's baseline usage (and thus their load response) on event days near holidays, which might otherwise be the case if the "near-holiday" nature of those days was ignored.[12]

The aggregate DBP regression equation for SCE produced the following statistics:

- Adjusted R-squared = 0.9449; and
- Number of observations = 2,016.

Table 5.6 presents the usual summary of average event-day load impacts, including the uncertainty-adjusted values. The hourly load impacts averaged about 21 to 30 MW across all events. However, the range of load impacts across events was large. Figure 5.3 illustrates the range of uncertainty-adjusted impacts. Figure 5.4 shows the average load impacts.

[12] As noted in Section 3, if these near-holiday days were not event days, we would likely exclude them from the analysis database on the grounds that they are not representative of typical summer weekdays.

Table 5.6: Total DBP Load Impacts – Average Event Day – *SCE*

Hour Ending	Estimated Reference Load (kWh)	Actual Event Day Load (kWh)	Estimated Load Impact (kWh/hour)	Weighted Average Temperature (°F)	Uncertainty Adjusted Impact (kWh/hr)- Percentiles				
					10th%ile	30th%ile	50th%ile	70th%ile	90th%ile
1	867,600	855,997	-11,603	70.3	34,052	7,079	-11,603	-30,284	-57,257
2	858,165	851,876	-6,290	69.5	30,565	8,791	-6,290	-21,370	-43,144
3	845,694	841,523	-4,171	68.8	28,378	9,148	-4,171	-17,490	-36,720
4	837,868	842,352	4,483	68.1	34,023	16,570	4,483	-7,604	-25,057
5	861,898	862,071	172	67.5	28,908	11,930	172	-11,586	-28,563
6	900,225	898,979	-1,246	67.1	23,202	8,758	-1,246	-11,250	-25,694
7	941,186	945,882	4,696	67.2	28,260	14,338	4,696	-4,946	-18,868
8	987,357	994,095	6,738	69.2	33,348	17,626	6,738	-4,151	-19,872
9	1,032,874	1,033,115	241	72.6	24,823	10,300	241	-9,817	-24,340
10	1,067,325	1,062,930	-4,394	76.0	19,582	5,416	-4,394	-14,205	-28,371
11	1,089,176	1,087,839	-1,338	79.3	21,207	7,887	-1,338	-10,563	-23,883
12	1,085,214	1,074,546	-10,668	81.9	11,998	-1,393	-10,668	-19,942	-33,333
13	1,065,359	1,044,322	-21,036	83.9	7,031	-9,551	-21,036	-32,522	-49,104
14	1,067,305	1,046,169	-21,136	85.3	10,131	-8,342	-21,136	-33,930	-52,403
15	1,060,924	1,037,689	-23,235	85.8	8,444	-10,272	-23,235	-36,197	-54,913
16	1,046,229	1,017,691	-28,538	85.9	6,172	-14,335	-28,538	-42,740	-63,247
17	1,024,990	994,641	-30,350	85.0	9,692	-13,965	-30,350	-46,734	-70,391
18	992,531	968,231	-24,299	83.5	16,140	-7,752	-24,299	-40,847	-64,739
19	971,993	944,092	-27,901	81.2	11,219	-11,894	-27,901	-43,909	-67,021
20	957,860	937,934	-19,927	77.9	16,541	-5,004	-19,927	-34,849	-56,394
21	957,866	939,230	-18,636	75.1	17,070	-4,025	-18,636	-33,247	-54,342
22	939,150	929,185	-9,965	73.3	25,254	4,446	-9,965	-24,376	-45,183
23	921,562	902,796	-18,766	72.0	20,683	-2,623	-18,766	-34,908	-58,214
24	900,760	882,078	-18,682	71.0	22,784	-1,715	-18,682	-35,650	-60,148
	Reference Energy Use (kWh)	Actual Event Day Energy Use (kWh)	Change in Energy Use (kWh)	Cooling Degree Hours (Base 75 °F)	Uncertainty Adjusted Impact (kWh/hour) - Percentiles				
					10th	30th	50th	70th	90th
Daily	23,281,112	22,995,262	-285,850	80.8	489,504	31,419	-285,850	-603,118	-1,061,204

Figure 5.3: DBP Uncertainty-Adjusted Load Impacts – Average Event Day -- *SCE*

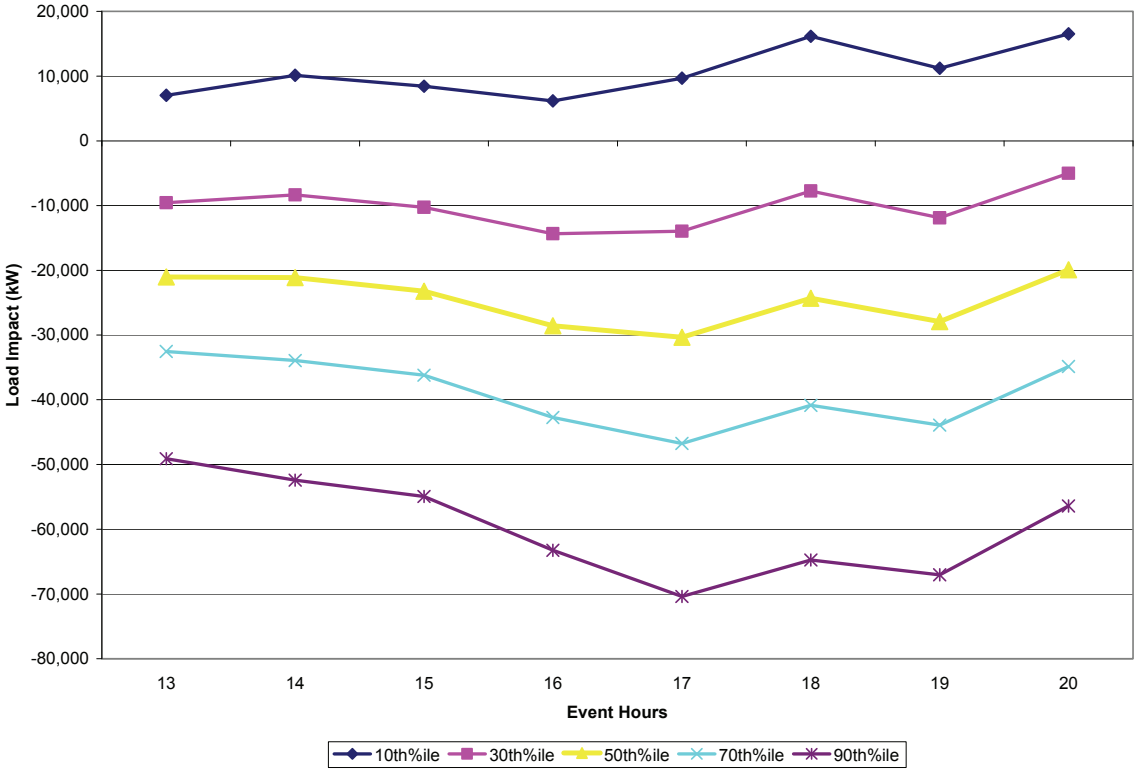
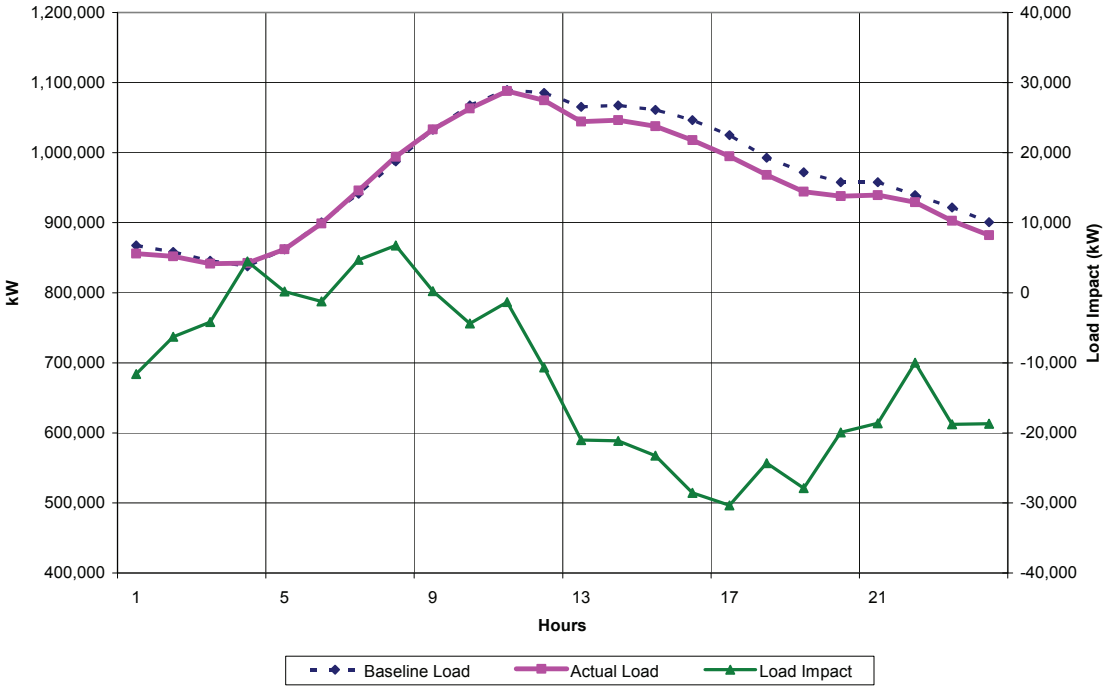


Figure 5.4: SCE DBP Load Impacts – Average Event Day in 2007



There was considerable variability across events in customers' *load-reduction bids* ("committed reductions" in the DBP Events database), *load impacts measure by program baselines* ("actual reductions"), and our *estimated load impacts*. Figure 5.5 illustrates this wide range of DBP load impacts across events, showing the average hourly amount of committed reductions for each SCE event, along with the program-estimated "actual reductions" and our estimated load reductions. An illustration of the non-representative nature of events around holidays in 2007 is provided by the much larger than average of total bid amounts submitted for the two events immediately following July 4. In those cases, our estimated load reductions, which account for the unusually low loads throughout the day for those days, average half the committed amounts or less. A somewhat stable pattern seemed to hold for several of the events in mid-August, in which bids, program estimated load reductions, and our estimated load impacts were quite similar for several events in a row. Difficulties in estimating load impacts for events around holidays are again illustrated for the last several events, which occurred just prior to and following Labor Day.

Figure 5.5: Average Hourly DBP Bids and Load Impacts by Event

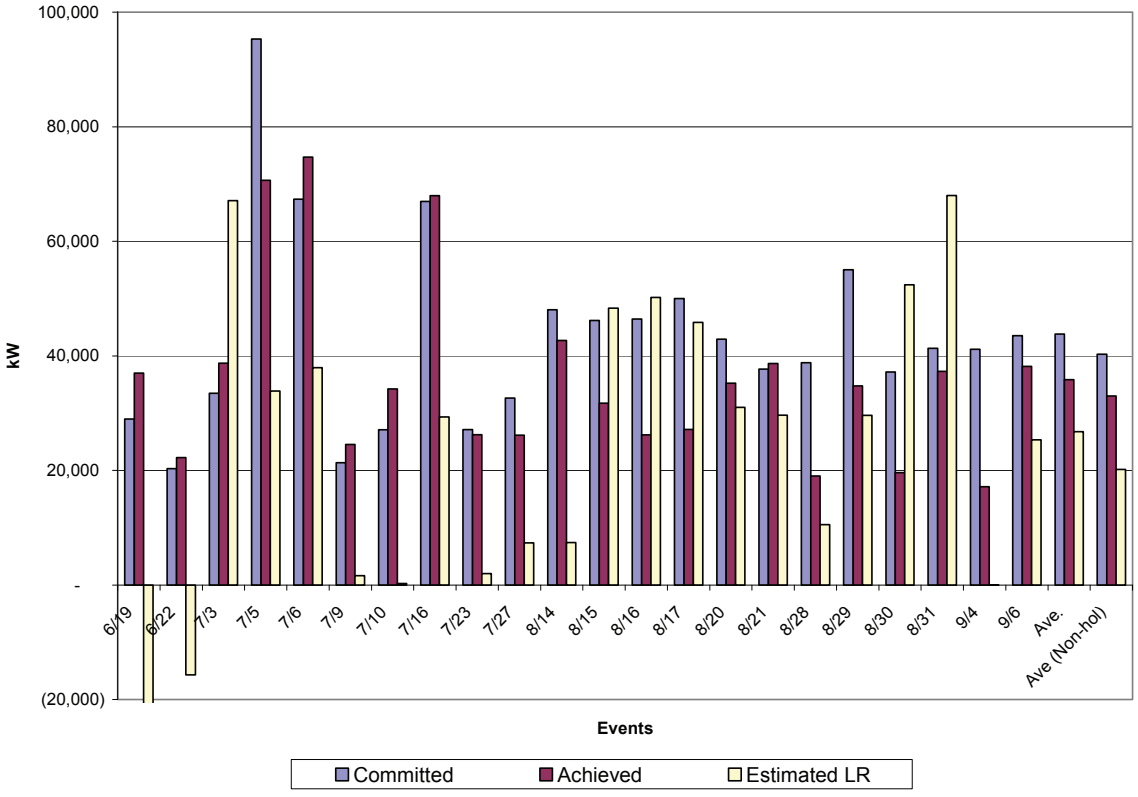
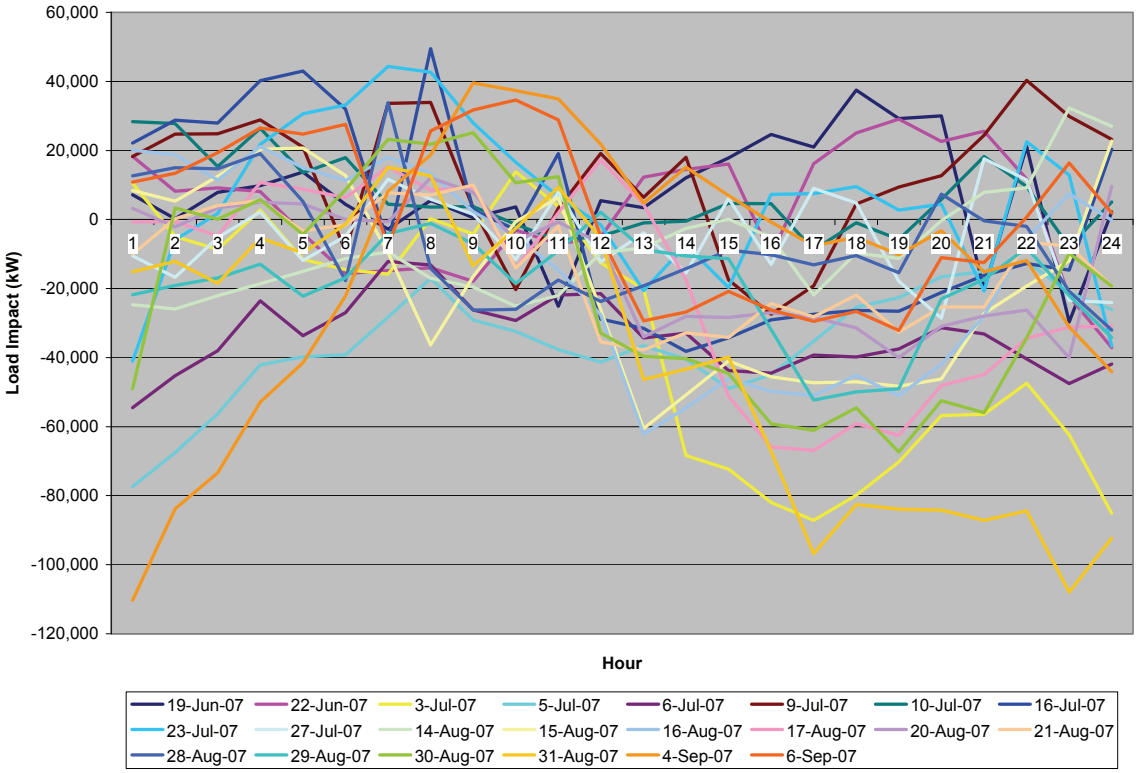


Figure 5.6 shows our estimated load impacts for each event.

Figure 5.6: DBP Event-Specific Load Impacts – *SCE*

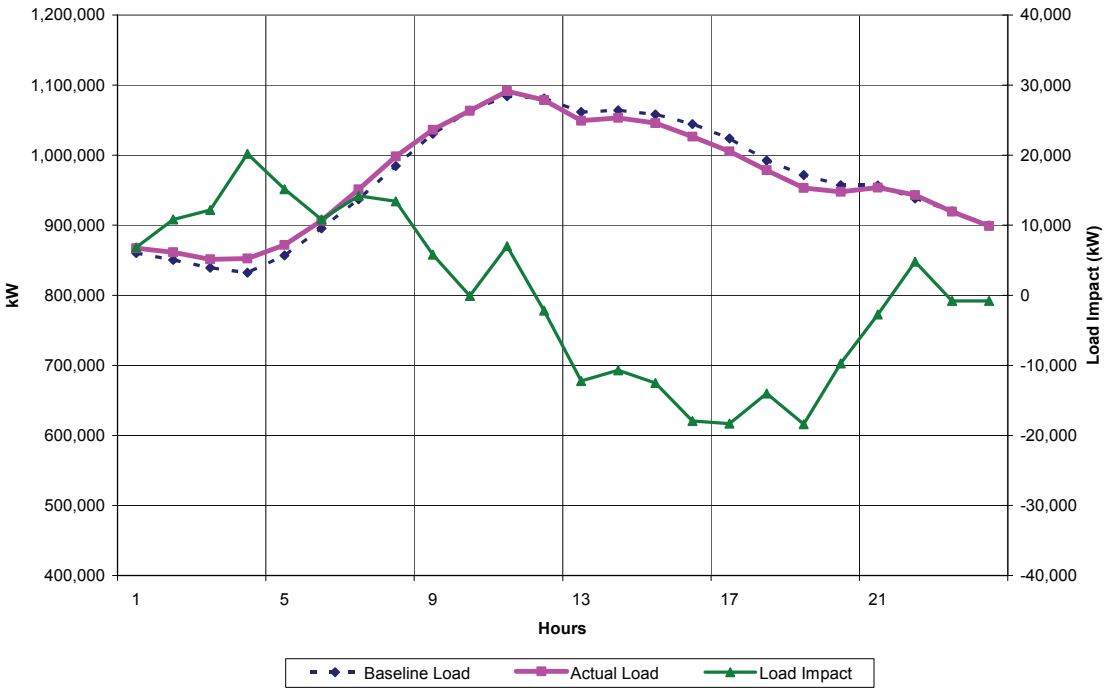


Given the wide range of estimated load impacts across events and the fact that the load impacts for several events were not statistically significant (see the SCE DBP equation output in Appendix 1), the load impact for the "average" event loses some of its meaning. To develop a more representative set of load impacts, we calculated an alternative set of average event-day load impacts which averaged the load impacts across only "good" event days, which excluded June 19th (a test event), July 3rd, July 5th, July 6th (days surrounding July 4), and August 30th, August 31st, and September 4th (days just prior to and following the Labor Day weekend). These averages are shown in Table 5.7, and illustrated in Figure 5.7. Hourly load impacts averaged across these days ranged from 10.7 to 18.4 MW, about half the magnitude of the average across all events.

Table 5.7: Total DBP Load Impacts – Average "Good" Event Day -- *SCE*

Hour Ending	Estimated Reference Load (kWh)	Actual Event Day Load (kWh)	Estimated Load Impact (kWh/hour)	Weighted Average Temperature (°F)	Uncertainty Adjusted Impact (kWh/hr)- Percentiles				
					10th%ile	30th%ile	50th%ile	70th%ile	90th%ile
1	860,364	867,207	6,844	69.6	27,902	12,732	2,226	-8,280	-23,450
2	850,541	861,357	10,816	68.8	26,661	13,737	4,787	-4,164	-17,087
3	839,250	851,414	12,164	68.1	24,605	13,820	6,351	-1,119	-11,904
4	832,268	852,451	20,183	67.5	33,947	21,938	13,620	5,302	-6,707
5	856,710	871,862	15,152	67.0	31,804	18,158	8,707	-745	-14,391
6	895,601	906,422	10,821	66.6	26,833	13,492	4,252	-4,988	-18,329
7	936,968	951,164	14,196	66.7	31,070	17,276	7,722	-1,831	-15,625
8	984,708	998,124	13,416	68.6	37,870	20,203	7,967	-4,269	-21,936
9	1,030,469	1,036,276	5,807	71.9	21,938	9,493	873	-7,746	-20,191
10	1,063,461	1,063,382	-79	75.2	13,776	1,784	-6,522	-14,827	-26,819
11	1,084,180	1,091,190	7,011	78.5	16,909	6,719	-339	-7,397	-17,587
12	1,080,895	1,078,704	-2,191	81.2	10,852	-1,397	-9,881	-18,365	-30,614
13	1,061,512	1,049,286	-12,225	83.3	9,810	-7,567	-19,602	-31,637	-49,013
14	1,063,794	1,053,094	-10,700	84.7	9,409	-6,661	-17,791	-28,921	-44,991
15	1,058,177	1,045,649	-12,528	85.4	6,895	-8,459	-19,094	-29,728	-45,083
16	1,044,206	1,026,268	-17,938	85.4	2,130	-13,072	-23,601	-34,130	-49,332
17	1,023,762	1,005,452	-18,310	84.6	6,668	-11,506	-24,093	-36,680	-54,854
18	992,397	978,394	-14,003	83.0	12,911	-5,931	-18,981	-32,032	-50,874
19	971,580	953,173	-18,407	80.6	9,223	-10,059	-23,414	-36,769	-56,052
20	957,279	947,555	-9,724	77.2	14,072	-3,056	-14,918	-26,781	-43,908
21	956,534	953,795	-2,739	74.6	20,186	3,264	-8,456	-20,176	-37,098
22	938,170	942,964	4,794	73.0	23,867	9,379	-654	-10,688	-25,176
23	920,090	919,294	-796	71.8	21,234	4,622	-6,883	-18,389	-35,001
24	899,596	898,793	-803	70.8	24,453	5,887	-6,972	-19,831	-38,397
	Reference Energy Use (kWh)	Actual Event Day Energy Use (kWh)	Change in Energy Use (kWh)	Cooling Degree Hours (Base 75 °F)	Uncertainty Adjusted Impact (kWh/hour) - Percentiles				
					10th	30th	50th	70th	90th
Daily	23,202,509	23,203,269	759	74.1	465,023	104,795	-144,698	-394,191	-754,419

Figure 5.7: SCE DBP Load Impacts – Average of "Good" Events



Finally, narrowing the estimated load impacts further, we also estimated aggregate load impacts for a subset of 21 customers who displayed consistently large committed load reductions (>500 kW) and load reduction realizations according the program baseline method. Estimated load impacts for this group of customers are shown in Table 5.8 and illustrated in Figure 5.8. The estimates showed hourly load impacts ranging from 10 to 15 MW, which is not much less than the average event-level impacts for the entire program for the "good" events.[13] Therefore, it appears that the load impacts brought about by DBP are due largely to the actions of a limited set of active bidders who submitted relatively large (500 kW) bids. Finally, Figure 5.9 shows the average hourly amount of committed reductions for each event for this group of consistent large bidders, along with the program-estimated "actual reductions" and our estimated load reductions. Note that the pattern of bids and load impacts is much more consistent across events than for all enrollees, as in Figure 5.5

[13] Subsequent to these calculations we identified at least two additional customer accounts who submitted very large (10 to 50 MW) committed load reductions for some hours on some event days, especially around the holidays. They likely contributed substantially to the wide range of values across events shown in Figure 5.5.

Table 5.8: DBP Load Impacts – Average "Good" Event Day (All "Responding" Participants) – *SCE*

Hour Ending	Estimated Reference Load (kWh)	Actual Event Day Load (kWh)	Estimated Load Impact (kWh/hour)	Weighted Average Temperature (°F)	Uncertainty Adjusted Impact (kWh/hr)- Percentiles				
					10th%ile	30th%ile	50th%ile	70th%ile	90th%ile
1	68,746	67,370	-1,376	71.9	4,720	1,119	-1,376	-3,870	-7,472
2	67,692	65,874	-1,819	71.0	4,536	782	-1,819	-4,419	-8,173
3	63,691	63,074	-617	70.3	4,363	1,421	-617	-2,654	-5,596
4	61,791	61,383	-409	69.6	3,255	1,091	-409	-1,908	-4,072
5	63,284	63,003	-281	69.1	3,856	1,412	-281	-1,974	-4,418
6	64,981	65,110	129	68.6	5,000	2,122	129	-1,865	-4,743
7	67,281	67,390	109	68.7	4,730	2,000	109	-1,782	-4,512
8	71,048	70,488	-561	70.5	3,955	1,287	-561	-2,408	-5,076
9	74,516	73,177	-1,339	73.4	2,706	316	-1,339	-2,994	-5,384
10	77,460	75,365	-2,094	76.6	2,164	-352	-2,094	-3,837	-6,352
11	78,956	76,754	-2,202	80.0	2,638	-222	-2,202	-4,183	-7,043
12	77,330	74,302	-3,029	82.9	1,345	-1,239	-3,029	-4,818	-7,402
13	75,987	66,105	-9,882	85.1	-5,588	-8,125	-9,882	-11,639	-14,176
14	76,665	66,832	-9,833	86.7	-5,816	-8,189	-9,833	-11,476	-13,849
15	76,376	66,121	-10,256	87.5	-6,224	-8,606	-10,256	-11,905	-14,287
16	76,241	65,517	-10,724	87.4	-6,845	-9,137	-10,724	-12,311	-14,603
17	74,651	63,923	-10,727	86.5	-5,867	-8,738	-10,727	-12,716	-15,587
18	73,271	63,321	-9,950	85.1	-5,490	-8,125	-9,950	-11,775	-14,410
19	77,844	62,725	-15,119	82.8	-7,952	-12,186	-15,119	-18,052	-22,286
20	78,201	65,601	-12,600	79.6	-4,639	-9,342	-12,600	-15,858	-20,561
21	78,827	74,019	-4,809	77.0	2,404	-1,857	-4,809	-7,760	-12,021
22	77,702	73,973	-3,729	75.4	2,797	-1,059	-3,729	-6,399	-10,254
23	74,909	71,448	-3,461	74.1	3,444	-636	-3,461	-6,286	-10,366
24	72,173	69,733	-2,440	73.1	4,539	415	-2,440	-5,296	-9,419
	Reference Energy Use (kWh)	Actual Event Day Energy Use (kWh)	Change in Energy Use (kWh)	Cooling Degree Hours (Base 75 °F)	Uncertainty Adjusted Impact (kWh/hour) - Percentiles				
					10th	30th	50th	70th	90th
Daily	1,749,625	1,632,608	-117,017	97.6	8,030	-65,849	-117,017	-168,185	-242,064

Figure 5.8: SCE DBP Load Impacts – Average of "Good" Events for 21 Consistent Responders

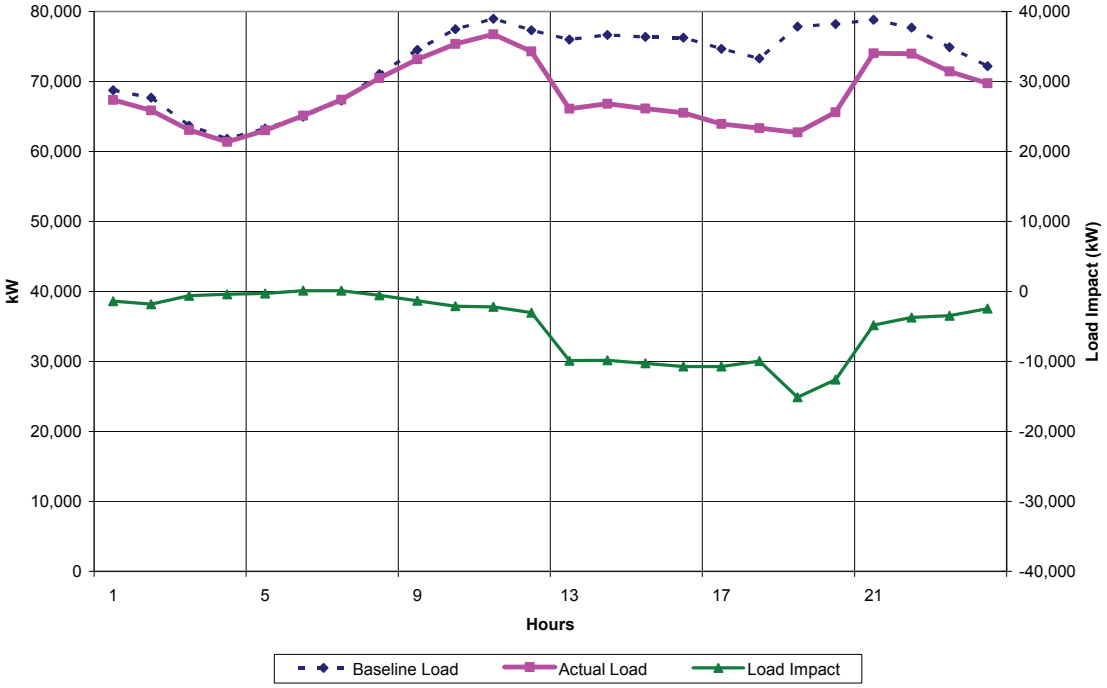
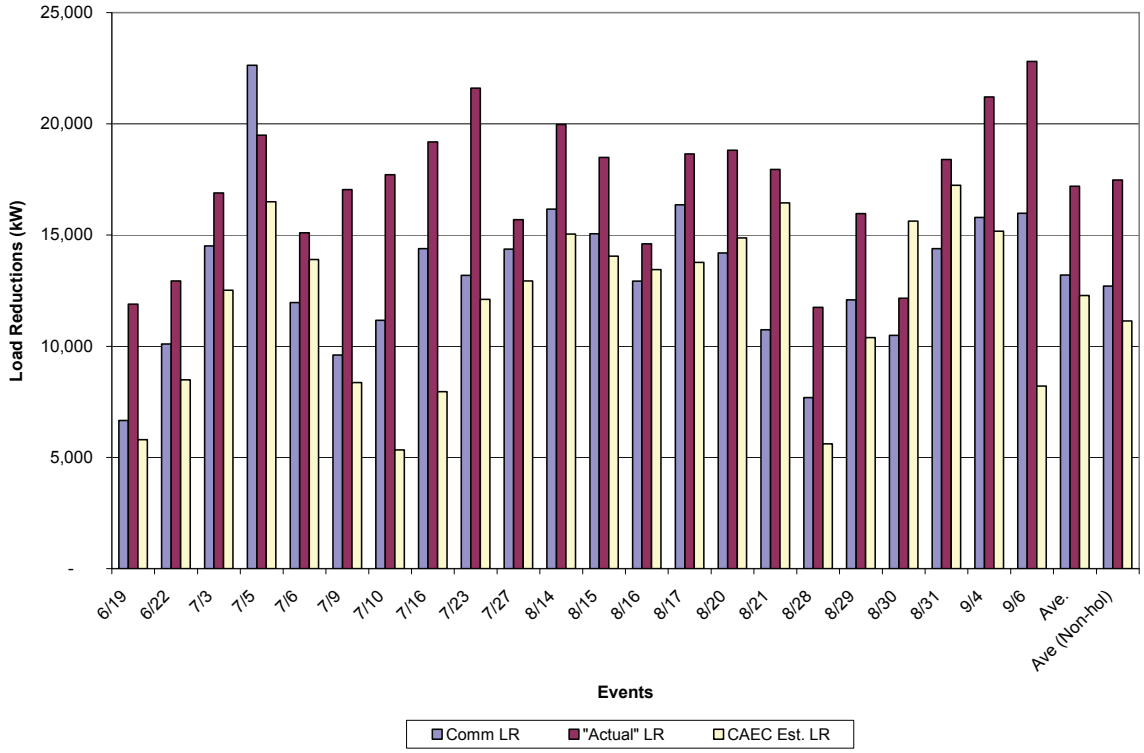


Figure 5.9: Average Hourly DBP Bids and Load Impacts for 21 Consistent Responders



5.3 PG&E

PG&E called only one DBP event in 2007, a four-hour test event (from 2 to 6 p.m.) on August 30. The following sub-section summarizes the characteristics of the DBP enrollees who submitted a bid for the test event.

5.3.1 Bidding patterns

As indicated in Table 5.9, about 80 percent of the total DBP load was comprised of customers in Manufacturing, Wholesale & utilities, and Offices, etc. These were also the source of essentially all of the bidders' loads. Only 8 percent of the DBP enrollees, representing 13 percent of the total DBP load submitted a bid for the test event.

Table 5.9: Characteristics of DBP Bidders – *PG&E*

	Definitions	All DBP Enrollees			Bidders in Test Event		
	NAICS	Count	Sum of max demands (MW)	% of load	Count	Sum of max demands (MW)	% of total DBP load
Ag, Min, Const	11,21,23	108	108	8%	1	1	0%
Manuf	31,32,33	288	551	42%	28	109	8%
Wholes, transp, util	22,42,48-49	164	231	18%	19	42	3%
Retail	44,45	15	14	1%	2	1	0%
Off, hotel, serv	51-56,62,72	342	264	20%	18	12	1%
Schools	61	54	51	4%	9	6	0%
Inst., govt	71,81,92	69	84	6%	5	4	0%
TOTAL		1,040	1,304	100%	82	176	13%
Percent of total					8%	13%	

5.3.2 Load impacts

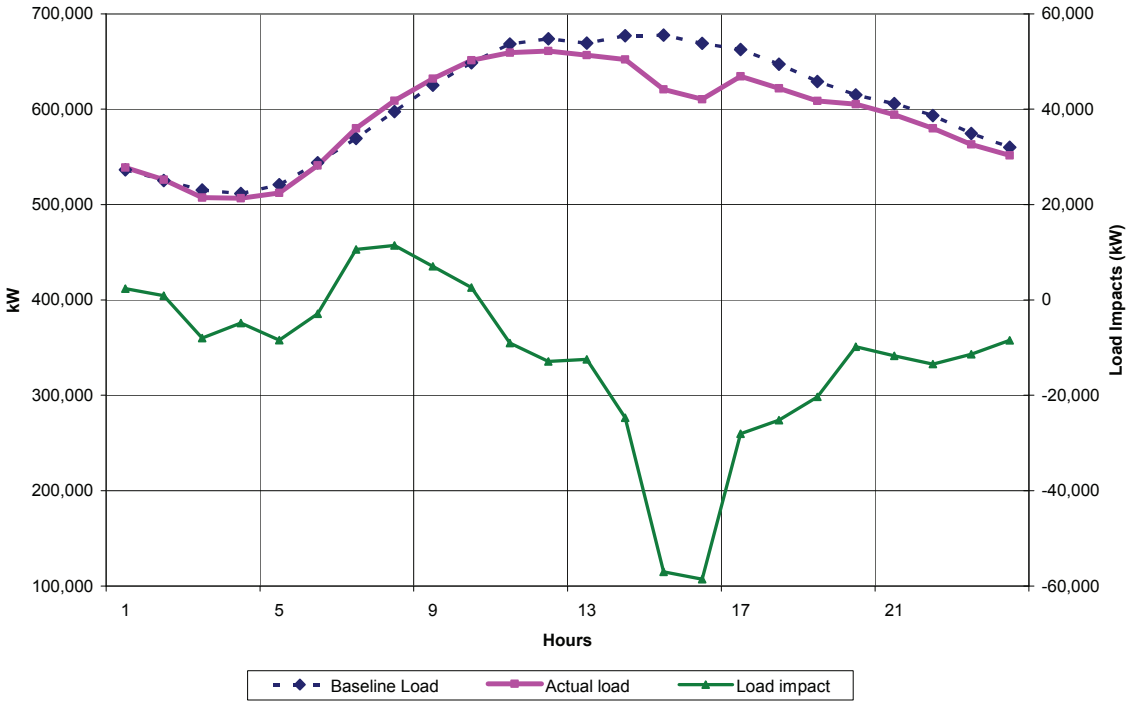
Table 5.10 summarizes the estimated load impacts for the August 30 event, while Figure 5.10 illustrates the baseline and actual loads, and the load impacts. Despite the relatively small number of bidders, the estimated load impacts were large – nearly 60 MW for the first two hours, and 28 and 25 MW in the last two hours.

Table 5.10: DBP Load Impacts – Test Event Day – *PG&E*[14]

Hour Ending	Estimated Reference Load (kWh)	Actual Event Day Load (kWh)	Estimated Load Impact (kWh/hour)	Weighted Average Temperature (°F)	Uncertainty Adjusted Impact (kWh/hr)- Percentiles				
					10th%ile	30th%ile	50th%ile	70th%ile	90th%ile
1	536,491	538,851	2,360	75.0	13,602	11,252	-3,858	-1,047	-2,601
2	525,281	526,187	906	74.4	1,781	21,870	12,178	1,755	9,654
3	515,245	507,231	-8,014	73.3	-632	-6,944	-4,782	-15,417	-3,750
4	511,565	506,699	-4,866	72.3	-20,326	6,872	-91	-5,732	598
5	520,806	512,357	-8,449	71.9	-14,991	-10,607	-1,699	-27,047	-6,125
6	543,919	541,023	-2,896	71.2	-15,465	-4,293	4,973	-4,044	1,533
7	569,441	580,041	10,600	71.0	24,624	10,159	-6,110	10,081	18,090
8	597,448	608,858	11,410	71.9	13,559	5,243	15,698	7,494	6,005
9	625,063	632,102	7,039	75.0	7,731	1,612	9,226	-11,501	11,851
10	648,792	651,382	2,590	78.4	-5,310	9,440	-50	1,750	-3,661
11	668,354	659,322	-9,032	82.4	-17,148	6,754	-10,936	-7,349	-9,600
12	673,862	660,962	-12,900	85.9	-13,998	-10,482	-5,237	-17,894	-32,904
13	669,180	656,706	-12,474	89.2	-12,177	-14,365	5,927	-11,038	-8,547
14	676,991	652,282	-24,709	90.4	-31,565	-31,155	-20,315	-22,491	-17,269
15	677,737	620,734	-57,003	91.7	-63,068	-47,396	-55,412	-70,884	-54,833
16	669,000	610,423	-58,577	92.1	-48,621	-58,820	-52,860	-60,760	-71,114
17	662,553	634,469	-28,084	92.3	-20,512	-39,638	-28,758	-20,125	-47,570
18	647,129	621,902	-25,227	91.0	-16,050	-14,212	-31,608	-25,941	-15,963
19	629,113	608,794	-20,319	88.7	-15,511	-11,641	-16,839	-14,556	-15,769
20	615,082	605,246	-9,836	84.9	-17,825	10,773	-17,242	-17,316	-9,641
21	605,863	594,134	-11,729	81.5	-15,603	-16,785	-1,807	-7,469	-7,595
22	593,339	579,904	-13,435	79.4	-26,714	-15,612	-10,858	-12,630	-26,314
23	574,567	563,191	-11,376	77.9	-6,662	-8,971	-24,272	-12,392	-2,670
24	560,095	551,609	-8,486	76.5	-17,864	-13,824	-8,954	-20,335	-5,599
	Reference Energy Use (kWh)	Actual Event Day Energy Use (kWh)	Change in Energy Use (kWh)	Cooling Degree Hours (Base 75 °F)	Uncertainty Adjusted Impact (kWh/hour) - Percentiles				
					10th	30th	50th	70th	90th
Daily	14,516,916	14,224,409	-292,507	157.5	-318,746	-220,769	-253,685	-364,888	-293,795

[14] Because there was only one event day in 2007 for this program, the uncertainty adjusted load impacts in this table are not calculated using the same method used in the "average event day" tables for the other programs. In this case, the uncertainty-adjusted load impacts are simulated using a Monte Carlo analysis based on the variance-covariance matrix from the estimated load impacts (as described in Section 3.2). The scenarios (i.e., the correlated random draws of load impacts) are ranked according to the total load impact during the event hours.

Figure 5.10: PG&E DBP Load Impacts – Test Event Day in 2007



6. Validity assessment

As we have described elsewhere in the report, the proximity of many of the 2007 event days to holidays presented serious problems in differentiating load impacts from loads that would have been low in the absence of the event day. Our "standard" models, which use Prais-Winsten methods to account for auto-correlation, did not appear to produce reasonable load impact estimates for near-holiday events. Specifically, the load impacts would persist for most or all of the event day (rather than only during and close to event hours), indicating that there was some other factor, which was omitted from the model, that explains the "load impacts". We estimated models with a lagged dependent variable, but the results produced erratic load impact estimates. The "morning load" variable performed best for the event days that were close to holidays, and had little effect on the load impact estimates for other event days. As always, some concern remains regarding the potential for omitted variable bias to affect the load impact estimates. An example is the problem of estimating equations on data for Schools without information on schedules of operation.

The DBP program models raise some interesting issues regarding the measurement of load impacts. Most enrolled customers do not submit bids when event days are called. However, they are included in the aggregate program load when the load impacts are estimated using data aggregated across all enrolled customers. This raises the possibility that load *increases* by enrolled non-bidders on event days could create a downward bias in the program-level load impact estimates, if not adequately controlled for in the regression.

The results that we have produced for SCE's DBP program, which showed that a core of consistent large bidders appears to account for most of the program-level load impacts, indicate that the *average* load impacts can be estimated reasonably well when data for non-bidders are included. That is, we obtained similar estimates of *average* load impacts across events whether basing them on *all* DBP participants or just the 21 consistent large bidders. However, the event-specific estimates and the uncertainty-adjusted load impacts were quite different for the two sets of estimates. Those for the subset of consistent bidders show a narrow range of load impacts, while those for all participants display a much wider variability (see also the event-specific figures in Appendix 2). These results raise questions about the most appropriate method for estimating DBP load impacts when the number and makeup of bidders changes from event to event.

The seemingly natural solution to this issue is to use a panel model, which would allow for the use of customer-specific event participation data. In principle, this method would allow the estimated load impacts for each event to be based on only the behavior of customers who submitted a bid for that event. However, when we implemented the panel model (as opposed to the aggregated models presented in this report), we found large load *increases* in pre-event hours of event days. It is not clear to us why this (clearly false) result occurs, but the use of aggregated data does not produce a similar result. The issues of appropriate estimation of DBP impacts suggest a need for some additional research.

7. Summary and Recommendations

Table 7.1 summarizes the range of hourly load impacts that were estimated for PY 2007 for the three utilities. We show a range of impacts in part because the hourly values are somewhat non-comparable. That is, in some cases the largest values tend to occur in the first hour of an event, while in others they tend to occur late in the event. In addition, the events may cover different hours.

Table 7.1: Summary of CPP and DBP Load Impacts (MW) – 2007

Rate/Program	SDG&E	SCE	PG&E	Total
CPP	5.5 to 11	5.7 to 9.1	8.5 to 15.0	24.2 to 32.1
DBP	0.4	10.7 to 18.4	20.3 to 58.6	35.8 to 77
Total	5.9 to 11.4	19 to 25	36 to 72	51 to 107

Table 7.2 summarizes estimated changes in annual energy consumption, calculated as the sum of statistically significant hourly load impacts on event days.

Table 7.2: Change in Annual Energy Consumption, by Utility and Program (MWh)

Utility	CPP	DBP	DBP (SCE "good" events)
SDG&E	-506.3	-14.4	
SCE	-653.3	-4,390	-1,119
PG&E	-648.9	-213.9	

We have two recommendations for future impact evaluations of these programs. First, it may be useful to arrive at some consensus regarding the definition of "uncertainty-adjusted load impacts". The Protocols are not completely clear as to how these are defined. While we are confident that our methods for producing the uncertainty-adjusted load impacts are reasonable and accurate, alternative methods are available that may better match the opinions of others about what information about the variability of event impacts would be most useful.

Our second recommendation is to explore further methods for controlling for bidding behavior in the DBP load impact estimates. Although we do not believe that it is appropriate to count potential event-day load increases of non-bidders against the program's load impacts, the methods that we used to ensure that this would not occur have not produced reliable results thus far. Additional research may lead to an improvement in the methodology. Such improvements would likely reduce the *uncertainty* around the estimated load impacts and may lead to an increase in the *level* of the estimated load impacts.

References

[CAEC 2008] CA Energy Consulting, *Program-year 2006 Evaluation of Statewide Large Commercial and Industrial Day-Ahead Demand Response Programs*, prepared for Southern California Edison and the Working Group 2 Measurement and Evaluation Committee, June 2008.

[Quantum 2004] Quantum Consulting and Summit Blue Consulting, *Working Group 2 Demand Response Program Evaluation – Program Year 2004 Final Report*, Prepared for the Working Group 2 Measurement and Evaluation Committee, 2004.

[Quantum 2006] Quantum Consulting and Summit Blue Consulting, *Evaluation of 2005 Statewide Large Nonresidential Day-ahead and Reliability Demand Response Programs*, Prepared for Southern California Edison and the Working Group 2 Measurement and Evaluation Committee, 2006.

Appendix 1. Aggregate load impact regression statistics -- CPP

Appendix 1 and 2 contain listings of regression output for the primary aggregate CPP and DBP load impact regression equations respectively, which underlie the estimated load impacts. Note that only one regression equation was estimated in the case of SCE and PG&E, while 24 separate hourly equations were estimated for SDG&E.

Descriptions of the variables included in the listings are as follows:

load	Program-level hourly load (indexed to hours for SDG&E hourly models)
h_i	Indicator variables for hour of day
mon_h_i	Hourly interaction with Monday variable
fri_h_i	Hourly interaction with Friday variable
cdd_h_i	Daily CDD value interacted with hour of day
evt_j_h_i	Indicator for hour i of event day j
dt_i	Indicator for day of week, where 1 = Monday, and 5 = Friday
mi	Indicator for month i
_cons	Constant term

SDG&E CPP Models

```
->  prais load1 cdd_bldall evtd1-evtd9 dt2-dt5 m6-m9,nolog


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     102
-------------+------------------------------           F( 18,    83) =   22.98
       Model |  1.1334e+09    18  62964035.8           Prob > F      =  0.0000
    Residual |   227378584    83  2739501.01           R-squared     =  0.8329
-------------+------------------------------           Adj R-squared =  0.7967
       Total |  1.3607e+09   101  13472586.4           Root MSE      =  1655.1

------------------------------------------------------------------------------
       load1 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
  cdd_bldall |   369.3691   118.4901     3.12   0.003     133.6971     605.041
       evtd1 |    3790.83   1742.605     2.18   0.032     324.8582    7256.801
       evtd2 |   3084.151   1855.156     1.66   0.100    -605.6793    6773.982
       evtd3 |    3212.58   1734.499     1.85   0.068    -237.2698    6662.429
       evtd4 |   162.5799   1634.324     0.10   0.921    -3088.026    3413.186
       evtd5 |  -687.1822   1741.563    -0.39   0.694    -4151.082    2776.717
       evtd6 |   791.7257   1887.986     0.42   0.676    -2963.403    4546.855
       evtd7 |     2113.9   1963.066     1.08   0.285     -1790.56    6018.359
       evtd8 |   2256.278    2316.99     0.97   0.333    -2352.122    6864.678
       evtd9 |   3979.288   1848.667     2.15   0.034     302.3635    7656.212
         dt2 |   5140.427   471.1779    10.91   0.000     4203.274    6077.581
         dt3 |   5397.637   538.9179    10.02   0.000     4325.751    6469.523
         dt4 |   6604.163    532.207    12.41   0.000     5545.624    7662.701
         dt5 |   5588.068   460.1097    12.15   0.000     4672.929    6503.208
          m6 |    2260.97   771.3979     2.93   0.004     726.6903    3795.249
          m7 |   1816.042   978.4339     1.86   0.067    -130.0233    3762.108
          m8 |   3856.861   1176.622     3.28   0.002     1516.606    6197.116
          m9 |  -439.0444    873.806    -0.50   0.617    -2177.009    1298.921
       _cons |   46519.14   666.5078    69.80   0.000     45193.49     47844.8
-------------+----------------------------------------------------------------
         rho |   .3600198
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.267904
Durbin-Watson statistic (transformed) 1.978602


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     102
-------------+------------------------------           F( 18,    83) =   18.83
       Model |   909989733    18  50554985.2           Prob > F      =  0.0000
    Residual |   222799148    83  2684327.08           R-squared     =  0.8033
-------------+------------------------------           Adj R-squared =  0.7607
       Total |  1.1328e+09   101  11215731.5           Root MSE      =  1638.4

------------------------------------------------------------------------------
       load2 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
  cdd_bldall |   384.6925   113.9575     3.38   0.001     158.0356    611.3493
       evtd1 |   4120.889   1729.408     2.38   0.019     681.1652    7560.613
       evtd2 |   3130.688   1823.339     1.72   0.090    -495.8606    6757.236
       evtd3 |   2882.736   1721.529     1.67   0.098    -541.3158    6306.788
       evtd4 |   280.3706   1642.663     0.17   0.865     -2986.82    3547.562
       evtd5 |   -136.901   1726.269    -0.08   0.937    -3570.381    3296.579
       evtd6 |   684.2904   1845.953     0.37   0.712    -2987.235    4355.816
       evtd7 |   185.2197   1912.332     0.10   0.923    -3618.332    3988.772
```

```
       evtd8 |   2257.895   2259.712     1.00   0.321    -2236.582    6752.371
       evtd9 |   3422.218   1831.648     1.87   0.065    -220.8572    7065.293
         dt2 |   4383.423    474.303     9.24   0.000     3440.053    5326.792
         dt3 |   4549.283   536.2746     8.48   0.000     3482.654    5615.911
         dt4 |    5498.28   529.5862    10.38   0.000     4444.954    6551.605
         dt5 |   5127.167   463.5947    11.06   0.000     4205.096    6049.239
          m6 |   1958.059   723.4227     2.71   0.008     519.2009    3396.918
          m7 |   1517.218   922.6481     1.64   0.104    -317.8915    3352.328
          m8 |   3001.955   1115.691     2.69   0.009      782.891    5221.019
          m9 |  -480.3909   817.1208    -0.59   0.558    -2105.611     1144.83
       _cons |   45825.99   634.2326    72.25   0.000     44564.52    47087.45
-------------+----------------------------------------------------------------
         rho |   .3166087
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.346327
Durbin-Watson statistic (transformed) 1.949571


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     102
-------------+------------------------------           F( 18,    83) =   14.67
       Model |   724913248    18  40272958.2           Prob > F      =  0.0000
    Residual |   227844684    83  2745116.68           R-squared     =  0.7609
-------------+------------------------------           Adj R-squared =  0.7090
       Total |   952757932   101  9433246.85           Root MSE      =  1656.8

------------------------------------------------------------------------------
       load3 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
  cdd_bldall |   392.6942   113.6806     3.45   0.001     166.5882    618.8003
       evtd1 |   3298.156   1750.683     1.88   0.063    -183.8824    6780.195
       evtd2 |   2168.181   1837.549     1.18   0.241    -1486.631    5822.992
       evtd3 |   2621.329    1742.82     1.50   0.136    -845.0695    6087.728
       evtd4 |   56.70043   1672.377     0.03   0.973     -3269.59    3382.991
       evtd5 |  -718.6885    1746.77    -0.41   0.682    -4192.944    2755.567
       evtd6 |    282.917   1856.583     0.15   0.879    -3409.752    3975.586
       evtd7 |  -241.2714   1920.394    -0.13   0.900    -4060.857    3578.314
       evtd8 |   2766.833   2269.339     1.22   0.226    -1746.791    7280.457
       evtd9 |   4360.109   1852.894     2.35   0.021     674.7785     8045.44
         dt2 |   3586.368   483.3944     7.42   0.000     2624.916     4547.82
         dt3 |   3902.818   543.4196     7.18   0.000     2821.978    4983.658
         dt4 |   4200.539   536.6402     7.83   0.000     3133.183    5267.895
         dt5 |   4288.488   472.7121     9.07   0.000     3348.282    5228.693
          m6 |   1403.173   713.9188     1.97   0.053    -16.78298    2823.129
          m7 |   1158.806   912.8198     1.27   0.208    -656.7557    2974.368
          m8 |   2626.556   1106.296     2.37   0.020     426.1764    4826.935
          m9 |  -1276.779    805.573    -1.58   0.117    -2879.031    325.4731
       _cons |   45384.41   630.5209    71.98   0.000     44130.33    46638.49
-------------+----------------------------------------------------------------
         rho |   .2964251
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.372684
Durbin-Watson statistic (transformed) 1.939817


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     102
-------------+------------------------------           F( 18,    83) =   13.96
       Model |   686200226    18  38122234.8           Prob > F      =  0.0000
    Residual |   226693627    83  2731248.52           R-squared     =  0.7517
-------------+------------------------------           Adj R-squared =  0.6978
```

```
       Total |   912893852   101  9038552.99           Root MSE      =  1652.6

------------------------------------------------------------------------------
       load4 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
  cdd_bldall |    352.899   115.4031     3.06   0.003     123.3669     582.431
       evtd1 |   3337.977   1743.903     1.91   0.059    -130.5765     6806.53
       evtd2 |   2043.063   1841.024     1.11   0.270     -1618.66    5704.787
       evtd3 |   1228.726   1735.929     0.71   0.481    -2223.966    4681.418
       evtd4 |  -517.9357   1653.642    -0.31   0.755    -3806.964    2771.092
       evtd5 |  -127.2251   1740.979    -0.07   0.942    -3589.962    3335.512
       evtd6 |  -252.3149    1865.04    -0.14   0.893    -3961.804    3457.174
       evtd7 |  -617.4012   1933.008    -0.32   0.750    -4462.076    3227.274
       evtd8 |   2272.599   2283.983     1.00   0.323    -2270.151     6815.35
       evtd9 |   4364.523   1847.388     2.36   0.020     690.1429    8038.903
         dt2 |   3190.046   477.3473     6.68   0.000     2240.621    4139.471
         dt3 |   3922.101   540.5949     7.26   0.000      2846.88    4997.323
         dt4 |   4042.342   533.8535     7.57   0.000     2980.528    5104.155
         dt5 |   4209.982   466.5067     9.02   0.000     3282.119    5137.845
          m6 |   1470.934   734.9817     2.00   0.049     9.085015    2932.783
          m7 |   1302.972   936.6987     1.39   0.168     -560.084    3166.028
          m8 |   3107.382   1131.897     2.75   0.007     856.0844     5358.68
          m9 |  -1005.068   830.4496    -1.21   0.230    -2656.799    646.6628
       _cons |   44590.07    643.031    69.34   0.000     43311.11    45869.03
-------------+----------------------------------------------------------------
         rho |   .3224803
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.344906
Durbin-Watson statistic (transformed) 1.978714


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     102
-------------+------------------------------           F( 18,    83) =   14.39
       Model |   713670545    18  39648363.6           Prob > F      =  0.0000
    Residual |   228706225    83  2755496.69           R-squared     =  0.7573
-------------+------------------------------           Adj R-squared =  0.7047
       Total |   942376771   101  9330463.07           Root MSE      =    1660

------------------------------------------------------------------------------
       load5 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
  cdd_bldall |   346.8352   116.0839     2.99   0.004      115.949    577.7215
       evtd1 |   3892.019   1751.416     2.22   0.029     408.5226    7375.515
       evtd2 |   1608.858   1849.856     0.87   0.387    -2070.431    5288.147
       evtd3 |   841.5905   1743.397     0.48   0.631    -2625.956    4309.137
       evtd4 |  -198.9703   1659.721    -0.12   0.905    -3500.089    3102.149
       evtd5 |  -185.6614   1748.573    -0.11   0.916    -3663.503     3292.18
       evtd6 |   177.6734   1874.439     0.09   0.925     -3550.51    3905.857
       evtd7 |  -603.0055   1943.091    -0.31   0.757    -4467.736    3261.725
       evtd8 |   3183.425   2295.822     1.39   0.169    -1382.873    7749.723
       evtd9 |   4701.005   1855.493     2.53   0.013     1010.504    8391.507
         dt2 |   2878.604   479.0574     6.01   0.000     1925.778     3831.43
         dt3 |   3969.972   542.8569     7.31   0.000     2890.252    5049.693
         dt4 |   4111.218   536.0877     7.67   0.000     3044.961    5177.474
         dt5 |    4349.34   468.1547     9.29   0.000       3418.2    5280.481
          m6 |    1408.77   740.2207     1.90   0.060     -63.4988     2881.04
          m7 |   1536.267    943.116     1.63   0.107     -339.553    3412.087
          m8 |   2913.476   1139.353     2.56   0.012     647.3478    5179.603
          m9 |  -1147.453    836.475    -1.37   0.174    -2811.168     516.262
       _cons |    47374.5     647.12    73.21   0.000      46087.4    48661.59
-------------+----------------------------------------------------------------
```

```
        rho |   .3246646
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.376376
Durbin-Watson statistic (transformed) 1.957217


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     102
-------------+------------------------------           F( 18,    83) =   12.98
       Model |   686707821    18  38150434.5           Prob > F      =  0.0000
    Residual |   243885055    83  2938374.16           R-squared     =  0.7379
-------------+------------------------------           Adj R-squared =  0.6811
       Total |   930592876   101  9213790.85           Root MSE      =  1714.2

------------------------------------------------------------------------------
       load6 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
  cdd_bldall |   356.3331   127.1811     2.80   0.006      103.375    609.2912
       evtd1 |   4693.301    1797.22     2.61   0.011     1118.703    8267.899
       evtd2 |   907.3587   1937.146     0.47   0.641    -2945.548    4760.265
       evtd3 |   1416.941   1788.829     0.79   0.431    -2140.967    4974.849
       evtd4 |   522.5258   1657.361     0.32   0.753    -2773.899     3818.95
       evtd5 |  -1717.167   1800.332    -0.95   0.343    -5297.955     1863.62
       evtd6 |   202.8321   1988.566     0.10   0.919    -3752.345    4158.009
       evtd7 |   47.44492   2078.978     0.02   0.982    -4087.559    4182.449
       evtd8 |    2972.87   2444.621     1.22   0.227    -1889.382    7835.123
       evtd9 |   4726.671   1911.379     2.47   0.015     925.0141    8528.328
         dt2 |   1922.994   477.4743     4.03   0.000     973.3168    2872.671
         dt3 |     3105.4   553.3711     5.61   0.000     2004.767    4206.033
         dt4 |   3035.937   546.5082     5.56   0.000     1948.955     4122.92
         dt5 |   3126.362   465.8249     6.71   0.000     2199.855    4052.869
          m6 |     1523.7   859.0219     1.77   0.080    -184.8598     3232.26
          m7 |    1706.89    1081.87     1.58   0.118    -444.9054    3858.686
          m8 |   3370.179   1289.876     2.61   0.011     804.6661    5935.691
          m9 |  -657.2696   978.4428    -0.67   0.504    -2603.353    1288.814
       _cons |   52634.33   730.6577    72.04   0.000     51181.08    54087.58
-------------+----------------------------------------------------------------
        rho |   .4158185
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.196408
Durbin-Watson statistic (transformed) 1.946299


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     102
-------------+------------------------------           F( 18,    83) =   12.87
       Model |   876047838    18  48669324.3           Prob > F      =  0.0000
    Residual |   313877313    83  3781654.37           R-squared     =  0.7362
-------------+------------------------------           Adj R-squared =  0.6790
       Total |  1.1899e+09   101  11781437.1           Root MSE      =  1944.6

------------------------------------------------------------------------------
       load7 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
  cdd_bldall |   314.1101   153.7562     2.04   0.044     8.295231     619.925
       evtd1 |   3609.944   2014.334     1.79   0.077    -396.4848    7616.374
       evtd2 |   -2082.37   2221.012    -0.94   0.351    -6499.873    2335.133
       evtd3 |    1240.41   2005.667     0.62   0.538     -2748.78    5229.601
       evtd4 |   1710.781   1797.201     0.95   0.344     -1863.78    5285.341
       evtd5 |   1704.658   2033.674     0.84   0.404    -2340.237    5749.554
       evtd6 |   1287.183   2336.019     0.55   0.583    -3359.065    5933.431
```

```
       evtd7 |   391.4598    2474.58     0.16   0.875     -4530.38    5313.299
       evtd8 |   3059.022   2865.262     1.07   0.289    -2639.868    8757.912
       evtd9 |    4563.76    2156.48     2.12   0.037     274.6089    8852.911
         dt2 |    2845.34   518.3782     5.49   0.000     1814.307    3876.373
         dt3 |   3405.736   613.5741     5.55   0.000     2185.361     4626.11
         dt4 |   3459.442   606.0719     5.71   0.000     2253.989    4664.895
         dt5 |   2435.623   505.3671     4.82   0.000     1430.468    3440.778
          m6 |   2080.955   1134.991     1.83   0.070    -176.4964    4338.407
          m7 |   2189.451   1411.883     1.55   0.125    -618.7268    4997.629
          m8 |    4675.75   1646.827     2.84   0.006     1400.276    7951.223
          m9 |   979.2276   1319.951     0.74   0.460    -1646.103    3604.558
       _cons |   57311.47   949.4469    60.36   0.000     55423.06    59199.88
-------------+----------------------------------------------------------------
         rho |   .5253636
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.010659
Durbin-Watson statistic (transformed) 1.848284


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     102
-------------+------------------------------           F( 18,    83) =   14.27
       Model |  1.0268e+09    18  57042372.1           Prob > F      =  0.0000
    Residual |   331828429    83  3997932.88           R-squared     =  0.7558
-------------+------------------------------           Adj R-squared =  0.7028
       Total |  1.3586e+09   101  13451397.3           Root MSE      =  1999.5

------------------------------------------------------------------------------
       load8 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
  cdd_bldall |     586.799   155.5287     3.77   0.000     277.4586    896.1394
       evtd1 |    3968.37   2079.271     1.91   0.060    -167.2163    8103.957
       evtd2 |   614.4595   2279.119     0.27   0.788    -3918.617    5147.535
       evtd3 |   434.0806   2070.005     0.21   0.834    -3683.076    4551.237
       evtd4 |   1116.379   1871.693     0.60   0.552    -2606.342    4839.101
       evtd5 |   566.9021   2093.716     0.27   0.787    -3597.415    4731.219
       evtd6 |   -1691.85    2378.83    -0.71   0.479    -6423.248    3039.547
       evtd7 |  -879.5183   2510.076    -0.35   0.727    -5871.959    4112.923
       evtd8 |   758.8531   2921.894     0.26   0.796    -5052.677    6570.383
       evtd9 |   2848.807   2221.406     1.28   0.203     -1569.48    7267.094
         dt2 |   2785.053   539.5604     5.16   0.000     1711.889    3858.217
         dt3 |   3969.982   635.3406     6.25   0.000     2706.316    5233.649
         dt4 |   4069.843   627.5364     6.49   0.000     2821.699    5317.988
         dt5 |    2276.01   526.0349     4.33   0.000     1229.748    3322.272
          m6 |   2032.928   1117.859     1.82   0.073    -190.4479    4256.305
          m7 |   1211.494    1394.72     0.87   0.388    -1562.549    3985.536
          m8 |   3194.946   1637.641     1.95   0.054    -62.25625    6452.149
          m9 |  -270.0087   1290.345    -0.21   0.835    -2836.453    2296.436
       _cons |   60383.22    937.211    64.43   0.000     58519.15     62247.3
-------------+----------------------------------------------------------------
         rho |   .4953577
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.045988
Durbin-Watson statistic (transformed) 1.731974


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     102
-------------+------------------------------           F( 18,    83) =   13.01
       Model |  1.0590e+09    18  58833110.8           Prob > F      =  0.0000
    Residual |   375209855    83  4520600.66           R-squared     =  0.7384
```

```
-------------+------------------------------           Adj R-squared =  0.6816
       Total |  1.4342e+09   101  14200057.9           Root MSE      =  2126.2

------------------------------------------------------------------------------
       load9 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
  cdd_bldall |   827.4266   161.4573     5.12   0.000     506.2945    1148.559
       evtd1 |   4229.138   2221.293     1.90   0.060     -188.925    8647.201
       evtd2 |  -464.3153    2413.97    -0.19   0.848    -5265.605    4336.975
       evtd3 |   2106.537   2211.068     0.95   0.343    -2291.188    6504.262
       evtd4 |   323.8379    2024.79     0.16   0.873    -3703.389    4351.064
       evtd5 |   -39.4232   2229.994    -0.02   0.986    -4474.791    4395.945
       evtd6 |  -1205.072    2496.18    -0.48   0.631    -6169.875     3759.73
       evtd7 |  -1276.592   2620.682    -0.49   0.627    -6489.023    3935.839
       evtd8 |   185.1347   3068.962     0.06   0.952    -5918.907    6289.176
       evtd9 |    1413.34   2367.146     0.60   0.552    -3294.818    6121.497
         dt2 |   2553.631   583.3918     4.38   0.000     1393.288    3713.974
         dt3 |   3499.223   681.5575     5.13   0.000     2143.633    4854.814
         dt4 |   3465.805   673.1392     5.15   0.000     2126.958    4804.652
         dt5 |   1861.192   568.9131     3.27   0.002     729.6463    2992.737
          m6 |   2317.486   1121.753     2.07   0.042     86.36546    4548.607
          m7 |   1373.808   1406.176     0.98   0.331    -1423.021    4170.636
          m8 |   2157.499   1665.057     1.30   0.199    -1154.233     5469.23
          m9 |  -875.8845   1284.599    -0.68   0.497      -3430.9    1679.131
       _cons |   61331.45   946.2904    64.81   0.000     59449.32    63213.59
-------------+----------------------------------------------------------------
         rho |   .4538552
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.121938
Durbin-Watson statistic (transformed) 1.814319


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     102
-------------+------------------------------           F( 18,    83) =   11.80
       Model |  1.1686e+09    18  64921003.6           Prob > F      =  0.0000
    Residual |   456483120    83  5499796.62           R-squared     =  0.7191
-------------+------------------------------           Adj R-squared =  0.6582
       Total |  1.6251e+09   101  16089714.7           Root MSE      =  2345.2

------------------------------------------------------------------------------
      load10 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
  cdd_bldall |   1094.784   165.2651     6.62   0.000     766.0781     1423.49
       evtd1 |   2956.677   2472.737     1.20   0.235    -1961.497    7874.852
       evtd2 |  -1396.372   2618.438    -0.53   0.595    -6604.339    3811.595
       evtd3 |   669.6222   2461.345     0.27   0.786    -4225.894    5565.138
       evtd4 |  -901.3659   2335.461    -0.39   0.701    -5546.504    3743.772
       evtd5 |  -581.3743   2469.465    -0.24   0.814     -5493.04    4330.292
       evtd6 |  -2963.002   2656.745    -1.12   0.268    -8247.161    2321.156
       evtd7 |  -2807.132   2756.663    -1.02   0.311    -8290.022    2675.759
       evtd8 |  -2459.521   3256.321    -0.76   0.452    -8936.212    4017.171
       evtd9 |  -387.2096   2620.793    -0.15   0.883    -5599.861    4825.441
         dt2 |   2584.676   673.7987     3.84   0.000     1244.517    3924.834
         dt3 |   3473.557   765.9124     4.54   0.000     1950.188    4996.925
         dt4 |   3737.775    756.365     4.94   0.000     2233.395    5242.154
         dt5 |    1784.97   658.2952     2.71   0.008     475.6475    3094.293
          m6 |   2239.656    1060.75     2.11   0.038     129.8665    4349.445
          m7 |   669.1249   1349.537     0.50   0.621     -2015.05     3353.3
          m8 |   317.9942   1628.027     0.20   0.846    -2920.086    3556.074
          m9 |  -1779.471   1199.532    -1.48   0.142    -4165.291    606.3496
       _cons |   61727.94   923.6756    66.83   0.000     59890.79    63565.09
```

```
-------------+----------------------------------------------------------------
         rho |   .3361742
-------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.368234
Durbin-Watson statistic (transformed) 1.875790


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     102
-------------+------------------------------           F( 18,    83) =   11.81
       Model |  1.1582e+09    18  64342450.9           Prob > F      =  0.0000
    Residual |   452072829    83  5446660.59           R-squared     =  0.7193
-------------+------------------------------           Adj R-squared =  0.6584
       Total |  1.6102e+09   101  15942940.1           Root MSE      =  2333.8

------------------------------------------------------------------------------
      load11 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
  cdd_bldall |   1193.609   154.5157     7.72   0.000     886.2835    1500.934
       evtd1 |   330.3586     2471.6     0.13   0.894    -4585.555    5246.273
       evtd2 |  -2994.523   2565.308    -1.17   0.246    -8096.817    2107.771
       evtd3 |  -352.9853   2461.024    -0.14   0.886    -5247.862    4541.892
       evtd4 |  -2154.424    2394.21    -0.90   0.371    -6916.412    2607.564
       evtd5 |  -3745.331    2464.26    -1.52   0.132    -8646.645    1155.984
       evtd6 |  -5241.439   2581.072    -2.03   0.045    -10375.09   -107.7912
       evtd7 |  -3469.159   2660.468    -1.30   0.196    -8760.723    1822.405
       evtd8 |  -5232.727   3140.063    -1.67   0.099    -11478.19    1012.731
       evtd9 |  -5670.045    2611.63    -2.17   0.033    -10864.47   -475.6185
         dt2 |    1792.19   694.7935     2.58   0.012     410.2736    3174.106
         dt3 |   2855.583    768.642     3.72   0.000     1326.784    4384.381
         dt4 |   3287.881    759.057     4.33   0.000     1778.147    4797.615
         dt5 |   828.6407   680.3928     1.22   0.227    -524.6332    2181.915
          m6 |   2150.395   946.0095     2.27   0.026     268.8202     4031.97
          m7 |   612.7303   1217.211     0.50   0.616    -1808.253    3033.714
          m8 |  -322.7654   1482.566    -0.22   0.828     -3271.53    2625.999
          m9 |  -1384.065   1065.453    -1.30   0.198    -3503.209    735.0786
       _cons |   62893.63   852.7405    73.75   0.000     61197.57     64589.7
-------------+----------------------------------------------------------------
         rho |   .2442641
-------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.534257
Durbin-Watson statistic (transformed) 1.959178


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     102
-------------+------------------------------           F( 18,    83) =    9.90
       Model |  1.1629e+09    18  64604931.7           Prob > F      =  0.0000
    Residual |   541469742    83  6523731.83           R-squared     =  0.6823
-------------+------------------------------           Adj R-squared =  0.6134
       Total |  1.7044e+09   101  16874836.8           Root MSE      =  2554.2

------------------------------------------------------------------------------
      load12 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
  cdd_bldall |   1152.432   169.4451     6.80   0.000     815.4124    1489.451
       evtd1 |  -7743.805   2704.653    -2.86   0.005    -13123.25   -2364.359
       evtd2 |  -10700.41   2808.913    -3.81   0.000    -16287.22    -5113.59
       evtd3 |  -6164.241   2693.043    -2.29   0.025     -11520.6   -807.8864
       evtd4 |  -9738.163    2618.01    -3.72   0.000    -14945.28   -4531.046
       evtd5 |     -11680     2696.7    -4.33   0.000    -17043.63   -6316.368
```

```
       evtd6 |  -9733.881   2826.732    -3.44   0.001    -15356.14   -4111.625
       evtd7 |  -11847.15   2914.205    -4.07   0.000    -17643.39   -6050.918
       evtd8 |  -13392.18    3439.94    -3.89   0.000    -20234.08   -6550.274
       evtd9 |  -11666.32   2858.133    -4.08   0.000    -17351.03    -5981.61
         dt2 |   1713.927   759.5311     2.26   0.027       203.25    3224.604
         dt3 |   1908.945   841.0533     2.27   0.026     236.1237    3581.766
         dt4 |   2796.823   830.5646     3.37   0.001     1144.863    4448.782
         dt5 |  -34.52657   743.7267    -0.05   0.963    -1513.769    1444.716
          m6 |   3035.458     1038.8     2.92   0.004     969.3273    5101.589
          m7 |   1987.944   1336.143     1.49   0.141    -669.5906    4645.479
          m8 |  -33.57607   1627.021    -0.02   0.984    -3269.656    3202.504
          m9 |  -1098.777   1170.055    -0.94   0.350    -3425.969    1228.416
       _cons |   62727.17   935.2665    67.07   0.000     60866.97    64587.38
-------------+----------------------------------------------------------------
         rho |   .2471846
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.569388
Durbin-Watson statistic (transformed) 1.953602


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     102
-------------+------------------------------           F( 18,    83) =    9.46
       Model |   922831861    18  51268436.7           Prob > F      =  0.0000
    Residual |   449630186    83  5417231.15           R-squared     =  0.6724
-------------+------------------------------           Adj R-squared =  0.6013
       Total |  1.3725e+09   101  13588733.1           Root MSE      =  2327.5

------------------------------------------------------------------------------
      load13 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
  cdd_bldall |   1039.855   161.9062     6.42   0.000       717.83     1361.88
       evtd1 |  -6173.248   2456.771    -2.51   0.014    -11059.67    -1286.83
       evtd2 |  -6374.302   2590.305    -2.46   0.016    -11526.31    -1222.29
       evtd3 |  -2226.325   2445.576    -0.91   0.365    -7090.477    2637.827
       evtd4 |  -6839.492   2333.428    -2.93   0.004    -11480.59   -2198.397
       evtd5 |  -7604.951    2452.32    -3.10   0.003    -12482.52   -2727.384
       evtd6 |  -8217.595   2622.478    -3.13   0.002     -13433.6   -3001.592
       evtd7 |  -9358.742   2716.817    -3.44   0.001    -14762.38   -3955.102
       evtd8 |  -10182.19   3210.328    -3.17   0.002     -16567.4   -3796.973
       evtd9 |  -9335.941   2602.027    -3.59   0.001    -14511.27   -4160.614
         dt2 |   1992.243   673.7494     2.96   0.004      652.182    3332.303
         dt3 |   2495.918   761.8163     3.28   0.002     980.6957     4011.14
         dt4 |   2902.805    752.315     3.86   0.000     1406.481    4399.129
         dt5 |   100.1811   658.5356     0.15   0.879     -1209.62    1409.982
          m6 |   2487.934   1027.905     2.42   0.018     443.4716    4532.397
          m7 |   1674.855   1310.955     1.28   0.205    -932.5827    4282.292
          m8 |  -499.1806   1585.211    -0.31   0.754    -3652.101     2653.74
          m9 |  -826.9569   1161.051    -0.71   0.478    -3136.241    1482.327
       _cons |   59867.12   901.1215    66.44   0.000     58074.83    61659.41
-------------+----------------------------------------------------------------
         rho |   .3167785
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.429561
Durbin-Watson statistic (transformed) 1.878411


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     102
-------------+------------------------------           F( 18,    83) =    9.01
       Model |   820932196    18  45607344.2           Prob > F      =  0.0000
```

```
    Residual |   420069898    83  5061083.11           R-squared     =  0.6615
-------------+------------------------------           Adj R-squared =  0.5881
       Total |  1.2410e+09   101  12287149.4           Root MSE      =  2249.7

------------------------------------------------------------------------------
      load14 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
  cdd_bldall |   1075.635   163.9339     6.56   0.000     749.5769    1401.693
       evtd1 |  -4179.512    2364.04    -1.77   0.081    -8881.493    522.4687
       evtd2 |   -4681.04   2532.136    -1.85   0.068    -9717.356    355.2764
       evtd3 |  -3015.943   2352.986    -1.28   0.203    -7695.937     1664.05
       evtd4 |  -5297.224    2199.01    -2.41   0.018    -9670.966   -923.4823
       evtd5 |  -6332.745   2365.044    -2.68   0.009    -11036.72   -1628.768
       evtd6 |  -6163.239    2587.15    -2.38   0.019    -11308.98   -1017.502
       evtd7 |  -8673.588   2696.963    -3.22   0.002    -14037.74   -3309.437
       evtd8 |  -10034.49   3178.409    -3.16   0.002    -16356.22   -3712.764
       evtd9 |  -7657.249   2510.848    -3.05   0.003    -12651.22   -2663.273
         dt2 |   2426.937   633.6574     3.83   0.000     1166.618    3687.257
         dt3 |   2234.372   729.6194     3.06   0.003     783.1888    3685.556
         dt4 |   2544.514   720.5492     3.53   0.001     1111.371    3977.658
         dt5 |    578.927   618.4651     0.94   0.352    -651.1752    1809.029
          m6 |   2368.944   1085.965     2.18   0.032      209.004    4528.885
          m7 |   416.7338   1372.625     0.30   0.762    -2313.362     3146.83
          m8 |  -796.8327   1644.078    -0.48   0.629    -4066.838    2473.173
          m9 |  -1111.836    1233.09    -0.90   0.370    -3564.402     1340.73
       _cons |   56905.96   930.6669    61.15   0.000      55054.9    58757.02
-------------+----------------------------------------------------------------
         rho |   .3873655
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.300364
Durbin-Watson statistic (transformed) 1.811081


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     102
-------------+------------------------------           F( 18,    83) =    9.21
       Model |   704175273    18  39120848.5           Prob > F      =  0.0000
    Residual |   352468685    83  4246610.66           R-squared     =  0.6664
-------------+------------------------------           Adj R-squared =  0.5941
       Total |  1.0566e+09   101  10461821.4           Root MSE      =  2060.7

------------------------------------------------------------------------------
      load15 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
  cdd_bldall |   1032.499   150.7706     6.85   0.000     732.6226    1332.376
       evtd1 |  -3329.287    2164.45    -1.54   0.128    -7634.291    975.7174
       evtd2 |  -4326.859   2321.597    -1.86   0.066    -8944.422    290.7035
       evtd3 |  -3034.466   2154.326    -1.41   0.163    -7319.334    1250.401
       evtd4 |  -4476.365   2009.517    -2.23   0.029    -8473.215   -479.5158
       evtd5 |  -6834.668   2165.947    -3.16   0.002    -11142.65   -2526.687
       evtd6 |  -5720.825   2374.379    -2.41   0.018    -10443.37   -998.2796
       evtd7 |  -7361.594   2476.699    -2.97   0.004    -12287.65   -2435.539
       evtd8 |  -8702.858   2917.554    -2.98   0.004    -14505.75   -2899.961
       evtd9 |  -6089.106   2299.517    -2.65   0.010    -10662.75    -1515.46
         dt2 |   1640.994   579.0117     2.83   0.006     489.3626    2792.625
         dt3 |   1753.674   667.6843     2.63   0.010      425.677    3081.671
         dt4 |   1879.003   659.3879     2.85   0.006     567.5074      3190.5
         dt5 |   592.1474   565.0711     1.05   0.298    -531.7563    1716.051
          m6 |    2914.27   1002.946     2.91   0.005     919.4512     4909.09
          m7 |   409.0425   1266.676     0.32   0.748    -2110.325     2928.41
          m8 |   75.48204   1515.693     0.05   0.960     -2939.17    3090.134
          m9 |  -743.9189   1139.542    -0.65   0.516    -3010.422    1522.584
```

```
       _cons |   56765.82   858.0126    66.16   0.000     55059.27    58472.37
-------------+----------------------------------------------------------------
         rho |   .3936601
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.269920
Durbin-Watson statistic (transformed) 1.857845


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     102
-------------+------------------------------           F( 18,    83) =   10.76
       Model |   913391331    18  50743962.9           Prob > F      =  0.0000
    Residual |   391561064    83  4717603.18           R-squared     =  0.6999
-------------+------------------------------           Adj R-squared =  0.6349
       Total |  1.3050e+09   101  12920320.7           Root MSE      =    2172

------------------------------------------------------------------------------
      load16 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
  cdd_bldal1 |   1126.359   168.2947     6.69   0.000     791.6277    1461.091
       evtd1 |  -8328.304   2260.551    -3.68   0.000    -12824.45   -3832.159
       evtd2 |  -7360.955   2474.376    -2.97   0.004    -12282.39   -2439.521
       evtd3 |  -5787.781    2250.41    -2.57   0.012    -10263.76   -1311.807
       evtd4 |  -7806.452   2039.079    -3.83   0.000     -11862.1   -3750.806
       evtd5 |  -11008.14   2275.007    -4.84   0.000    -15533.03    -6483.24
       evtd6 |     -10438   2578.375    -4.05   0.000    -15566.29   -5309.719
       evtd7 |  -10932.13   2718.278    -4.02   0.000    -16338.67   -5525.581
       evtd8 |   -12955.5   3167.746    -4.09   0.000    -19256.02   -6654.982
       evtd9 |  -10174.09   2414.004    -4.21   0.000    -14975.45   -5372.737
         dt2 |   1825.701   587.7493     3.11   0.003     656.6912    2994.711
         dt3 |   2373.315   691.2199     3.43   0.001     998.5063    3748.123
         dt4 |   1893.544   682.7209     2.77   0.007     535.6391    3251.448
         dt5 |   429.6681   573.0306     0.75   0.455    -710.0667    1569.403
          m6 |   2994.439   1202.547     2.49   0.015     602.6219    5386.257
          m7 |   390.4892   1501.493     0.26   0.795    -2595.921    3376.899
          m8 |  -324.6101   1765.588    -0.18   0.855    -3836.293    3187.073
          m9 |  -944.7776    1386.03    -0.68   0.497    -3701.537    1811.981
       _cons |   59378.91   1009.011    58.85   0.000     57372.03    61385.79
-------------+----------------------------------------------------------------
         rho |   .4884773
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.102121
Durbin-Watson statistic (transformed) 1.686354


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     102
-------------+------------------------------           F( 18,    83) =    9.82
       Model |   954109569    18  53006087.2           Prob > F      =  0.0000
    Residual |   447992695    83  5397502.35           R-squared     =  0.6805
-------------+------------------------------           Adj R-squared =  0.6112
       Total |  1.4021e+09   101  13882200.6           Root MSE      =  2323.3

------------------------------------------------------------------------------
      load17 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
  cdd_bldal1 |   1230.623   182.9745     6.73   0.000     866.6945    1594.552
       evtd1 |   -11091.6   2408.927    -4.60   0.000    -15882.86   -6300.344
       evtd2 |  -9127.128   2652.332    -3.44   0.001    -14402.51   -3851.747
       evtd3 |  -7723.215   2398.463    -3.22   0.002    -12493.66   -2952.769
       evtd4 |  -8082.297   2153.889    -3.75   0.000     -12366.3   -3798.298
```

```
       evtd5 |  -12003.46   2430.402    -4.94   0.000    -16837.43   -7169.486
       evtd6 |  -11581.93   2784.251    -4.16   0.000    -17119.69   -6044.163
       evtd7 |  -13385.42   2946.512    -4.54   0.000    -19245.91   -7524.925
       evtd8 |  -14361.56   3416.418    -4.20   0.000    -21156.67   -7566.438
       evtd9 |  -10986.27   2577.566    -4.26   0.000    -16112.95   -5859.599
         dt2 |   629.1611   621.1673     1.01   0.314    -606.3157    1864.638
         dt3 |   1509.348   734.3352     2.06   0.043     48.78491    2969.911
         dt4 |   808.1454   725.3459     1.11   0.268    -634.5384    2250.829
         dt5 |  -128.4771   605.5736    -0.21   0.833    -1332.939    1075.984
          m6 |   2427.027   1341.669     1.81   0.074    -241.4977    5095.552
          m7 |   303.1768   1670.128     0.18   0.856     -3018.64    3624.994
          m8 |  -1696.142   1951.283    -0.87   0.387    -5577.165    2184.882
          m9 |  -1545.272   1557.218    -0.99   0.324    -4642.516    1551.972
       _cons |   61787.72   1122.737    55.03   0.000     59554.64     64020.8
-------------+----------------------------------------------------------------
         rho |   .5180286
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.097546
Durbin-Watson statistic (transformed) 1.776641


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     102
-------------+------------------------------           F( 18,    83) =   12.82
       Model |   952128405    18  52896022.5           Prob > F      =  0.0000
    Residual |   342411113    83   4125435.1           R-squared     =  0.7355
-------------+------------------------------           Adj R-squared =  0.6781
       Total |  1.2945e+09   101    12817223           Root MSE      =  2031.1

------------------------------------------------------------------------------
      load18 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
  cdd_bldall |     1155.1   170.9083     6.76   0.000     815.1706     1495.03
       evtd1 |  -11112.43   2048.933    -5.42   0.000    -15187.67   -7037.181
       evtd2 |  -8917.935   2312.717    -3.86   0.000    -13517.84   -4318.033
       evtd3 |  -6593.951   2042.431    -3.23   0.002    -10656.27   -2531.637
       evtd4 |  -7427.184   1760.409    -4.22   0.000    -10928.57   -3925.801
       evtd5 |  -10441.08   2106.458    -4.96   0.000    -14630.74   -6251.423
       evtd6 |  -10273.88   2548.937    -4.03   0.000    -15343.61   -5204.145
       evtd7 |  -10482.92   2760.694    -3.80   0.000    -15973.83   -4992.012
       evtd8 |   -11225.3   3079.472    -3.65   0.000    -17350.24    -5100.35
       evtd9 |  -8647.097   2221.734    -3.89   0.000    -13066.04   -4228.158
         dt2 |   477.3036   509.5884     0.94   0.352    -536.2472    1490.854
         dt3 |   1007.535   615.2114     1.64   0.105    -216.0954    2231.166
         dt4 |   972.5116   607.9031     1.60   0.113    -236.5833    2181.606
         dt5 |  -23.28089   497.6991    -0.05   0.963    -1013.184    966.6226
          m6 |   2359.678   1467.766     1.61   0.112    -559.6491    5279.006
          m7 |   820.9196   1819.034     0.45   0.653    -2797.065    4438.904
          m8 |  -655.9596   2052.121    -0.32   0.750    -4737.545    3425.626
          m9 |  -1540.818   1830.435    -0.84   0.402    -5181.479    2099.844
       _cons |   59773.18   1261.959    47.37   0.000     57263.19     62283.16
-------------+----------------------------------------------------------------
         rho |   .6678873
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    0.893779
Durbin-Watson statistic (transformed) 1.693709


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     102
-------------+------------------------------           F( 18,    83) =   10.71
```

```
      Model |   748543200    18  41585733.3           Prob > F      =  0.0000
   Residual |   322163133    83  3881483.53           R-squared     =  0.6991
-------------+------------------------------           Adj R-squared =  0.6339
      Total |  1.0707e+09   101  10601052.8           Root MSE      =  1970.1

------------------------------------------------------------------------------
     load19 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
  cdd_bldall |    1074.74    166.854     6.44   0.000     742.8736    1406.605
       evtd1 |  -4489.457   1977.456    -2.27   0.026    -8422.537    -556.378
       evtd2 |  -3814.603       2238    -1.70   0.092    -8265.896    636.6892
       evtd3 |  -687.4516   1971.551    -0.35   0.728    -4608.787    3233.884
       evtd4 |   -4182.87   1691.199    -2.47   0.015    -7546.597   -819.1438
       evtd5 |  -5686.913    2039.88    -2.79   0.007    -9744.152   -1629.674
       evtd6 |  -3560.729   2486.703    -1.43   0.156    -8506.682    1385.223
       evtd7 |  -8434.336   2703.705    -3.12   0.002     -13811.9   -3056.776
       evtd8 |  -7252.221   2994.412    -2.42   0.018    -13207.99   -1296.456
       evtd9 |  -5067.278   2149.088    -2.36   0.021    -9341.728   -792.8286
         dt2 |   -9.09008    489.813    -0.02   0.985    -983.3085    965.1283
         dt3 |   778.8873   592.7026     1.31   0.192    -399.9743    1957.749
         dt4 |   546.8597   585.7017     0.93   0.353    -618.0775    1711.797
         dt5 |   242.6915   478.6413     0.51   0.613    -709.3069     1194.69
          m6 |   2069.739   1469.028     1.41   0.163    -852.0997    4991.577
          m7 |   967.6217   1823.909     0.53   0.597     -2660.06    4595.303
          m8 |   510.0768   2049.496     0.25   0.804    -3566.288    4586.441
          m9 |  -1947.523    1864.43    -1.04   0.299    -5655.799    1760.752
       _cons |    57863.1   1277.668    45.29   0.000     55321.87    60404.33
-------------+----------------------------------------------------------------
         rho |   .6884825
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    0.856416
Durbin-Watson statistic (transformed) 1.939818


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     102
-------------+------------------------------           F( 18,    83) =   10.09
       Model |   676410766    18  37578375.9           Prob > F      =  0.0000
   Residual |   309076459    83  3723812.76           R-squared     =  0.6864
-------------+------------------------------           Adj R-squared =  0.6184
      Total |   985487225   101  9757299.26           Root MSE      =  1929.7

------------------------------------------------------------------------------
     load20 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
  cdd_bldall |   881.7017   158.0601     5.58   0.000     567.3264    1196.077
       evtd1 |  -2278.748   1975.471    -1.15   0.252    -6207.881    1650.386
       evtd2 |  -1745.166   2206.656    -0.79   0.431    -6134.115    2643.784
       evtd3 |   211.2558   1967.989     0.11   0.915    -3702.995    4125.507
       evtd4 |  -1201.007    1726.96    -0.70   0.489     -4635.86    2233.847
       evtd5 |  -2014.326    2010.62    -1.00   0.319    -6013.369    1984.717
       evtd6 |  -1442.012   2372.038    -0.61   0.545    -6159.901    3275.877
       evtd7 |  -2455.266    2539.27    -0.97   0.336    -7505.773     2595.24
       evtd8 |  -5376.832   2892.027    -1.86   0.067    -11128.96    375.2926
       evtd9 |  -2205.994   2127.391    -1.04   0.303    -6437.289    2025.302
         dt2 |    118.544   498.9877     0.24   0.813    -873.9224     1111.01
         dt3 |   1154.751   597.1562     1.93   0.057    -32.96868    2342.471
         dt4 |   503.9771   589.9496     0.85   0.395    -669.4091    1677.363
         dt5 |   428.5158   486.7092     0.88   0.381    -539.5293    1396.561
          m6 |   1884.046   1254.273     1.50   0.137    -610.6525    4378.744
          m7 |   1102.509   1552.904     0.71   0.480    -1986.156    4191.173
          m8 |   832.2401   1780.182     0.47   0.641     -2708.47     4372.95
```

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          m9 |  -1179.044   1498.171    -0.79   0.434    -4158.847    1800.758
       _cons |   56838.42   1054.033    53.92   0.000     54741.99    58934.85
-------------+----------------------------------------------------------------
         rho |   .5981217
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    0.953467
Durbin-Watson statistic (transformed) 2.093612


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     102
-------------+------------------------------           F( 18,    83) =    9.87
       Model |   650621898    18    36145661           Prob > F      =  0.0000
    Residual |   304113759    83  3664021.19           R-squared     =  0.6815
-------------+------------------------------           Adj R-squared =  0.6124
       Total |   954735656   101  9452828.28           Root MSE      =  1914.2

------------------------------------------------------------------------------
      load21 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
  cdd_bldall |   870.2729   153.2282     5.68   0.000     565.5082    1175.038
       evtd1 |  -570.7097    1975.81    -0.29   0.773    -4500.516    3359.097
       evtd2 |   1297.243   2188.365     0.59   0.555    -3055.327    5649.814
       evtd3 |   1047.071   1967.604     0.53   0.596    -2866.414    4960.555
       evtd4 |  -162.8789    1750.66    -0.09   0.926     -3644.87    3319.113
       evtd5 |  -1779.804   1999.559    -0.89   0.376    -5756.847    2197.239
       evtd6 |  -2656.634   2317.118    -1.15   0.255    -7265.289    1952.022
       evtd7 |  -2266.997   2462.674    -0.92   0.360    -7165.157    2631.163
       evtd8 |  -3006.781   2837.609    -1.06   0.292    -8650.672    2637.109
       evtd9 |  -2370.663   2119.054    -1.12   0.266    -6585.376     1844.05
         dt2 |   59.47766   505.2216     0.12   0.907    -945.3878    1064.343
         dt3 |    1391.61   600.3153     2.32   0.023     197.6072    2585.613
         dt4 |   504.5759   593.0046     0.85   0.397    -674.8864    1684.038
         dt5 |   290.3544   492.5765     0.59   0.557    -689.3604    1270.069
          m6 |   1536.774   1156.993     1.33   0.188    -764.4385    3837.987
          m7 |   702.2638   1436.351     0.49   0.626    -2154.581    3559.108
          m8 |  -120.1943   1666.054    -0.07   0.943    -3433.908    3193.519
          m9 |  -2547.668   1355.379    -1.88   0.064    -5243.462    148.1252
       _cons |   56785.91   967.6476    58.68   0.000      54861.3    58710.52
-------------+----------------------------------------------------------------
         rho |   .5493447
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.025502
Durbin-Watson statistic (transformed) 2.132139


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     102
-------------+------------------------------           F( 18,    83) =    9.38
       Model |   662134171    18  36785231.7           Prob > F      =  0.0000
    Residual |   325547703    83  3922261.48           R-squared     =  0.6704
-------------+------------------------------           Adj R-squared =  0.5989
       Total |   987681874   101  9779028.46           Root MSE      =  1980.5

------------------------------------------------------------------------------
      load22 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
  cdd_bldall |   691.6277   154.8242     4.47   0.000     383.6886    999.5668
       evtd1 |    612.096    2057.18     0.30   0.767    -3479.552    4703.744
       evtd2 |   2867.346   2258.979     1.27   0.208    -1625.672    7360.364
       evtd3 |   3277.441   2048.099     1.60   0.113    -796.1448    7351.027
```

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       evtd4 |  -1750.412   1846.825    -0.95   0.346    -5423.673    1922.848
       evtd5 |   668.3937   2073.027     0.32   0.748    -3454.773     4791.56
       evtd6 |  -589.2168    2363.06    -0.25   0.804    -5289.248    4110.814
       evtd7 |  -2961.806   2496.315    -1.19   0.239    -7926.876    2003.264
       evtd8 |  -2197.709   2901.479    -0.76   0.451    -7968.633    3573.216
       evtd9 |  -1785.372   2199.123    -0.81   0.419    -6159.339    2588.594
         dt2 |   781.0919   532.4745     1.47   0.146    -277.9783    1840.162
         dt3 |   1521.078   628.0037     2.42   0.018     272.0038    2770.152
         dt4 |   569.1098   620.2999     0.92   0.362    -664.6417    1802.861
         dt5 |   759.3892   519.1141     1.46   0.147    -273.1079    1791.886
          m6 |   1345.791   1121.545     1.20   0.234    -884.9168    3576.499
          m7 |    1065.53   1398.003     0.76   0.448    -1715.041      3846.1
          m8 |    1369.63   1638.295     0.84   0.406    -1888.872    4628.132
          m9 |  -2311.369   1297.292    -1.78   0.078     -4891.63     268.892
       _cons |   55300.93   939.4682    58.86   0.000     53432.36    57169.49
-------------+----------------------------------------------------------------
         rho |   .5043848
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.157966
Durbin-Watson statistic (transformed) 2.030752


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     102
-------------+------------------------------           F( 18,    83) =    8.28
       Model |   746022370    18  41445687.2           Prob > F      =  0.0000
    Residual |   415290905    83  5003504.88           R-squared     =  0.6424
-------------+------------------------------           Adj R-squared =  0.5648
       Total |  1.1613e+09   101  11498151.2           Root MSE      =  2236.9

------------------------------------------------------------------------------
      load23 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
  cdd_bldall |   643.0611   170.1483     3.78   0.000     304.6431    981.4791
       evtd1 |   1859.311   2336.251     0.80   0.428    -2787.398     6506.02
       evtd2 |   4015.118   2540.419     1.58   0.118    -1037.673    9067.909
       evtd3 |   4247.341   2325.514     1.83   0.071    -378.0127    8872.694
       evtd4 |  -3307.769   2127.747    -1.55   0.124    -7539.771    924.2342
       evtd5 |   1270.683   2345.832     0.54   0.589    -3395.082    5936.448
       evtd6 |   1392.958   2628.483     0.53   0.598    -3834.989    6620.905
       evtd7 |   -858.752   2760.489    -0.31   0.757    -6349.253    4631.749
       evtd8 |  -2777.846   3231.529    -0.86   0.392    -9205.228    3649.535
       evtd9 |  -2583.239   2490.051    -1.04   0.303    -7535.851    2369.373
         dt2 |   1428.917   613.0705     2.33   0.022     209.5446     2648.29
         dt3 |   2330.427   716.6343     3.25   0.002     905.0698    3755.783
         dt4 |   858.9063   707.7858     1.21   0.228    -548.8512    2266.664
         dt5 |    1171.02   597.8404     1.96   0.054    -18.06095     2360.1
          m6 |    1425.25   1184.742     1.20   0.232    -931.1548    3781.656
          m7 |   1422.658   1484.639     0.96   0.341    -1530.229    4375.545
          m8 |   2313.479    1757.01     1.32   0.192    -1181.143    5808.101
          m9 |  -1613.582   1357.365    -1.19   0.238    -4313.327    1086.163
       _cons |   53517.65   998.9081    53.58   0.000     51530.87    55504.44
-------------+----------------------------------------------------------------
         rho |   .4566805
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.235034
Durbin-Watson statistic (transformed) 1.977682


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     102
```

```
-------------+------------------------------           F( 18,    83) =    9.17
       Model |   684020121    18  38001117.8           Prob > F      =  0.0000
    Residual |   344093386    83  4145703.45           R-squared     =  0.6653
-------------+------------------------------           Adj R-squared =  0.5927
       Total |  1.0281e+09   101  10179341.7           Root MSE      =  2036.1

------------------------------------------------------------------------------
      load24 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
  cdd_bldall |   651.6104   146.8086     4.44   0.000     359.6141    943.6068
       evtd1 |   2665.525   2142.114     1.24   0.217    -1595.053    6926.103
       evtd2 |   4098.634   2286.063     1.79   0.077    -448.2539    8645.522
       evtd3 |   3483.793   2132.121     1.63   0.106    -756.9096    7724.495
       evtd4 |  -3572.944   2002.437    -1.78   0.078    -7555.711    409.8226
       evtd5 |   1629.968   2141.656     0.76   0.449    -2629.699    5889.635
       evtd6 |   4835.471   2330.056     2.08   0.041     201.0827    9469.859
       evtd7 |  -392.2466   2425.156    -0.16   0.872    -5215.784    4431.291
       evtd8 |  -2811.431   2860.876    -0.98   0.329    -8501.598    2878.736
       evtd9 |  -2706.769   2273.523    -1.19   0.237    -7228.714    1815.176
         dt2 |   1190.853   577.1665     2.06   0.042     42.89166    2338.814
         dt3 |   1642.546   661.9506     2.48   0.015     325.9532    2959.139
         dt4 |   536.7593   653.7126     0.82   0.414    -763.4489    1836.967
         dt5 |   899.7892   563.4913     1.60   0.114    -220.9723    2020.551
          m6 |   1908.212   962.3009     1.98   0.051    -5.765715     3822.19
          m7 |    987.944   1218.865     0.81   0.420     -1436.33    3412.218
          m8 |   2221.591   1463.482     1.52   0.133    -689.2152    5132.396
          m9 |  -1218.403   1091.033    -1.12   0.267    -3388.425    951.6183
       _cons |   52177.85   828.6499    62.97   0.000      50529.7       53826
-------------+----------------------------------------------------------------
         rho |   .3709801
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.332944
Durbin-Watson statistic (transformed) 1.984697
```

SCE CPP Model

```
      Source |       SS       df       MS              Number of obs =    2016
-------------+------------------------------           F(389,  1626) =  268.15
       Model |  3.3662e+10   389  86535476.5           Prob > F      =  0.0000
    Residual |   524738684  1626  322717.518           R-squared     =  0.9847
-------------+------------------------------           Adj R-squared =  0.9810
       Total |  3.4187e+10  2015  16966272.5           Root MSE      =  568.08

------------------------------------------------------------------------------
         kwh |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
      cpp1_1 |  -372.4829    590.425    -0.63   0.528    -1530.557    785.5909
      cpp1_2 |  -769.4034    590.425    -1.30   0.193    -1927.477    388.6703
      cpp1_3 |  -435.2442    590.425    -0.74   0.461    -1593.318    722.8296
      cpp1_4 |  -24.61148    590.425    -0.04   0.967    -1182.685    1133.462
      cpp1_5 |   1934.509    590.425     3.28   0.001     776.4354    3092.583
      cpp1_6 |   65.45066    590.425     0.11   0.912    -1092.623    1223.524
      cpp1_7 |  -551.6572    590.425    -0.93   0.350    -1709.731    606.4166
      cpp1_8 |  -363.3291    590.425    -0.62   0.538    -1521.403    794.7446
      cpp1_9 |   189.8918    590.425     0.32   0.748    -968.1819    1347.966
     cpp1_10 |  -144.8486    590.425    -0.25   0.806    -1302.922    1013.225
     cpp1_11 |  -319.6559    590.425    -0.54   0.588     -1477.73    838.4179
     cpp1_12 |  -3649.348    590.425    -6.18   0.000    -4807.422   -2491.274
     cpp1_13 |  -8819.144    590.425   -14.94   0.000    -9977.218   -7661.071
     cpp1_14 |  -8808.301    590.425   -14.92   0.000    -9966.374   -7650.227
     cpp1_15 |  -7933.758    590.425   -13.44   0.000    -9091.832   -6775.684
     cpp1_16 |   -6693.03    590.425   -11.34   0.000    -7851.104   -5534.956
     cpp1_17 |  -6000.138    590.425   -10.16   0.000    -7158.212   -4842.065
     cpp1_18 |  -5523.373    590.425    -9.35   0.000    -6681.446   -4365.299
     cpp1_19 |  -2201.798    590.425    -3.73   0.000    -3359.871   -1043.724
     cpp1_20 |   279.7989    590.425     0.47   0.636    -878.2749    1437.873
     cpp1_21 |   1490.012    590.425     2.52   0.012     331.9387    2648.086
     cpp1_22 |   1847.734    590.425     3.13   0.002     689.6601    3005.808
     cpp1_23 |   1439.727    590.425     2.44   0.015     281.6534    2597.801
     cpp1_24 |   1331.545    590.425     2.26   0.024     173.4714    2489.619
      cpp2_1 |  -1422.553   590.0831    -2.41   0.016    -2579.956   -265.1503
      cpp2_2 |  -691.3713   590.0831    -1.17   0.242    -1848.774    466.0318
      cpp2_3 |  -146.3504   590.0831    -0.25   0.804    -1303.753    1011.053
      cpp2_4 |   678.6313   590.0831     1.15   0.250    -478.7718    1836.034
      cpp2_5 |   2027.477   590.0831     3.44   0.001     870.0736     3184.88
      cpp2_6 |   1130.873   590.0831     1.92   0.055    -26.53057    2288.276
      cpp2_7 |   872.9428   590.0831     1.48   0.139    -284.4603    2030.346
      cpp2_8 |   178.1619   590.0831     0.30   0.763    -979.2411    1335.565
      cpp2_9 |  -163.8645   590.0831    -0.28   0.781    -1321.268    993.5386
     cpp2_10 |   133.6667   590.0831     0.23   0.821    -1023.736     1291.07
     cpp2_11 |   230.5973   590.0831     0.39   0.696    -926.8058        1388
     cpp2_12 |  -1872.858   590.0831    -3.17   0.002    -3030.261   -715.4547
     cpp2_13 |  -8199.382   590.0831   -13.90   0.000    -9356.785   -7041.979
     cpp2_14 |  -8071.568   590.0831   -13.68   0.000    -9228.971   -6914.165
     cpp2_15 |  -6944.019   590.0831   -11.77   0.000    -8101.422   -5786.616
     cpp2_16 |  -6429.485   590.0831   -10.90   0.000    -7586.888   -5272.081
     cpp2_17 |  -5916.817   590.0831   -10.03   0.000     -7074.22   -4759.414
     cpp2_18 |  -6044.658   590.0831   -10.24   0.000    -7202.061   -4887.255
     cpp2_19 |  -3753.645   590.0831    -6.36   0.000    -4911.048   -2596.241
     cpp2_20 |  -2028.505   590.0831    -3.44   0.001    -3185.908   -871.1019
     cpp2_21 |  -1400.286   590.0831    -2.37   0.018    -2557.689   -242.8828
     cpp2_22 |  -1410.738   590.0831    -2.39   0.017    -2568.142   -253.3354
     cpp2_23 |  -745.9688   590.0831    -1.26   0.206    -1903.372    411.4343
     cpp2_24 |  -595.7485   590.0831    -1.01   0.313    -1753.152    561.6546
      cpp3_1 |  -47.59822   583.0454    -0.08   0.935    -1191.198    1096.001
      cpp3_2 |   337.3008   583.0454     0.58   0.563    -806.2985      1480.9
      cpp3_3 |   502.3611   583.0454     0.86   0.389    -641.2383     1645.96
```

cpp3_4	569.7139	583.0454	0.98	0.329	-573.8854	1713.313
cpp3_5	991.9191	583.0454	1.70	0.089	-151.6802	2135.518
cpp3_6	-153.4333	583.0454	-0.26	0.792	-1297.033	990.166
cpp3_7	-1116.378	583.0454	-1.91	0.056	-2259.977	27.22181
cpp3_8	-1896.299	583.0454	-3.25	0.001	-3039.899	-752.7
cpp3_9	-749.1104	583.0454	-1.28	0.199	-1892.71	394.4889
cpp3_10	-1784.432	583.0454	-3.06	0.002	-2928.032	-640.833
cpp3_11	-1976.047	583.0454	-3.39	0.001	-3119.646	-832.4478
cpp3_12	-4528.179	583.0454	-7.77	0.000	-5671.779	-3384.58
cpp3_13	-10460.53	583.0454	-17.94	0.000	-11604.13	-9316.936
cpp3_14	-10429.72	583.0454	-17.89	0.000	-11573.32	-9286.124
cpp3_15	-8729.939	583.0454	-14.97	0.000	-9873.538	-7586.34
cpp3_16	-7624.2	583.0454	-13.08	0.000	-8767.799	-6480.6
cpp3_17	-7141.833	583.0454	-12.25	0.000	-8285.432	-5998.234
cpp3_18	-6349.287	583.0454	-10.89	0.000	-7492.886	-5205.687
cpp3_19	-3949.155	583.0454	-6.77	0.000	-5092.754	-2805.556
cpp3_20	-2111.783	583.0454	-3.62	0.000	-3255.382	-968.1834
cpp3_21	-1492.218	583.0454	-2.56	0.011	-2635.817	-348.6183
cpp3_22	-1676.131	583.0454	-2.87	0.004	-2819.73	-532.5315
cpp3_23	-889.5203	583.0454	-1.53	0.127	-2033.12	254.079
cpp3_24	-514.9964	583.0454	-0.88	0.377	-1658.596	628.6029
cpp4_1	-2484.836	593.733	-4.19	0.000	-3649.398	-1320.273
cpp4_2	-1876.996	593.733	-3.16	0.002	-3041.558	-712.4339
cpp4_3	-1604.085	593.733	-2.70	0.007	-2768.648	-439.5231
cpp4_4	-1001.312	593.733	-1.69	0.092	-2165.874	163.2505
cpp4_5	-903.0078	593.733	-1.52	0.128	-2067.57	261.5545
cpp4_6	-1372.133	593.733	-2.31	0.021	-2536.695	-207.5708
cpp4_7	-2337.764	593.733	-3.94	0.000	-3502.326	-1173.202
cpp4_8	-2655.108	593.733	-4.47	0.000	-3819.67	-1490.545
cpp4_9	-2470.63	593.733	-4.16	0.000	-3635.192	-1306.067
cpp4_10	-2796.17	593.733	-4.71	0.000	-3960.732	-1631.607
cpp4_11	-2912.367	593.733	-4.91	0.000	-4076.93	-1747.805
cpp4_12	-4710.934	593.733	-7.93	0.000	-5875.497	-3546.372
cpp4_13	-8378.86	593.733	-14.11	0.000	-9543.422	-7214.298
cpp4_14	-7848.927	593.733	-13.22	0.000	-9013.49	-6684.365
cpp4_15	-6293.243	593.733	-10.60	0.000	-7457.805	-5128.68
cpp4_16	-5116.714	593.733	-8.62	0.000	-6281.276	-3952.152
cpp4_17	-4116.061	593.733	-6.93	0.000	-5280.624	-2951.499
cpp4_18	-3496.326	593.733	-5.89	0.000	-4660.888	-2331.763
cpp4_19	-479.8434	593.733	-0.81	0.419	-1644.406	684.7189
cpp4_20	754.4524	593.733	1.27	0.204	-410.1099	1919.015
cpp4_21	1306.906	593.733	2.20	0.028	142.3434	2471.468
cpp4_22	1519.646	593.733	2.56	0.011	355.0836	2684.208
cpp4_23	1631.633	593.733	2.75	0.006	467.0705	2796.195
cpp4_24	1870.968	593.733	3.15	0.002	706.4053	3035.53
cpp5_1	-470.5898	595.3393	-0.79	0.429	-1638.303	697.1229
cpp5_2	861.538	595.3393	1.45	0.148	-306.1747	2029.251
cpp5_3	1901.409	595.3393	3.19	0.001	733.6958	3069.121
cpp5_4	1453.581	595.3393	2.44	0.015	285.868	2621.293
cpp5_5	965.2237	595.3393	1.62	0.105	-202.489	2132.936
cpp5_6	-979.4657	595.3393	-1.65	0.100	-2147.178	188.247
cpp5_7	-2702.101	595.3393	-4.54	0.000	-3869.814	-1534.388
cpp5_8	-3554.955	595.3393	-5.97	0.000	-4722.667	-2387.242
cpp5_9	-2827.572	595.3393	-4.75	0.000	-3995.284	-1659.859
cpp5_10	-3558.226	595.3393	-5.98	0.000	-4725.939	-2390.514
cpp5_11	-3569.009	595.3393	-5.99	0.000	-4736.722	-2401.296
cpp5_12	-5274.066	595.3393	-8.86	0.000	-6441.779	-4106.354
cpp5_13	-8773.261	595.3393	-14.74	0.000	-9940.973	-7605.548
cpp5_14	-7952.348	595.3393	-13.36	0.000	-9120.061	-6784.635
cpp5_15	-6508.88	595.3393	-10.93	0.000	-7676.593	-5341.168
cpp5_16	-5952.486	595.3393	-10.00	0.000	-7120.198	-4784.773
cpp5_17	-5194.817	595.3393	-8.73	0.000	-6362.53	-4027.104
cpp5_18	-4405.793	595.3393	-7.40	0.000	-5573.506	-3238.081

cpp5_19	-1458.675	595.3393	-2.45	0.014	-2626.388	-290.9626
cpp5_20	-344.6597	595.3393	-0.58	0.563	-1512.372	823.053
cpp5_21	758.0047	595.3393	1.27	0.203	-409.7081	1925.717
cpp5_22	592.9781	595.3393	1.00	0.319	-574.7347	1760.691
cpp5_23	966.7352	595.3393	1.62	0.105	-200.9775	2134.448
cpp5_24	1480.61	595.3393	2.49	0.013	312.8969	2648.322
cpp6_1	-360.1453	591.455	-0.61	0.543	-1520.239	799.9486
cpp6_2	339.5235	591.455	0.57	0.566	-820.5705	1499.617
cpp6_3	544.5303	591.455	0.92	0.357	-615.5637	1704.624
cpp6_4	1480.595	591.455	2.50	0.012	320.5015	2640.689
cpp6_5	2039.636	591.455	3.45	0.001	879.5425	3199.73
cpp6_6	1194.606	591.455	2.02	0.044	34.5123	2354.7
cpp6_7	421.8071	591.455	0.71	0.476	-738.2869	1581.901
cpp6_8	-219.1893	591.455	-0.37	0.711	-1379.283	940.9047
cpp6_9	-590.099	591.455	-1.00	0.319	-1750.193	569.995
cpp6_10	-473.9353	591.455	-0.80	0.423	-1634.029	686.1587
cpp6_11	-517.713	591.455	-0.88	0.382	-1677.807	642.3809
cpp6_12	-2774.942	591.455	-4.69	0.000	-3935.036	-1614.848
cpp6_13	-9703.675	591.455	-16.41	0.000	-10863.77	-8543.581
cpp6_14	-9852.874	591.455	-16.66	0.000	-11012.97	-8692.78
cpp6_15	-7760.628	591.455	-13.12	0.000	-8920.722	-6600.534
cpp6_16	-6958.878	591.455	-11.77	0.000	-8118.972	-5798.784
cpp6_17	-6617.954	591.455	-11.19	0.000	-7778.048	-5457.86
cpp6_18	-6121.523	591.455	-10.35	0.000	-7281.617	-4961.429
cpp6_19	-3708.921	591.455	-6.27	0.000	-4869.015	-2548.827
cpp6_20	-2906.386	591.455	-4.91	0.000	-4066.48	-1746.292
cpp6_21	-1896.729	591.455	-3.21	0.001	-3056.823	-736.6347
cpp6_22	-1581.446	591.455	-2.67	0.008	-2741.54	-421.3517
cpp6_23	-641.0114	591.455	-1.08	0.279	-1801.105	519.0826
cpp6_24	-254.2157	591.455	-0.43	0.667	-1414.31	905.8782
cpp7_1	66.30203	591.3971	0.11	0.911	-1093.679	1226.283
cpp7_2	382.4456	591.3971	0.65	0.518	-777.5349	1542.426
cpp7_3	-38.57815	591.3971	-0.07	0.948	-1198.559	1121.402
cpp7_4	686.6147	591.3971	1.16	0.246	-473.3659	1846.595
cpp7_5	1810.447	591.3971	3.06	0.002	650.4661	2970.427
cpp7_6	1444.392	591.3971	2.44	0.015	284.4119	2604.373
cpp7_7	120.5407	591.3971	0.20	0.839	-1039.44	1280.521
cpp7_8	-284.2473	591.3971	-0.48	0.631	-1444.228	875.7332
cpp7_9	-552.6247	591.3971	-0.93	0.350	-1712.605	607.3559
cpp7_10	-579.05	591.3971	-0.98	0.328	-1739.031	580.9306
cpp7_11	-868.8536	591.3971	-1.47	0.142	-2028.834	291.127
cpp7_12	-2782.204	591.3971	-4.70	0.000	-3942.185	-1622.223
cpp7_13	-10215.49	591.3971	-17.27	0.000	-11375.47	-9055.508
cpp7_14	-9478.305	591.3971	-16.03	0.000	-10638.29	-8318.325
cpp7_15	-8440.755	591.3971	-14.27	0.000	-9600.735	-7280.774
cpp7_16	-7791.449	591.3971	-13.17	0.000	-8951.429	-6631.468
cpp7_17	-6894.574	591.3971	-11.66	0.000	-8054.554	-5734.593
cpp7_18	-7227.35	591.3971	-12.22	0.000	-8387.33	-6067.369
cpp7_19	-4833.471	591.3971	-8.17	0.000	-5993.451	-3673.49
cpp7_20	-4204.656	591.3971	-7.11	0.000	-5364.637	-3044.676
cpp7_21	-2178.711	591.3971	-3.68	0.000	-3338.692	-1018.73
cpp7_22	-1799.973	591.3971	-3.04	0.002	-2959.954	-639.9924
cpp7_23	-641.2658	591.3971	-1.08	0.278	-1801.246	518.7148
cpp7_24	-272.8298	591.3971	-0.46	0.645	-1432.81	887.1507
cpp8_1	21.90588	604.611	0.04	0.971	-1163.993	1207.804
cpp8_2	41.18777	604.611	0.07	0.946	-1144.711	1227.086
cpp8_3	-25.56408	604.611	-0.04	0.966	-1211.463	1160.334
cpp8_4	757.8579	604.611	1.25	0.210	-428.0407	1943.756
cpp8_5	1790.666	604.611	2.96	0.003	604.7679	2976.565
cpp8_6	1104.17	604.611	1.83	0.068	-81.72866	2290.068
cpp8_7	1168.172	604.611	1.93	0.054	-17.72684	2354.07
cpp8_8	877.4107	604.611	1.45	0.147	-308.4878	2063.309
cpp8_9	-29.81941	604.611	-0.05	0.961	-1215.718	1156.079

cpp8_10	-441.5713	604.611	-0.73	0.465	-1627.47	744.3272
cpp8_11	-1196.354	604.611	-1.98	0.048	-2382.253	-10.45582
cpp8_12	-2579.638	604.611	-4.27	0.000	-3765.537	-1393.74
cpp8_13	-8463.402	604.611	-14.00	0.000	-9649.3	-7277.503
cpp8_14	-7886.78	604.611	-13.04	0.000	-9072.678	-6700.881
cpp8_15	-6421.563	604.611	-10.62	0.000	-7607.461	-5235.664
cpp8_16	-5925.21	604.611	-9.80	0.000	-7111.108	-4739.311
cpp8_17	-5339.538	604.611	-8.83	0.000	-6525.436	-4153.639
cpp8_18	-5647.649	604.611	-9.34	0.000	-6833.547	-4461.75
cpp8_19	-2863.561	604.611	-4.74	0.000	-4049.459	-1677.662
cpp8_20	-1870.811	604.611	-3.09	0.002	-3056.71	-684.9129
cpp8_21	-1626.79	604.611	-2.69	0.007	-2812.689	-440.8916
cpp8_22	-1218.114	604.611	-2.01	0.044	-2404.013	-32.21579
cpp8_23	-658.443	604.611	-1.09	0.276	-1844.342	527.4555
cpp8_24	-88.56423	604.611	-0.15	0.884	-1274.463	1097.334
cpp9_1	-830.8118	584.1399	-1.42	0.155	-1976.558	314.9342
cpp9_2	59.21169	584.1399	0.10	0.919	-1086.534	1204.958
cpp9_3	123.7935	584.1399	0.21	0.832	-1021.953	1269.54
cpp9_4	869.5952	584.1399	1.49	0.137	-276.1509	2015.341
cpp9_5	1804.194	584.1399	3.09	0.002	658.4478	2949.94
cpp9_6	815.9497	584.1399	1.40	0.163	-329.7964	1961.696
cpp9_7	135.8533	584.1399	0.23	0.816	-1009.893	1281.599
cpp9_8	-552.7276	584.1399	-0.95	0.344	-1698.474	593.0184
cpp9_9	41.70946	584.1399	0.07	0.943	-1104.037	1187.455
cpp9_10	-355.5291	584.1399	-0.61	0.543	-1501.275	790.2169
cpp9_11	-618.4718	584.1399	-1.06	0.290	-1764.218	527.2742
cpp9_12	-1788.539	584.1399	-3.06	0.002	-2934.285	-642.7925
cpp9_13	-8753.439	584.1399	-14.99	0.000	-9899.185	-7607.693
cpp9_14	-8537.404	584.1399	-14.62	0.000	-9683.15	-7391.658
cpp9_15	-7275.104	584.1399	-12.45	0.000	-8420.85	-6129.358
cpp9_16	-6379.753	584.1399	-10.92	0.000	-7525.499	-5234.007
cpp9_17	-7031.017	584.1399	-12.04	0.000	-8176.764	-5885.271
cpp9_18	-6816.694	584.1399	-11.67	0.000	-7962.44	-5670.948
cpp9_19	-4545.403	584.1399	-7.78	0.000	-5691.149	-3399.657
cpp9_20	-3218.608	584.1399	-5.51	0.000	-4364.354	-2072.862
cpp9_21	-2010.621	584.1399	-3.44	0.001	-3156.367	-864.8745
cpp9_22	-1587.28	584.1399	-2.72	0.007	-2733.026	-441.5344
cpp9_23	-279.9147	584.1399	-0.48	0.632	-1425.661	865.8314
cpp9_24	-12.93384	584.1399	-0.02	0.982	-1158.68	1132.812
cpp10_1	-321.1464	593.2692	-0.54	0.588	-1484.799	842.5061
cpp10_2	4.371706	593.2692	0.01	0.994	-1159.281	1168.024
cpp10_3	441.055	593.2692	0.74	0.457	-722.5975	1604.707
cpp10_4	1427.806	593.2692	2.41	0.016	264.1532	2591.458
cpp10_5	2635.239	593.2692	4.44	0.000	1471.587	3798.892
cpp10_6	2146.271	593.2692	3.62	0.000	982.6188	3309.924
cpp10_7	215.9274	593.2692	0.36	0.716	-947.7251	1379.58
cpp10_8	-649.2734	593.2692	-1.09	0.274	-1812.926	514.379
cpp10_9	-1561.163	593.2692	-2.63	0.009	-2724.815	-397.5103
cpp10_10	-426.3507	593.2692	-0.72	0.472	-1590.003	737.3018
cpp10_11	-1266.661	593.2692	-2.14	0.033	-2430.314	-103.0089
cpp10_12	-3286.289	593.2692	-5.54	0.000	-4449.941	-2122.636
cpp10_13	-10132.78	593.2692	-17.08	0.000	-11296.44	-8969.131
cpp10_14	-9712.858	593.2692	-16.37	0.000	-10876.51	-8549.205
cpp10_15	-8388.687	593.2692	-14.14	0.000	-9552.34	-7225.035
cpp10_16	-7854.93	593.2692	-13.24	0.000	-9018.583	-6691.278
cpp10_17	-7516.009	593.2692	-12.67	0.000	-8679.662	-6352.357
cpp10_18	-6210.857	593.2692	-10.47	0.000	-7374.51	-5047.205
cpp10_19	-3289.266	593.2692	-5.54	0.000	-4452.918	-2125.613
cpp10_20	-822.2967	593.2692	-1.39	0.166	-1985.949	341.3557
cpp10_21	82.22302	593.2692	0.14	0.890	-1081.429	1245.875
cpp10_22	182.9746	593.2692	0.31	0.758	-980.6778	1346.627
cpp10_23	178.7356	593.2692	0.30	0.763	-984.9169	1342.388
cpp10_24	237.0088	593.2692	0.40	0.690	-926.6436	1400.661

cpp11_1	56.89274	602.4371	0.09	0.925	-1124.742	1238.527
cpp11_2	453.9512	602.4371	0.75	0.451	-727.6835	1635.586
cpp11_3	370.4444	602.4371	0.61	0.539	-811.1903	1552.079
cpp11_4	705.9767	602.4371	1.17	0.241	-475.658	1887.611
cpp11_5	1057.05	602.4371	1.75	0.080	-124.5849	2238.684
cpp11_6	-209.507	602.4371	-0.35	0.728	-1391.142	972.1277
cpp11_7	302.8257	602.4371	0.50	0.615	-878.809	1484.46
cpp11_8	-612.8265	602.4371	-1.02	0.309	-1794.461	568.8082
cpp11_9	-1820.073	602.4371	-3.02	0.003	-3001.707	-638.4379
cpp11_10	-1565.203	602.4371	-2.60	0.009	-2746.838	-383.5683
cpp11_11	-2294.993	602.4371	-3.81	0.000	-3476.627	-1113.358
cpp11_12	-2784.484	602.4371	-4.62	0.000	-3966.118	-1602.849
cpp11_13	-7666.978	602.4371	-12.73	0.000	-8848.612	-6485.343
cpp11_14	-7453.784	602.4371	-12.37	0.000	-8635.419	-6272.15
cpp11_15	-6636.383	602.4371	-11.02	0.000	-7818.017	-5454.748
cpp11_16	-5590.228	602.4371	-9.28	0.000	-6771.863	-4408.594
cpp11_17	-5028.549	602.4371	-8.35	0.000	-6210.184	-3846.915
cpp11_18	-4386.013	602.4371	-7.28	0.000	-5567.648	-3204.379
cpp11_19	-2086.687	602.4371	-3.46	0.001	-3268.321	-905.0521
cpp11_20	-360.6014	602.4371	-0.60	0.550	-1542.236	821.0332
cpp11_21	634.5479	602.4371	1.05	0.292	-547.0868	1816.183
cpp11_22	425.3663	602.4371	0.71	0.480	-756.2684	1607.001
cpp11_23	1625.866	602.4371	2.70	0.007	444.2314	2807.501
cpp11_24	1938.667	602.4371	3.22	0.001	757.0326	3120.302
cpp12_1	1318.86	633.9578	2.08	0.038	75.40004	2562.32
cpp12_2	2396.968	633.9578	3.78	0.000	1153.508	3640.428
cpp12_3	1906.203	633.9578	3.01	0.003	662.7425	3149.663
cpp12_4	1243.549	633.9578	1.96	0.050	.0889901	2487.009
cpp12_5	685.7268	633.9578	1.08	0.280	-557.7332	1929.187
cpp12_6	-549.8654	633.9578	-0.87	0.386	-1793.325	693.5946
cpp12_7	-226.965	633.9578	-0.36	0.720	-1470.425	1016.495
cpp12_8	-877.435	633.9578	-1.38	0.167	-2120.895	366.025
cpp12_9	-1097.348	633.9578	-1.73	0.084	-2340.808	146.1123
cpp12_10	-960.8936	633.9578	-1.52	0.130	-2204.354	282.5664
cpp12_11	-1911.513	633.9578	-3.02	0.003	-3154.973	-668.0533
cpp12_12	-3180.328	633.9578	-5.02	0.000	-4423.788	-1936.868
cpp12_13	-9912.922	633.9578	-15.64	0.000	-11156.38	-8669.462
cpp12_14	-9771.621	633.9578	-15.41	0.000	-11015.08	-8528.161
cpp12_15	-8441.428	633.9578	-13.32	0.000	-9684.888	-7197.968
cpp12_16	-7902.21	633.9578	-12.46	0.000	-9145.67	-6658.75
cpp12_17	-7841.86	633.9578	-12.37	0.000	-9085.32	-6598.4
cpp12_18	-6242.512	633.9578	-9.85	0.000	-7485.972	-4999.052
cpp12_19	-4340.629	633.9578	-6.85	0.000	-5584.089	-3097.169
cpp12_20	-2513.821	633.9578	-3.97	0.000	-3757.281	-1270.361
cpp12_21	-1821.557	633.9578	-2.87	0.004	-3065.017	-578.0974
cpp12_22	-2144.173	633.9578	-3.38	0.001	-3387.633	-900.7134
cpp12_23	-1040.76	633.9578	-1.64	0.101	-2284.22	202.6996
cpp12_24	-474.284	633.9578	-0.75	0.454	-1717.744	769.1761
morn_load	.6327144	.0279358	22.65	0.000	.5779205	.6875083
wcdd_h1	-22.86563	16.19683	-1.41	0.158	-54.63448	8.903226
wcdd_h2	-30.69531	16.19683	-1.90	0.058	-62.46416	1.073547
wcdd_h3	-17.15222	16.19683	-1.06	0.290	-48.92108	14.61663
wcdd_h4	-5.560331	16.19683	-0.34	0.731	-37.32919	26.20852
wcdd_h5	40.16763	16.19683	2.48	0.013	8.398776	71.93649
wcdd_h6	63.32935	16.19683	3.91	0.000	31.5605	95.09821
wcdd_h7	-13.20008	16.19683	-0.81	0.415	-44.96893	18.56878
wcdd_h8	-2.43773	16.19683	-0.15	0.880	-34.20659	29.33113
wcdd_h9	16.00978	16.19683	0.99	0.323	-15.75908	47.77863
wcdd_h10	30.99954	16.19683	1.91	0.056	-.7693167	62.76839
wcdd_h11	54.07399	16.19683	3.34	0.001	22.30513	85.84284
wcdd_h12	51.44143	16.19683	3.18	0.002	19.67257	83.21028
wcdd_h13	63.66679	16.19683	3.93	0.000	31.89793	95.43564
wcdd_h14	37.89908	16.19683	2.34	0.019	6.130225	69.66794

wcdd_h15	14.60808	16.19683	0.90	0.367	-17.16078	46.37693
wcdd_h16	9.102057	16.19683	0.56	0.574	-22.6668	40.87091
wcdd_h17	-3.655301	16.19683	-0.23	0.821	-35.42416	28.11355
wcdd_h18	-14.33166	16.19683	-0.88	0.376	-46.10052	17.43719
wcdd_h19	-17.7161	16.19683	-1.09	0.274	-49.48496	14.05275
wcdd_h20	-20.10102	16.19683	-1.24	0.215	-51.86988	11.66784
wcdd_h21	-8.696541	16.19683	-0.54	0.591	-40.4654	23.07231
wcdd_h22	13.44832	16.19683	0.83	0.406	-18.32053	45.21718
wcdd_h23	3.37976	16.19683	0.21	0.835	-28.3891	35.14861
wcdd_h24	4.312273	16.19683	0.27	0.790	-27.45658	36.08113
dt2	2639.199	174.759	15.10	0.000	2296.422	2981.975
dt3	2736.565	177.4883	15.42	0.000	2388.435	3084.695
dt4	2893.78	178.887	16.18	0.000	2542.906	3244.653
dt5	3395.547	212.9751	15.94	0.000	2977.812	3813.281
m7	58.42213	43.01605	1.36	0.175	-25.95057	142.7948
m8	31.6592	50.19847	0.63	0.528	-66.80128	130.1197
m9	-218.163	37.81772	-5.77	0.000	-292.3396	-143.9865
mon_h2	413.1054	236.0321	1.75	0.080	-49.85369	876.0645
mon_h3	494.2753	236.0321	2.09	0.036	31.31626	957.2344
mon_h4	934.7773	236.0321	3.96	0.000	471.8182	1397.736
mon_h5	2005.343	236.0321	8.50	0.000	1542.384	2468.302
mon_h6	2629.22	236.0321	11.14	0.000	2166.261	3092.18
mon_h7	2930.337	236.0321	12.41	0.000	2467.377	3393.296
mon_h8	3634.044	236.0321	15.40	0.000	3171.085	4097.003
mon_h9	3918.856	236.0321	16.60	0.000	3455.897	4381.815
mon_h10	3549.771	236.0321	15.04	0.000	3086.812	4012.731
mon_h11	3500.014	236.0321	14.83	0.000	3037.055	3962.973
mon_h12	3445.307	236.0321	14.60	0.000	2982.348	3908.266
mon_h13	3588.042	236.0321	15.20	0.000	3125.083	4051.001
mon_h14	3654.77	236.0321	15.48	0.000	3191.81	4117.729
mon_h15	3458.356	236.0321	14.65	0.000	2995.397	3921.315
mon_h16	3525.286	236.0321	14.94	0.000	3062.327	3988.245
mon_h17	3531.978	236.0321	14.96	0.000	3069.019	3994.937
mon_h18	3544.589	236.0321	15.02	0.000	3081.63	4007.548
mon_h19	3259.233	236.0321	13.81	0.000	2796.274	3722.192
mon_h20	3119.018	236.0321	13.21	0.000	2656.059	3581.977
mon_h21	3278.613	236.0321	13.89	0.000	2815.654	3741.572
mon_h22	3191.375	236.0321	13.52	0.000	2728.416	3654.334
mon_h23	3445.471	236.0321	14.60	0.000	2982.512	3908.43
mon_h24	3643.504	236.0321	15.44	0.000	3180.545	4106.463
fri_h2	-167.2199	249.7708	-0.67	0.503	-657.1264	322.6866
fri_h3	-239.052	249.7708	-0.96	0.339	-728.9585	250.8545
fri_h4	-533.244	249.7708	-2.13	0.033	-1023.15	-43.3375
fri_h5	-524.526	249.7708	-2.10	0.036	-1014.432	-34.61954
fri_h6	-582.0758	249.7708	-2.33	0.020	-1071.982	-92.16933
fri_h7	-1175.643	249.7708	-4.71	0.000	-1665.549	-685.7361
fri_h8	-1474.318	249.7708	-5.90	0.000	-1964.224	-984.4111
fri_h9	-1456.846	249.7708	-5.83	0.000	-1946.752	-966.9391
fri_h10	-1692.168	249.7708	-6.77	0.000	-2182.074	-1202.261
fri_h11	-1643.725	249.7708	-6.58	0.000	-2133.632	-1153.819
fri_h12	-1655.98	249.7708	-6.63	0.000	-2145.886	-1166.073
fri_h13	-1480.896	249.7708	-5.93	0.000	-1970.803	-990.99
fri_h14	-1717.818	249.7708	-6.88	0.000	-2207.725	-1227.912
fri_h15	-1685.73	249.7708	-6.75	0.000	-2175.636	-1195.823
fri_h16	-1615.124	249.7708	-6.47	0.000	-2105.03	-1125.217
fri_h17	-1433.369	249.7708	-5.74	0.000	-1923.276	-943.4628
fri_h18	-1216.043	249.7708	-4.87	0.000	-1705.95	-726.1369
fri_h19	-1550.99	249.7708	-6.21	0.000	-2040.897	-1061.084
fri_h20	-1766.093	249.7708	-7.07	0.000	-2256	-1276.187
fri_h21	-1847.759	249.7708	-7.40	0.000	-2337.666	-1357.853
fri_h22	-2060.76	249.7708	-8.25	0.000	-2550.667	-1570.854
fri_h23	-2033.357	249.7708	-8.14	0.000	-2523.263	-1543.451
fri_h24	-1865.911	249.7708	-7.47	0.000	-2355.817	-1376.004

h2	347.1501	225.7789	1.54	0.124	-95.69792	789.9982
h3	146.0384	225.7789	0.65	0.518	-296.8096	588.8865
h4	371.8492	225.7789	1.65	0.100	-70.99885	814.6973
h5	2132.34	225.7789	9.44	0.000	1689.492	2575.188
h6	5449.369	225.7789	24.14	0.000	5006.521	5892.217
h7	9167.768	225.7789	40.61	0.000	8724.92	9610.616
h8	10401.23	225.7789	46.07	0.000	9958.387	10844.08
h9	9872.286	225.7789	43.73	0.000	9429.438	10315.13
h10	9925.21	225.7789	43.96	0.000	9482.362	10368.06
h11	10066.56	225.7789	44.59	0.000	9623.716	10509.41
h12	9205.498	225.7789	40.77	0.000	8762.65	9648.346
h13	7291.344	225.7789	32.29	0.000	6848.496	7734.192
h14	6910.765	225.7789	30.61	0.000	6467.917	7353.613
h15	5146.954	225.7789	22.80	0.000	4704.106	5589.803
h16	3919.352	225.7789	17.36	0.000	3476.504	4362.2
h17	2765.469	225.7789	12.25	0.000	2322.621	3208.317
h18	1929.693	225.7789	8.55	0.000	1486.845	2372.541
h19	3038.294	225.7789	13.46	0.000	2595.446	3481.142
h20	3626.973	225.7789	16.06	0.000	3184.125	4069.821
h21	3243.997	225.7789	14.37	0.000	2801.149	3686.845
h22	2649.953	225.7789	11.74	0.000	2207.105	3092.801
h23	1012.198	225.7789	4.48	0.000	569.3498	1455.046
h24	450.6104	225.7789	2.00	0.046	7.7623	893.4584
_cons	-907.2197	486.2227	-1.87	0.062	-1860.909	46.46912

PG&E CPP Model

Source	SS	df	MS		
Model	5.4721e+12	391	1.3995e+10	Number of obs	3096
Residual	9.1857e+10	2704	33970731.1	F(391, 2704)	411.98
Total	5.5640e+12	3095	1.7977e+09	Prob > F	0.0000
				R-squared	0.9835
				Adj R-squared	0.9811
				Root MSE	5828.4

load	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
evt1_h1	-1590.687	6090.37	-0.26	0.794	-13532.94	10351.56
evt1_h2	-1230.252	6090.37	-0.20	0.840	-13172.5	10712
evt1_h3	-627.5926	6090.37	-0.10	0.918	-12569.84	11314.66
evt1_h4	1321.524	6090.37	0.22	0.828	-10620.73	13263.78
evt1_h5	1415.265	6090.37	0.23	0.816	-10526.99	13357.52
evt1_h6	-2049.596	6090.37	-0.34	0.736	-13991.85	9892.656
evt1_h7	-1578.239	6090.37	-0.26	0.796	-13520.49	10364.01
evt1_h8	-1294.035	6090.37	-0.21	0.832	-13236.29	10648.22
evt1_h9	1036.525	6090.37	0.17	0.865	-10905.73	12978.78
evt1_h10	1438.357	6090.37	0.24	0.813	-10503.9	13380.61
evt1_h11	1275.207	6090.37	0.21	0.834	-10667.05	13217.46
evt1_h12	-877.3476	6090.37	-0.14	0.885	-12819.6	11064.9
evt1_h13	-7524.855	6090.37	-1.24	0.217	-19467.11	4417.397
evt1_h14	-13363.19	6090.37	-2.19	0.028	-25305.44	-1420.934
evt1_h15	-13162.67	6090.37	-2.16	0.031	-25104.92	-1220.42
evt1_h16	-15169.2	6090.37	-2.49	0.013	-27111.46	-3226.951
evt1_h17	-17514.95	6090.37	-2.88	0.004	-29457.2	-5572.698
evt1_h18	-15899.63	6090.37	-2.61	0.009	-27841.88	-3957.375
evt1_h19	-7534.531	6090.37	-1.24	0.216	-19476.78	4407.721
evt1_h20	-3634.281	6090.37	-0.60	0.551	-15576.53	8307.971
evt1_h21	-3100.866	6090.37	-0.51	0.611	-15043.12	8841.386
evt1_h22	-3709.842	6090.37	-0.61	0.542	-15652.09	8232.41
evt1_h23	-2317.189	6090.37	-0.38	0.704	-14259.44	9625.063
evt1_h24	-234.8246	6090.37	-0.04	0.969	-12177.08	11707.43
evt2_h1	2322.77	5905.02	0.39	0.694	-9256.039	13901.58
evt2_h2	2584.19	5905.02	0.44	0.662	-8994.619	14163
evt2_h3	897.9929	5905.02	0.15	0.879	-10680.82	12476.8
evt2_h4	1746.711	5905.02	0.30	0.767	-9832.098	13325.52
evt2_h5	4338.587	5905.02	0.73	0.463	-7240.222	15917.4
evt2_h6	3349.661	5905.02	0.57	0.571	-8229.148	14928.47
evt2_h7	380.2091	5905.02	0.06	0.949	-11198.6	11959.02
evt2_h8	-2841.366	5905.02	-0.48	0.630	-14420.17	8737.443
evt2_h9	-6372.947	5905.02	-1.08	0.281	-17951.76	5205.861
evt2_h10	-8851.105	5905.02	-1.50	0.134	-20429.91	2727.704
evt2_h11	-11543	5905.02	-1.95	0.051	-23121.81	35.80818
evt2_h12	-12073.93	5905.02	-2.04	0.041	-23652.74	-495.1175
evt2_h13	-16905.18	5905.02	-2.86	0.004	-28483.99	-5326.372
evt2_h14	-22416.76	5905.02	-3.80	0.000	-33995.57	-10837.95
evt2_h15	-22247.55	5905.02	-3.77	0.000	-33826.36	-10668.74
evt2_h16	-19618.98	5905.02	-3.32	0.001	-31197.78	-8040.167
evt2_h17	-14659.2	5905.02	-2.48	0.013	-26238.01	-3080.388
evt2_h18	-10478.54	5905.02	-1.77	0.076	-22057.34	1100.274
evt2_h19	-3649.491	5905.02	-0.62	0.537	-15228.3	7929.318
evt2_h20	-2028.222	5905.02	-0.34	0.731	-13607.03	9550.587
evt2_h21	-3012.759	5905.02	-0.51	0.610	-14591.57	8566.05
evt2_h22	-2096.206	5905.02	-0.35	0.723	-13675.02	9482.603
evt2_h23	-4255.909	5905.02	-0.72	0.471	-15834.72	7322.9
evt2_h24	-7183.518	5905.02	-1.22	0.224	-18762.33	4395.291
evt3_h1	-19406.08	6231.219	-3.11	0.002	-31624.51	-7187.644
evt3_h2	-16220.65	6231.219	-2.60	0.009	-28439.08	-4002.213
evt3_h3	-12922.25	6231.219	-2.07	0.038	-25140.68	-703.8142

evt3_h4	-8344.105	6231.219	-1.34	0.181	-20562.54	3874.328
evt3_h5	-3699.039	6231.219	-0.59	0.553	-15917.47	8519.394
evt3_h6	573.6268	6231.219	0.09	0.927	-11644.81	12792.06
evt3_h7	1047.628	6231.219	0.17	0.866	-11170.81	13266.06
evt3_h8	3348.313	6231.219	0.54	0.591	-8870.12	15566.75
evt3_h9	3275.206	6231.219	0.53	0.599	-8943.227	15493.64
evt3_h10	911.8839	6231.219	0.15	0.884	-11306.55	13130.32
evt3_h11	-1108.231	6231.219	-0.18	0.859	-13326.66	11110.2
evt3_h12	-1235.331	6231.219	-0.20	0.843	-13453.76	10983.1
evt3_h13	-8858.703	6231.219	-1.42	0.155	-21077.14	3359.73
evt3_h14	-15363.3	6231.219	-2.47	0.014	-27581.73	-3144.866
evt3_h15	-16398.58	6231.219	-2.63	0.009	-28617.01	-4180.149
evt3_h16	-13072.01	6231.219	-2.10	0.036	-25290.44	-853.575
evt3_h17	-9622.501	6231.219	-1.54	0.123	-21840.93	2595.932
evt3_h18	-4041.543	6231.219	-0.65	0.517	-16259.98	8176.89
evt3_h19	9592.91	6231.219	1.54	0.124	-2625.523	21811.34
evt3_h20	17117.12	6231.219	2.75	0.006	4898.692	29335.56
evt3_h21	17547.65	6231.219	2.82	0.005	5329.222	29766.09
evt3_h22	16939.92	6231.219	2.72	0.007	4721.488	29158.35
evt3_h23	16557.96	6231.219	2.66	0.008	4339.524	28776.39
evt3_h24	14042.31	6231.219	2.25	0.024	1823.881	26260.75
evt4_h1	4527.192	6037.147	0.75	0.453	-7310.697	16365.08
evt4_h2	4093.073	6037.147	0.68	0.498	-7744.816	15930.96
evt4_h3	2399.688	6037.147	0.40	0.691	-9438.202	14237.58
evt4_h4	1931.753	6037.147	0.32	0.749	-9906.136	13769.64
evt4_h5	4117.949	6037.147	0.68	0.495	-7719.941	15955.84
evt4_h6	2196.933	6037.147	0.36	0.716	-9640.956	14034.82
evt4_h7	217.3911	6037.147	0.04	0.971	-11620.5	12055.28
evt4_h8	-4284.505	6037.147	-0.71	0.478	-16122.39	7553.384
evt4_h9	-7135.873	6037.147	-1.18	0.237	-18973.76	4702.017
evt4_h10	-8068.066	6037.147	-1.34	0.182	-19905.96	3769.823
evt4_h11	-8858.516	6037.147	-1.47	0.142	-20696.41	2979.373
evt4_h12	-10482.65	6037.147	-1.74	0.083	-22320.54	1355.239
evt4_h13	-15816.5	6037.147	-2.62	0.009	-27654.39	-3978.614
evt4_h14	-21395.49	6037.147	-3.54	0.000	-33233.38	-9557.605
evt4_h15	-20604.03	6037.147	-3.41	0.001	-32441.92	-8766.141
evt4_h16	-20166.73	6037.147	-3.34	0.001	-32004.62	-8328.837
evt4_h17	-15824.93	6037.147	-2.62	0.009	-27662.82	-3987.036
evt4_h18	-15035.56	6037.147	-2.49	0.013	-26873.44	-3197.666
evt4_h19	-3699.661	6037.147	-0.61	0.540	-15537.55	8138.228
evt4_h20	-422.8057	6037.147	-0.07	0.944	-12260.7	11415.08
evt4_h21	-1584.012	6037.147	-0.26	0.793	-13421.9	10253.88
evt4_h22	895.1181	6037.147	0.15	0.882	-10942.77	12733.01
evt4_h23	2373.225	6037.147	0.39	0.694	-9464.664	14211.11
evt4_h24	3157.436	6037.147	0.52	0.601	-8680.453	14995.33
evt5_h1	4531.358	5963.149	0.76	0.447	-7161.432	16224.15
evt5_h2	5184.857	5963.149	0.87	0.385	-6507.933	16877.65
evt5_h3	2810.865	5963.149	0.47	0.637	-8881.925	14503.66
evt5_h4	1148.9	5963.149	0.19	0.847	-10543.89	12841.69
evt5_h5	5548.736	5963.149	0.93	0.352	-6144.055	17241.53
evt5_h6	5109.589	5963.149	0.86	0.392	-6583.201	16802.38
evt5_h7	1544.745	5963.149	0.26	0.796	-10148.05	13237.54
evt5_h8	-317.4604	5963.149	-0.05	0.958	-12010.25	11375.33
evt5_h9	-775.4199	5963.149	-0.13	0.897	-12468.21	10917.37
evt5_h10	-1206.185	5963.149	-0.20	0.840	-12898.98	10486.61
evt5_h11	-3886.803	5963.149	-0.65	0.515	-15579.59	7805.987
evt5_h12	-7626.92	5963.149	-1.28	0.201	-19319.71	4065.871
evt5_h13	-13431.36	5963.149	-2.25	0.024	-25124.15	-1738.57
evt5_h14	-18113.3	5963.149	-3.04	0.002	-29806.09	-6420.508
evt5_h15	-19829.59	5963.149	-3.33	0.001	-31522.38	-8136.801
evt5_h16	-16114.86	5963.149	-2.70	0.007	-27807.65	-4422.072
evt5_h17	-12899.77	5963.149	-2.16	0.031	-24592.56	-1206.975
evt5_h18	-11014.6	5963.149	-1.85	0.065	-22707.39	678.1942

evt5_h19	-4716.631	5963.149	-0.79	0.429	-16409.42	6976.16
evt5_h20	183.6964	5963.149	0.03	0.975	-11509.09	11876.49
evt5_h21	-341.4177	5963.149	-0.06	0.954	-12034.21	11351.37
evt5_h22	2447.061	5963.149	0.41	0.682	-9245.729	14139.85
evt5_h23	4081.305	5963.149	0.68	0.494	-7611.486	15774.1
evt5_h24	5091.264	5963.149	0.85	0.393	-6601.527	16784.05
evt6_h1	1870.658	5900.893	0.32	0.751	-9700.06	13441.38
evt6_h2	2316.478	5900.893	0.39	0.695	-9254.239	13887.2
evt6_h3	3119.552	5900.893	0.53	0.597	-8451.166	14690.27
evt6_h4	3936.963	5900.893	0.67	0.505	-7633.755	15507.68
evt6_h5	4904.9	5900.893	0.83	0.406	-6665.818	16475.62
evt6_h6	4513.552	5900.893	0.76	0.444	-7057.165	16084.27
evt6_h7	2100.922	5900.893	0.36	0.722	-9469.796	13671.64
evt6_h8	-6702.225	5900.893	-1.14	0.256	-18272.94	4868.492
evt6_h9	-14070.04	5900.893	-2.38	0.017	-25640.76	-2499.322
evt6_h10	-16344.58	5900.893	-2.77	0.006	-27915.29	-4773.858
evt6_h11	-13829.83	5900.893	-2.34	0.019	-25400.55	-2259.11
evt6_h12	-10611.39	5900.893	-1.80	0.072	-22182.11	959.327
evt6_h13	-17467.78	5900.893	-2.96	0.003	-29038.5	-5897.067
evt6_h14	-16285.43	5900.893	-2.76	0.006	-27856.15	-4714.717
evt6_h15	-16358.72	5900.893	-2.77	0.006	-27929.44	-4788.004
evt6_h16	-15132.63	5900.893	-2.56	0.010	-26703.35	-3561.915
evt6_h17	-9843.504	5900.893	-1.67	0.095	-21414.22	1727.214
evt6_h18	-6754.666	5900.893	-1.14	0.252	-18325.38	4816.052
evt6_h19	2311.552	5900.893	0.39	0.695	-9259.166	13882.27
evt6_h20	2539.734	5900.893	0.43	0.667	-9030.984	14110.45
evt6_h21	1349.763	5900.893	0.23	0.819	-10220.95	12920.48
evt6_h22	2271.146	5900.893	0.38	0.700	-9299.571	13841.86
evt6_h23	2519.623	5900.893	0.43	0.669	-9051.095	14090.34
evt6_h24	2922.537	5900.893	0.50	0.620	-8648.181	14493.25
evt7_h1	-3410.724	6048.599	-0.56	0.573	-15271.07	8449.621
evt7_h2	-4395.43	6048.599	-0.73	0.467	-16255.78	7464.915
evt7_h3	-4366.332	6048.599	-0.72	0.470	-16226.68	7494.013
evt7_h4	-3779.144	6048.599	-0.62	0.532	-15639.49	8081.201
evt7_h5	-4658.331	6048.599	-0.77	0.441	-16518.68	7202.014
evt7_h6	-3989.919	6048.599	-0.66	0.510	-15850.26	7870.426
evt7_h7	-36.42635	6048.599	-0.01	0.995	-11896.77	11823.92
evt7_h8	-1012.669	6048.599	-0.17	0.867	-12873.01	10847.68
evt7_h9	2932.241	6048.599	0.48	0.628	-8928.104	14792.59
evt7_h10	545.8595	6048.599	0.09	0.928	-11314.49	12406.2
evt7_h11	1493.591	6048.599	0.25	0.805	-10366.75	13353.94
evt7_h12	3827.398	6048.599	0.63	0.527	-8032.947	15687.74
evt7_h13	-6185.843	6048.599	-1.02	0.307	-18046.19	5674.502
evt7_h14	-8466.424	6048.599	-1.40	0.162	-20326.77	3393.921
evt7_h15	-7197.875	6048.599	-1.19	0.234	-19058.22	4662.47
evt7_h16	-9673.988	6048.599	-1.60	0.110	-21534.33	2186.357
evt7_h17	-11611.38	6048.599	-1.92	0.055	-23471.72	248.9665
evt7_h18	-11167.28	6048.599	-1.85	0.065	-23027.63	693.0606
evt7_h19	-3864.738	6048.599	-0.64	0.523	-15725.08	7995.606
evt7_h20	-235.7158	6048.599	-0.04	0.969	-12096.06	11624.63
evt7_h21	444.4857	6048.599	0.07	0.941	-11415.86	12304.83
evt7_h22	-2247.626	6048.599	-0.37	0.710	-14107.97	9612.719
evt7_h23	-4263.69	6048.599	-0.70	0.481	-16124.03	7596.655
evt7_h24	-4886.001	6048.599	-0.81	0.419	-16746.35	6974.344
evt8_h1	-3306.981	6024.456	-0.55	0.583	-15119.99	8506.023
evt8_h2	-2710.559	6024.456	-0.45	0.653	-14523.56	9102.446
evt8_h3	-4449.991	6024.456	-0.74	0.460	-16263	7363.013
evt8_h4	-1278.21	6024.456	-0.21	0.832	-13091.21	10534.79
evt8_h5	-2379.366	6024.456	-0.39	0.693	-14192.37	9433.639
evt8_h6	-1432.22	6024.456	-0.24	0.812	-13245.22	10380.78
evt8_h7	3772.878	6024.456	0.63	0.531	-8040.126	15585.88
evt8_h8	1459.59	6024.456	0.24	0.809	-10353.41	13272.59
evt8_h9	2369.172	6024.456	0.39	0.694	-9443.832	14182.18

evt8_h10	3809.045	6024.456	0.63	0.527	-8003.959	15622.05
evt8_h11	3552.051	6024.456	0.59	0.556	-8260.954	15365.05
evt8_h12	3729.263	6024.456	0.62	0.536	-8083.742	15542.27
evt8_h13	-2927.791	6024.456	-0.49	0.627	-14740.79	8885.214
evt8_h14	-2450.887	6024.456	-0.41	0.684	-14263.89	9362.117
evt8_h15	2509.481	6024.456	0.42	0.677	-9303.523	14322.49
evt8_h16	-1623.044	6024.456	-0.27	0.788	-13436.05	10189.96
evt8_h17	-6058.392	6024.456	-1.01	0.315	-17871.4	5754.612
evt8_h18	-8519.803	6024.456	-1.41	0.157	-20332.81	3293.201
evt8_h19	-5112.617	6024.456	-0.85	0.396	-16925.62	6700.388
evt8_h20	-1547.915	6024.456	-0.26	0.797	-13360.92	10265.09
evt8_h21	1628.187	6024.456	0.27	0.787	-10184.82	13441.19
evt8_h22	-1587.093	6024.456	-0.26	0.792	-13400.1	10225.91
evt8_h23	-4328.847	6024.456	-0.72	0.472	-16141.85	7484.157
evt8_h24	-6751.639	6024.456	-1.12	0.263	-18564.64	5061.365
evt9_h1	-8296.746	6087.557	-1.36	0.173	-20233.48	3639.99
evt9_h2	-8920.221	6087.557	-1.47	0.143	-20856.96	3016.515
evt9_h3	-8039.856	6087.557	-1.32	0.187	-19976.59	3896.88
evt9_h4	-8266.178	6087.557	-1.36	0.175	-20202.91	3670.558
evt9_h5	-8168.55	6087.557	-1.34	0.180	-20105.29	3768.186
evt9_h6	-5401.515	6087.557	-0.89	0.375	-17338.25	6535.221
evt9_h7	12.17345	6087.557	0.00	0.998	-11924.56	11948.91
evt9_h8	1802.493	6087.557	0.30	0.767	-10134.24	13739.23
evt9_h9	9311.499	6087.557	1.53	0.126	-2625.237	21248.24
evt9_h10	12928.06	6087.557	2.12	0.034	991.3221	24864.79
evt9_h11	12521.74	6087.557	2.06	0.040	585.0016	24458.47
evt9_h12	11067.41	6087.557	1.82	0.069	-869.3247	23004.15
evt9_h13	1391.91	6087.557	0.23	0.819	-10544.83	13328.65
evt9_h14	2750.301	6087.557	0.45	0.651	-9186.435	14687.04
evt9_h15	1043.653	6087.557	0.17	0.864	-10893.08	12980.39
evt9_h16	-6541.906	6087.557	-1.07	0.283	-18478.64	5394.83
evt9_h17	-10427.03	6087.557	-1.71	0.087	-22363.77	1509.707
evt9_h18	-10362.57	6087.557	-1.70	0.089	-22299.31	1574.167
evt9_h19	-28.87474	6087.557	-0.00	0.996	-11965.61	11907.86
evt9_h20	8280.598	6087.557	1.36	0.174	-3656.138	20217.33
evt9_h21	11147.63	6087.557	1.83	0.067	-789.1055	23084.37
evt9_h22	5067.764	6087.557	0.83	0.405	-6868.972	17004.5
evt9_h23	1496.961	6087.557	0.25	0.806	-10439.78	13433.7
evt9_h24	99.28934	6087.557	0.02	0.987	-11837.45	12036.03
evt10_h1	-7730.011	6295.717	-1.23	0.220	-20074.92	4614.893
evt10_h2	-7796.487	6295.717	-1.24	0.216	-20141.39	4548.418
evt10_h3	-8337.656	6295.717	-1.32	0.186	-20682.56	4007.249
evt10_h4	-5457.306	6295.717	-0.87	0.386	-17802.21	6887.599
evt10_h5	-6743.008	6295.717	-1.07	0.284	-19087.91	5601.897
evt10_h6	-5085.514	6295.717	-0.81	0.419	-17430.42	7259.39
evt10_h7	2478.117	6295.717	0.39	0.694	-9866.787	14823.02
evt10_h8	7070.825	6295.717	1.12	0.261	-5274.079	19415.73
evt10_h9	13239.92	6295.717	2.10	0.036	895.0187	25584.83
evt10_h10	12670.88	6295.717	2.01	0.044	325.9803	25015.79
evt10_h11	8137.001	6295.717	1.29	0.196	-4207.903	20481.91
evt10_h12	8226.46	6295.717	1.31	0.191	-4118.444	20571.36
evt10_h13	-1928.967	6295.717	-0.31	0.759	-14273.87	10415.94
evt10_h14	-4901.193	6295.717	-0.78	0.436	-17246.1	7443.712
evt10_h15	-4677.389	6295.717	-0.74	0.458	-17022.29	7667.516
evt10_h16	-13168.1	6295.717	-2.09	0.037	-25513	-823.1956
evt10_h17	-20186.82	6295.717	-3.21	0.001	-32531.73	-7841.917
evt10_h18	-21561.58	6295.717	-3.42	0.001	-33906.48	-9216.671
evt10_h19	-14046.83	6295.717	-2.23	0.026	-26391.73	-1701.922
evt10_h20	-3750.575	6295.717	-0.60	0.551	-16095.48	8594.329
evt10_h21	-2565.9	6295.717	-0.41	0.684	-14910.8	9779.005
evt10_h22	-7509.422	6295.717	-1.19	0.233	-19854.33	4835.483
evt10_h23	-7578.046	6295.717	-1.20	0.229	-19922.95	4766.859
evt10_h24	-7579.284	6295.717	-1.20	0.229	-19924.19	4765.621

evt11_h1	-6523.395	6340.993	-1.03	0.304	-18957.08	5910.289
evt11_h2	-7464.709	6340.993	-1.18	0.239	-19898.39	4968.975
evt11_h3	-6738.883	6340.993	-1.06	0.288	-19172.57	5694.8
evt11_h4	-4992.134	6340.993	-0.79	0.431	-17425.82	7441.549
evt11_h5	-6383.265	6340.993	-1.01	0.314	-18816.95	6050.418
evt11_h6	-2635.589	6340.993	-0.42	0.678	-15069.27	9798.094
evt11_h7	3701.111	6340.993	0.58	0.559	-8732.572	16134.79
evt11_h8	8075.89	6340.993	1.27	0.203	-4357.794	20509.57
evt11_h9	13130.14	6340.993	2.07	0.038	696.4557	25563.82
evt11_h10	8576.778	6340.993	1.35	0.176	-3856.906	21010.46
evt11_h11	1396.333	6340.993	0.22	0.826	-11037.35	13830.02
evt11_h12	123.9312	6340.993	0.02	0.984	-12309.75	12557.61
evt11_h13	-9376.21	6340.993	-1.48	0.139	-21809.89	3057.473
evt11_h14	-9725.947	6340.993	-1.53	0.125	-22159.63	2707.737
evt11_h15	-10796.39	6340.993	-1.70	0.089	-23230.07	1637.294
evt11_h16	-20439	6340.993	-3.22	0.001	-32872.69	-8005.319
evt11_h17	-28288.94	6340.993	-4.46	0.000	-40722.62	-15855.25
evt11_h18	-29750.56	6340.993	-4.69	0.000	-42184.24	-17316.87
evt11_h19	-20821.36	6340.993	-3.28	0.001	-33255.04	-8387.673
evt11_h20	-11495.92	6340.993	-1.81	0.070	-23929.6	937.7639
evt11_h21	-8239.045	6340.993	-1.30	0.194	-20672.73	4194.639
evt11_h22	-12374.84	6340.993	-1.95	0.051	-24808.52	58.84483
evt11_h23	-11411.71	6340.993	-1.80	0.072	-23845.39	1021.972
evt11_h24	-10309.29	6340.993	-1.63	0.104	-22742.97	2124.396
evt12_h1	-9466.109	6236.171	-1.52	0.129	-21694.25	2762.036
evt12_h2	-8500.648	6236.171	-1.36	0.173	-20728.79	3727.496
evt12_h3	-6608.239	6236.171	-1.06	0.289	-18836.38	5619.905
evt12_h4	-4294.87	6236.171	-0.69	0.491	-16523.01	7933.274
evt12_h5	-4733.696	6236.171	-0.76	0.448	-16961.84	7494.449
evt12_h6	-567.5377	6236.171	-0.09	0.927	-12795.68	11660.61
evt12_h7	5321.16	6236.171	0.85	0.394	-6906.984	17549.3
evt12_h8	8635.225	6236.171	1.38	0.166	-3592.92	20863.37
evt12_h9	14604.09	6236.171	2.34	0.019	2375.942	26832.23
evt12_h10	13406.47	6236.171	2.15	0.032	1178.33	25634.62
evt12_h11	9492.269	6236.171	1.52	0.128	-2735.875	21720.41
evt12_h12	7823.024	6236.171	1.25	0.210	-4405.12	20051.17
evt12_h13	-3277.008	6236.171	-0.53	0.599	-15505.15	8951.136
evt12_h14	-3294.559	6236.171	-0.53	0.597	-15522.7	8933.586
evt12_h15	-6838.191	6236.171	-1.10	0.273	-19066.34	5389.954
evt12_h16	-15217.81	6236.171	-2.44	0.015	-27445.95	-2989.665
evt12_h17	-22638.8	6236.171	-3.63	0.000	-34866.94	-10410.65
evt12_h18	-24041.56	6236.171	-3.86	0.000	-36269.71	-11813.42
evt12_h19	-18313.29	6236.171	-2.94	0.003	-30541.43	-6085.146
evt12_h20	-10305.84	6236.171	-1.65	0.099	-22533.99	1922.303
evt12_h21	-7463.989	6236.171	-1.20	0.231	-19692.13	4764.155
evt12_h22	-9459.226	6236.171	-1.52	0.129	-21687.37	2768.918
evt12_h23	-9362.005	6236.171	-1.50	0.133	-21590.15	2866.139
evt12_h24	-12034.84	6236.171	-1.93	0.054	-24262.98	193.3048
morn_load	.8084612	.0255807	31.60	0.000	.7583015	.8586209
cdd_h1	210.4367	192.9451	1.09	0.276	-167.8982	588.7716
cdd_h2	130.3438	192.9451	0.68	0.499	-247.9911	508.6786
cdd_h3	40.37699	192.9451	0.21	0.834	-337.9579	418.7119
cdd_h4	32.4662	192.9451	0.17	0.866	-345.8687	410.8011
cdd_h5	319.9848	192.9451	1.66	0.097	-58.35011	698.3196
cdd_h6	632.5473	192.9451	3.28	0.001	254.2124	1010.882
cdd_h7	665.8722	192.9451	3.45	0.001	287.5373	1044.207
cdd_h8	876.0311	192.9451	4.54	0.000	497.6962	1254.366
cdd_h9	1060.979	192.9451	5.50	0.000	682.6444	1439.314
cdd_h10	1614.033	192.9451	8.37	0.000	1235.698	1992.368
cdd_h11	2025.535	192.9451	10.50	0.000	1647.2	2403.87
cdd_h12	2174.466	192.9451	11.27	0.000	1796.131	2552.801
cdd_h13	2271.486	192.9451	11.77	0.000	1893.151	2649.821
cdd_h14	2412.349	192.9451	12.50	0.000	2034.014	2790.684

cdd_h15	2447.007	192.9451	12.68	0.000	2068.672	2825.342
cdd_h16	2554.1	192.9451	13.24	0.000	2175.765	2932.435
cdd_h17	2615.955	192.9451	13.56	0.000	2237.62	2994.29
cdd_h18	2426.145	192.9451	12.57	0.000	2047.81	2804.48
cdd_h19	1799.274	192.9451	9.33	0.000	1420.939	2177.609
cdd_h20	1004.656	192.9451	5.21	0.000	626.3207	1382.99
cdd_h21	702.1118	192.9451	3.64	0.000	323.7769	1080.447
cdd_h22	554.6576	192.9451	2.87	0.004	176.3227	932.9925
cdd_h23	329.3741	192.9451	1.71	0.088	-48.96075	707.709
cdd_h24	331.4721	192.9451	1.72	0.086	-46.86274	709.807
dt2	20205.68	1512.61	13.36	0.000	17239.69	23171.67
dt3	18933.99	1539.934	12.30	0.000	15914.42	21953.56
dt4	18503.05	1533.58	12.07	0.000	15495.94	21510.15
dt5	21932.5	1771.865	12.38	0.000	18458.15	25406.85
m6	-1605.856	398.8721	-4.03	0.000	-2387.982	-823.7314
m7	-2967.754	427.6493	-6.94	0.000	-3806.307	-2129.201
m8	1505.213	468.586	3.21	0.001	586.3899	2424.036
m9	6308.33	589.3203	10.70	0.000	5152.766	7463.894
m10	4049.199	528.3252	7.66	0.000	3013.237	5085.161
mon_h2	2881.201	1992.042	1.45	0.148	-1024.877	6787.279
mon_h3	6662.59	1992.042	3.34	0.001	2756.511	10568.67
mon_h4	11541.32	1992.042	5.79	0.000	7635.241	15447.4
mon_h5	15034.77	1992.042	7.55	0.000	11128.69	18940.85
mon_h6	18281.38	1992.042	9.18	0.000	14375.31	22187.46
mon_h7	21127.28	1992.042	10.61	0.000	17221.2	25033.36
mon_h8	23684.06	1992.042	11.89	0.000	19777.98	27590.14
mon_h9	25683.48	1992.042	12.89	0.000	21777.4	29589.56
mon_h10	26330.95	1992.042	13.22	0.000	22424.87	30237.03
mon_h11	27966.53	1992.042	14.04	0.000	24060.45	31872.6
mon_h12	30482.59	1992.042	15.30	0.000	26576.51	34388.67
mon_h13	33782.01	1992.042	16.96	0.000	29875.93	37688.09
mon_h14	33782.83	1992.042	16.96	0.000	29876.75	37688.91
mon_h15	34651.27	1992.042	17.39	0.000	30745.19	38557.35
mon_h16	35324.66	1992.042	17.73	0.000	31418.58	39230.73
mon_h17	35345.79	1992.042	17.74	0.000	31439.72	39251.87
mon_h18	36055.1	1992.042	18.10	0.000	32149.02	39961.18
mon_h19	36302.45	1992.042	18.22	0.000	32396.37	40208.53
mon_h20	35558.3	1992.042	17.85	0.000	31652.22	39464.38
mon_h21	35752.78	1992.042	17.95	0.000	31846.71	39658.86
mon_h22	35840.08	1992.042	17.99	0.000	31934	39746.15
mon_h23	35729.33	1992.042	17.94	0.000	31823.25	39635.41
mon_h24	35274.01	1992.042	17.71	0.000	31367.93	39180.09
fri_h2	-125.3319	1950.09	-0.06	0.949	-3949.149	3698.485
fri_h3	-357.882	1950.09	-0.18	0.854	-4181.699	3465.935
fri_h4	-1081.275	1950.09	-0.55	0.579	-4905.092	2742.542
fri_h5	-1671.303	1950.09	-0.86	0.391	-5495.12	2152.514
fri_h6	-2658.303	1950.09	-1.36	0.173	-6482.12	1165.514
fri_h7	-4712.189	1950.09	-2.42	0.016	-8536.006	-888.3712
fri_h8	-6236.654	1950.09	-3.20	0.001	-10060.47	-2412.837
fri_h9	-6868.423	1950.09	-3.52	0.000	-10692.24	-3044.605
fri_h10	-8135.817	1950.09	-4.17	0.000	-11959.63	-4312
fri_h11	-9292.803	1950.09	-4.77	0.000	-13116.62	-5468.985
fri_h12	-9168.134	1950.09	-4.70	0.000	-12991.95	-5344.317
fri_h13	-10209.84	1950.09	-5.24	0.000	-14033.66	-6386.025
fri_h14	-11071.3	1950.09	-5.68	0.000	-14895.12	-7247.482
fri_h15	-11856.76	1950.09	-6.08	0.000	-15680.57	-8032.938
fri_h16	-11521.81	1950.09	-5.91	0.000	-15345.63	-7697.993
fri_h17	-11504.63	1950.09	-5.90	0.000	-15328.45	-7680.813
fri_h18	-10799.21	1950.09	-5.54	0.000	-14623.02	-6975.39
fri_h19	-10012.01	1950.09	-5.13	0.000	-13835.83	-6188.192
fri_h20	-9561.078	1950.09	-4.90	0.000	-13384.9	-5737.261
fri_h21	-9850.23	1950.09	-5.05	0.000	-13674.05	-6026.413
fri_h22	-9863.678	1950.09	-5.06	0.000	-13687.5	-6039.861

fri_h23	-11128.65	1950.09	-5.71	0.000	-14952.47	-7304.831
fri_h24	-14157.68	1950.09	-7.26	0.000	-17981.5	-10333.86
h2	-3199.744	1296.698	-2.47	0.014	-5742.364	-657.1246
h3	-4388.643	1296.698	-3.38	0.001	-6931.263	-1846.024
h4	-3186.488	1296.698	-2.46	0.014	-5729.108	-643.8685
h5	3759.896	1296.698	2.90	0.004	1217.276	6302.516
h6	20964.65	1296.698	16.17	0.000	18422.03	23507.27
h7	44971.89	1296.698	34.68	0.000	42429.27	47514.51
h8	66798.89	1296.698	51.51	0.000	64256.27	69341.51
h9	82939.35	1296.698	63.96	0.000	80396.73	85481.97
h10	92382.96	1296.698	71.24	0.000	89840.34	94925.58
h11	99809.54	1296.698	76.97	0.000	97266.92	102352.2
h12	97741.01	1296.698	75.38	0.000	95198.39	100283.6
h13	88452.94	1296.698	68.21	0.000	85910.32	90995.56
h14	89881.56	1296.698	69.32	0.000	87338.94	92424.18
h15	84345.7	1296.698	65.05	0.000	81803.08	86888.32
h16	69502.1	1296.698	53.60	0.000	66959.48	72044.72
h17	54806.73	1296.698	42.27	0.000	52264.11	57349.35
h18	40988.21	1296.698	31.61	0.000	38445.59	43530.83
h19	34259.51	1296.698	26.42	0.000	31716.9	36802.13
h20	32125.54	1296.698	24.77	0.000	29582.92	34668.16
h21	27290.79	1296.698	21.05	0.000	24748.17	29833.41
h22	19884.5	1296.698	15.33	0.000	17341.88	22427.12
h23	11804.81	1296.698	9.10	0.000	9262.194	14347.43
h24	6151.476	1296.698	4.74	0.000	3608.856	8694.096
_cons	-3301.68	5849.971	-0.56	0.573	-14772.55	8169.187

Appendix 2. Aggregate load impact regression statistics -- DBP

SDG&E DBP Models

```
Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     125
-------------+------------------------------           F( 21,   103) =   17.09
       Model |  37559216.7    21  1788534.13           Prob > F      =  0.0000
    Residual |  10779082.9   103   104651.29           R-squared     =  0.7770
-------------+------------------------------           Adj R-squared =  0.7315
       Total |  48338299.5   124  389824.996           Root MSE      =   323.5

------------------------------------------------------------------------------
       load1 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
cdd_bldNAI~t |   91.17762   19.41187     4.70   0.000     52.67874    129.6765
       evtd1 |  -164.9494   338.7936    -0.49   0.627    -836.8666    506.9677
       evtd2 |   -567.821    357.538    -1.59   0.115    -1276.913    141.2714
       evtd3 |   137.4295   338.1248     0.41   0.685    -533.1612    808.0202
       evtd4 |  -273.1322   321.5962    -0.85   0.398    -910.9425    364.6781
       evtd5 |     1.8456   338.6053     0.01   0.996    -669.6982    673.3894
       evtd6 |  -335.4308   361.4237    -0.93   0.356     -1052.23    381.3679
       evtd7 |  -613.4728   369.4335    -1.66   0.100    -1346.157    119.2113
       evtd8 |  -1118.324   379.9403    -2.94   0.004    -1871.846   -364.8025
       evtd9 |  -251.5853   393.7473    -0.64   0.524     -1032.49    529.3195
       fire1 |  -1781.814   363.4458    -4.90   0.000    -2502.623   -1061.005
       fire2 |   -916.276   206.5878    -4.44   0.000    -1325.994   -506.5579
         dt2 |   700.9235    84.0422     8.34   0.000     534.2457    867.6014
         dt3 |     774.81   94.14229     8.23   0.000      588.101     961.519
         dt4 |   857.4407   93.81145     9.14   0.000     671.3878    1043.494
         dt5 |   902.3331   82.30116    10.96   0.000     739.1082    1065.558
          m6 |   115.5701   143.1368     0.81   0.421    -168.3081    399.4483
          m7 |    433.228   171.0844     2.53   0.013     93.92257    772.5335
          m8 |   422.9772   202.6922     2.09   0.039     20.98509    824.9694
          m9 |   581.4707   159.3529     3.65   0.000     265.4319    897.5096
         m10 |   73.33146   158.1776     0.46   0.644    -240.3764    387.0393
       _cons |   7198.467   121.8985    59.05   0.000      6956.71    7440.224
-------------+----------------------------------------------------------------
         rho |   .3206567
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.542095
Durbin-Watson statistic (transformed) 1.983707


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     125
-------------+------------------------------           F( 21,   103) =   11.68
       Model |  23784924.9    21  1132615.47           Prob > F      =  0.0000
    Residual |  9990829.38   103  96998.3435           R-squared     =  0.7042
-------------+------------------------------           Adj R-squared =  0.6439
       Total |  33775754.3   124  272385.115           Root MSE      =  311.45

------------------------------------------------------------------------------
       load2 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
cdd_bldNAI~t |   81.20401   19.04401     4.26   0.000      43.4347    118.9733
       evtd1 |  -70.54511   325.6202    -0.22   0.829    -716.3359    575.2457
       evtd2 |   -609.766   346.0713    -1.76   0.081    -1296.117     76.5848
```

```
       evtd3 |   89.04879   324.9526     0.27   0.785    -555.4181    733.5157
       evtd4 |  -157.9874   306.2579    -0.52   0.607    -765.3776    449.4029
       evtd5 |  -52.54826    325.667    -0.16   0.872    -698.4319    593.3353
       evtd6 |   -604.532   351.0174    -1.72   0.088    -1300.692    91.62812
       evtd7 |  -490.3192   359.1168    -1.37   0.175    -1202.543    221.9043
       evtd8 |  -1040.228   365.5015    -2.85   0.005    -1765.114    -315.342
       evtd9 |  -146.0903   372.3829    -0.39   0.696    -884.6239    592.4433
       fire1 |  -1750.961   352.1129    -4.97   0.000    -2449.294   -1052.628
       fire2 |  -963.3823   204.2769    -4.72   0.000    -1368.517   -558.2472
         dt2 |   231.7463   79.93499     2.90   0.005     73.21409    390.2785
         dt3 |   285.9314   90.31999     3.17   0.002      106.803    465.0598
         dt4 |   342.9404   89.94911     3.81   0.000     164.5475    521.3332
         dt5 |   382.5863   78.22987     4.89   0.000     227.4358    537.7368
          m6 |   93.30804   143.2673     0.65   0.516    -190.8288    377.4449
          m7 |   562.8333   170.7804     3.30   0.001     224.1307    901.5359
          m8 |   473.8994   201.3762     2.35   0.021     74.51727    873.2816
          m9 |    571.974   159.6148     3.58   0.001     255.4157    888.5323
         m10 |   43.60817   158.6235     0.27   0.784    -270.9841    358.2004
       _cons |   7538.496    120.972    62.32   0.000     7298.577    7778.416
-------------+----------------------------------------------------------------
         rho |   .3519497
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.514206
Durbin-Watson statistic (transformed) 1.936115


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     125
-------------+------------------------------           F( 21,   103) =   11.14
       Model |  21198945.1     21  1009473.58           Prob > F      =  0.0000
    Residual |   9333281.6   103  90614.3845           R-squared     =  0.6943
-------------+------------------------------           Adj R-squared =  0.6320
       Total |  30532226.7   124  246227.635           Root MSE      =  301.02

------------------------------------------------------------------------------
       load3 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
cdd_bldNAI~t |   69.51958   18.38406     3.78   0.000     33.05912      105.98
       evtd1 |  -173.0702     314.76    -0.55   0.584    -797.3224    451.1819
       evtd2 |  -610.9755   334.3733    -1.83   0.071    -1274.126    52.17512
       evtd3 |  -75.94969   314.1161    -0.24   0.809    -698.9249    547.0255
       evtd4 |  -180.6439   296.2254    -0.61   0.543    -768.1371    406.8493
       evtd5 |  -53.54967   314.7889    -0.17   0.865    -677.8591    570.7598
       evtd6 |  -882.4119   339.0707    -2.60   0.011    -1554.879   -209.9451
       evtd7 |  -614.3226   346.8731    -1.77   0.080    -1302.264    73.61826
       evtd8 |  -460.6397   353.2894    -1.30   0.195    -1161.306    240.0265
       evtd9 |   17.83035   360.3422     0.05   0.961    -696.8234    732.4841
       fire1 |  -1708.583   340.1811    -5.02   0.000    -2383.252   -1033.914
       fire2 |  -855.9623   197.0908    -4.34   0.000    -1246.845   -465.0793
         dt2 |   56.61266   77.32155     0.73   0.466    -96.73639    209.9617
         dt3 |   160.8264   87.31884     1.84   0.068    -12.34989    334.0028
         dt4 |    218.102   86.96373     2.51   0.014     45.62995    390.5741
         dt5 |   245.2603   75.67505     3.24   0.002     95.17669    395.3439
          m6 |   72.42022   138.1142     0.52   0.601    -201.4968    346.3372
          m7 |   578.5759   164.6663     3.51   0.001     251.9992    905.1526
          m8 |   568.0095   194.2297     2.92   0.004     182.8006    953.2183
          m9 |   589.8402   153.8646     3.83   0.000     284.6861    894.9943
         m10 |   58.95891   152.8973     0.39   0.701    -244.2768    362.1946
       _cons |   7402.636   116.6831    63.44   0.000     7171.222    7634.049
-------------+----------------------------------------------------------------
         rho |   .3498916
------------------------------------------------------------------------------
```

```
Durbin-Watson statistic (original)    1.516346
Durbin-Watson statistic (transformed) 1.904412


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     125
-------------+------------------------------           F( 21,   103) =   11.19
       Model |  22575577.7    21  1075027.51           Prob > F      =  0.0000
    Residual |  9891940.21   103  96038.2545           R-squared     =  0.6953
-------------+------------------------------           Adj R-squared =  0.6332
       Total |  32467517.9   124  261834.822           Root MSE      =   309.9

------------------------------------------------------------------------------
       load4 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
cdd_bldNAI~t |   78.57203   19.00487     4.13   0.000     40.88036    116.2637
       evtd1 |  -227.9202   323.9111    -0.70   0.483    -870.3215    414.4812
       evtd2 |  -509.8516   344.6365    -1.48   0.142    -1193.357    173.6536
       evtd3 |  -74.67551   323.2437    -0.23   0.818    -715.7531    566.4021
       evtd4 |  -126.5006   304.2039    -0.42   0.678    -729.8174    476.8161
       evtd5 |   50.20719   323.9989     0.15   0.877    -592.3682    692.7826
       evtd6 |  -881.7345   349.7657    -2.52   0.013    -1575.412   -188.0566
       evtd7 |  -744.7444   357.8897    -2.08   0.040    -1454.534   -34.95464
       evtd8 |  -386.6098   363.6366    -1.06   0.290    -1107.797    334.5777
       evtd9 |   292.0797   369.5032     0.79   0.431    -440.7428    1024.902
       fire1 |  -2047.892   350.7314    -5.84   0.000    -2743.485   -1352.299
       fire2 |   -833.089   204.1241    -4.08   0.000    -1237.921    -428.257
         dt2 |   165.1565   79.38711     2.08   0.040     7.71089    322.6021
         dt3 |   222.8642   89.81787     2.48   0.015     44.73168    400.9968
         dt4 |   255.5394   89.44058     2.86   0.005     78.15512    432.9237
         dt5 |   302.5077   77.68683     3.89   0.000     148.4341    456.5812
          m6 |   112.3458   143.4408     0.78   0.435    -172.1352    396.8269
          m7 |   583.5416   170.9172     3.41   0.001     244.5677    922.5155
          m8 |   532.5912   201.3804     2.64   0.009     133.2006    931.9818
          m9 |   549.8422    159.832     3.44   0.001     232.8531    866.8314
         m10 |   9.080041   158.8682     0.06   0.955    -305.9976    324.1577
       _cons |   7411.263   120.9671    61.27   0.000     7171.354    7651.173
-------------+----------------------------------------------------------------
         rho |   .3568482
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.524523
Durbin-Watson statistic (transformed) 1.888652


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     125
-------------+------------------------------           F( 21,   103) =   11.28
       Model |  21749165.9    21  1035674.57           Prob > F      =  0.0000
    Residual |  9454623.36   103  91792.4598           R-squared     =  0.6970
-------------+------------------------------           Adj R-squared =  0.6352
       Total |  31203789.3   124  251643.462           Root MSE      =  302.97

------------------------------------------------------------------------------
       load5 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
cdd_bldNAI~t |    69.6905   19.45124     3.58   0.001     31.11356    108.2674
       evtd1 |  -287.5571    314.831    -0.91   0.363    -911.9502    336.8361
       evtd2 |   17.80666   340.9808     0.05   0.958    -658.4482    694.0616
       evtd3 |  -32.03267   314.1499    -0.10   0.919    -655.0749    591.0096
       evtd4 |  -101.8095   288.5507    -0.35   0.725    -674.0817    470.4626
       evtd5 |   41.38962   315.8246     0.13   0.896    -584.9741    667.7533
```

```
       evtd6 |  -779.1686   350.1123    -2.23   0.028    -1473.534   -84.80338
       evtd7 |  -579.4905   359.2823    -1.61   0.110    -1292.042    133.0612
       evtd8 |   89.42003   354.3666     0.25   0.801    -613.3826    792.2227
       evtd9 |   505.7019   345.2614     1.46   0.146    -179.0425    1190.446
       fire1 |  -1967.851   349.5638    -5.63   0.000    -2661.128   -1274.573
       fire2 |  -756.5349   214.0641    -3.53   0.001    -1181.081   -331.9893
         dt2 |   52.84961    75.2249     0.70   0.484    -96.34123    202.0404
         dt3 |    163.745   86.76257     1.89   0.062    -8.328068    335.8181
         dt4 |   164.4843   86.26243     1.91   0.059    -6.596867    335.5655
         dt5 |   149.4146   73.54069     2.03   0.045     3.564032    295.2653
          m6 |   120.3085   155.6447     0.77   0.441     -188.376    428.9929
          m7 |   599.7867   184.3594     3.25   0.002     234.1534      965.42
          m8 |   580.2254   214.1706     2.71   0.008     155.4685    1004.982
          m9 |   565.7187   174.1708     3.25   0.002     220.2921    911.1453
         m10 |  -48.71823   173.6011    -0.28   0.780    -393.0151    295.5787
       _cons |   7676.792    129.118    59.46   0.000     7420.717    7932.868
-------------+----------------------------------------------------------------
         rho |   .4364514
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.407762
Durbin-Watson statistic (transformed) 1.784211


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     125
-------------+------------------------------           F( 21,   103) =   16.02
       Model |  44270535.6    21  2108120.74           Prob > F      =  0.0000
    Residual |  13554573.8   103  131597.804           R-squared     =  0.7656
-------------+------------------------------           Adj R-squared =  0.7178
       Total |  57825109.4   124  466331.527           Root MSE      =  362.76

------------------------------------------------------------------------------
       load6 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
cdd_bldNAI~t |   76.77338   20.73961     3.70   0.000     35.64125    117.9055
       evtd1 |  -55.91682   381.1632    -0.15   0.884    -811.8641    700.0305
       evtd2 |   1731.782   395.4209     4.38   0.000     947.5581    2516.006
       evtd3 |   294.7385   380.5042     0.77   0.440    -459.9018    1049.379
       evtd4 |  -92.54479   369.6405    -0.25   0.803    -825.6395    640.5499
       evtd5 |   28.92449   380.5515     0.08   0.940    -725.8096    783.6586
       evtd6 |   -613.339   397.2641    -1.54   0.126    -1401.219    174.5407
       evtd7 |  -82.57503   405.3073    -0.20   0.839    -886.4064    721.2563
       evtd8 |   523.5735   426.5274     1.23   0.222     -322.343     1369.49
       evtd9 |   172.3066   461.6073     0.37   0.710    -743.1826    1087.796
       fire1 |  -2572.849   402.2189    -6.40   0.000    -3370.555   -1775.142
       fire2 |  -964.8544    217.126    -4.44   0.000    -1395.473   -534.2363
         dt2 |   404.3744   97.15118     4.16   0.000      211.698    597.0509
         dt3 |   675.6264   106.2189     6.36   0.000     464.9663    886.2864
         dt4 |   530.1906   105.9907     5.00   0.000      319.983    740.3981
         dt5 |   439.8136   95.32951     4.61   0.000       250.75    628.8772
          m6 |   125.6541   146.2948     0.86   0.392    -164.4871    415.7953
          m7 |   540.2313   176.0891     3.07   0.003     191.0001    889.4625
          m8 |   539.4595   210.7367     2.56   0.012     121.5129    957.4061
          m9 |   453.5111   162.7756     2.79   0.006     130.6842     776.338
         m10 |  -36.48746    161.099    -0.23   0.821    -355.9894    283.0145
       _cons |   8411.733   127.7273    65.86   0.000     8158.416     8665.05
-------------+----------------------------------------------------------------
         rho |   .2422918
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.576819
Durbin-Watson statistic (transformed) 1.902059
```

```
Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     125
-------------+------------------------------           F( 21,   103) =   15.99
       Model |  40988438.6    21  1951830.41           Prob > F      =  0.0000
    Residual |  12569434.3   103  122033.342           R-squared     =  0.7653
-------------+------------------------------           Adj R-squared =  0.7175
       Total |  53557872.8   124  431918.329           Root MSE      =  349.33

------------------------------------------------------------------------------
       load7 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
cdd_bldNAI~t |   94.46133   19.78657     4.77   0.000     55.21934    133.7033
       evtd1 |   253.2138   367.2352     0.69   0.492    -475.1106    981.5383
       evtd2 |  -63.05448   379.8011    -0.17   0.868    -816.3005    690.1915
       evtd3 |  -75.30409   366.6195    -0.21   0.838    -802.4073    651.7991
       evtd4 |   8.066538   357.4582     0.02   0.982    -700.8675    717.0006
       evtd5 |  -26.00605   366.6052    -0.07   0.944     -753.081    701.0689
       evtd6 |  -583.3026   381.2495    -1.53   0.129    -1339.421    172.8159
       evtd7 |  -196.2792   388.8473    -0.50   0.615    -967.4662    574.9078
       evtd8 |   351.8716    410.776     0.86   0.394    -462.8057    1166.549
       evtd9 |   318.7182   448.2519     0.71   0.479    -570.2838     1207.72
       fire1 |  -2835.465   386.5028    -7.34   0.000    -3602.002   -2068.928
       fire2 |  -911.8942   206.6046    -4.41   0.000    -1321.646   -502.1427
         dt2 |   301.7707   94.09846     3.21   0.002     115.1486    488.3928
         dt3 |   442.3977   102.3666     4.32   0.000     239.3777    645.4178
         dt4 |   439.1828   102.1707     4.30   0.000     236.5514    641.8142
         dt5 |   274.5634   92.37472     2.97   0.004     91.35997    457.7669
          m6 |   106.8126   138.5231     0.77   0.442    -167.9154    381.5405
          m7 |   610.8735   166.9577     3.66   0.000     279.7521    941.9948
          m8 |   547.3825   200.1379     2.74   0.007     150.4562    944.3088
          m9 |   581.4847   154.1337     3.77   0.000     275.7969    887.1725
         m10 |   98.96098   152.4625     0.65   0.518    -203.4124    401.3343
       _cons |   9105.948   121.5713    74.90   0.000      8864.84    9347.056
-------------+----------------------------------------------------------------
         rho |   .2274373
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.596376
Durbin-Watson statistic (transformed) 1.937105


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     125
-------------+------------------------------           F( 21,   103) =   15.68
       Model |  43102987.1    21   2052523.2           Prob > F      =  0.0000
    Residual |    13485236   103  130924.621           R-squared     =  0.7617
-------------+------------------------------           Adj R-squared =  0.7131
       Total |  56588223.1   124  456356.638           Root MSE      =  361.84

------------------------------------------------------------------------------
       load8 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
cdd_bldNAI~t |   132.4735   22.38802     5.92   0.000     88.07217    176.8749
       evtd1 |   295.1022   377.8415     0.78   0.437    -454.2573    1044.462
       evtd2 |  -49.58931   403.3866    -0.12   0.902    -849.6116     750.433
       evtd3 |   123.0704   377.0519     0.33   0.745    -624.7232    870.8639
       evtd4 |  -212.8115   353.2462    -0.60   0.548    -913.3921    487.7691
       evtd5 |   58.42755   378.1039     0.15   0.877    -691.4525    808.3075
       evtd6 |  -105.1141   410.1615    -0.26   0.798    -918.5728    708.3445
       evtd7 |  -463.5696   419.8881    -1.10   0.272    -1296.319    369.1794
       evtd8 |   125.6643   424.3765     0.30   0.768    -715.9863    967.3149
```

```
       evtd9 |   407.5069   427.7473     0.95   0.343     -440.829    1255.843
       fire1 |   -3100.92    410.863    -7.55   0.000     -3915.77    -2286.07
       fire2 |  -1061.648   241.4616    -4.40   0.000     -1540.53   -582.7662
         dt2 |   242.0223    92.1499     2.63   0.010     59.26467    424.7799
         dt3 |   318.8109   104.6663     3.05   0.003     111.2299    526.3919
         dt4 |   366.3645   104.1961     3.52   0.001      159.716    573.0129
         dt5 |   120.4494   90.15349     1.34   0.184    -58.34878    299.2476
          m6 |  -102.4543   170.7188    -0.60   0.550    -441.0348    236.1261
          m7 |    292.412   203.1694     1.44   0.153    -110.5265    695.3505
          m8 |   7.475093    238.793     0.03   0.975    -466.1146    481.0648
          m9 |   266.9214   190.3274     1.40   0.164    -110.5481    644.3908
         m10 |  -356.7534   189.2841    -1.88   0.062    -732.1539    18.64701
       _cons |   10069.82   143.4414    70.20   0.000     9785.334     10354.3
-------------+----------------------------------------------------------------
         rho |   .3718903
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.383424
Durbin-Watson statistic (transformed) 1.992207


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     125
-------------+------------------------------           F( 21,   103) =   17.18
       Model |  55292221.1    21  2632962.91           Prob > F      =  0.0000
    Residual |  15781914.8   103  153222.474           R-squared     =  0.7780
-------------+------------------------------           Adj R-squared =  0.7327
       Total |  71074135.9   124  573178.515           Root MSE      =  391.44

------------------------------------------------------------------------------
       load9 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
cdd_bldNAI~t |   164.4028   23.78937     6.91   0.000     117.2222    211.5834
       evtd1 |   233.5031   409.4892     0.57   0.570    -578.6221    1045.628
       evtd2 |   166.2489   434.2035     0.38   0.703    -694.8914    1027.389
       evtd3 |   321.8501   408.6591     0.79   0.433    -488.6289    1132.329
       evtd4 |  -154.6231    386.312    -0.40   0.690    -920.7819    611.5357
       evtd5 |  -136.8917   409.4459    -0.33   0.739    -948.9311    675.1476
       evtd6 |  -125.0155   439.8952    -0.28   0.777    -997.4438    747.4128
       evtd7 |  -770.5771   449.9093    -1.71   0.090    -1662.866    121.7119
       evtd8 |   174.3625   459.5031     0.38   0.705    -736.9535    1085.679
       evtd9 |   184.4041   470.7558     0.39   0.696     -749.229    1118.037
       fire1 |  -3651.351   441.6099    -8.27   0.000     -4527.18   -2775.522
       fire2 |  -1415.362   254.4994    -5.56   0.000    -1920.101   -910.6222
         dt2 |   212.6498   100.8646     2.11   0.037      12.6086    412.6909
         dt3 |   272.4828   113.6543     2.40   0.018      47.0763    497.8894
         dt4 |   359.9906   113.2098     3.18   0.002     135.4656    584.5156
         dt5 |   50.15144   98.73211     0.51   0.613    -145.6604    245.9633
          m6 |  -81.13567   177.7711    -0.46   0.649    -433.7027    271.4313
          m7 |     229.07   212.0938     1.08   0.283     -191.568    649.7081
          m8 |  -33.12902   250.4896    -0.13   0.895    -529.9161     463.658
          m9 |   207.6577   198.0003     1.05   0.297    -185.0292    600.3445
         m10 |  -293.8048   196.6957    -1.49   0.138    -683.9042    96.29465
       _cons |    10542.7   150.5103    70.05   0.000      10244.2     10841.2
-------------+----------------------------------------------------------------
         rho |   .3417321
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.395186
Durbin-Watson statistic (transformed) 2.003576


Prais-Winsten AR(1) regression -- iterated estimates
```

```
      Source |       SS       df       MS              Number of obs =     125
-------------+------------------------------           F( 21,   103) =   20.10
       Model |    55619272    21  2648536.76           Prob > F      =  0.0000
    Residual |  13569116.5   103  131738.995           R-squared     =  0.8039
-------------+------------------------------           Adj R-squared =  0.7639
       Total |  69188388.5   124  557970.875           Root MSE      =  362.96

------------------------------------------------------------------------------
      load10 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
cdd_bldNAI~t |   197.7112    23.6284     8.37   0.000     150.8498    244.5726
       evtd1 |   268.6268    376.262     0.71   0.477    -477.6002    1014.854
       evtd2 |   100.6976   409.7504     0.25   0.806    -711.9457     913.341
       evtd3 |   15.51105   375.4465     0.04   0.967    -729.0985    760.1206
       evtd4 |  -132.6597   342.1507    -0.39   0.699    -811.2349    545.9154
       evtd5 |   166.5322   377.9391     0.44   0.660    -583.0208    916.0853
       evtd6 |   -313.796   422.6836    -0.74   0.460    -1152.089    524.4971
       evtd7 |  -330.6562   434.2596    -0.76   0.448    -1191.908    530.5953
       evtd8 |   58.15515   423.9133     0.14   0.891    -782.5768    898.8871
       evtd9 |   213.0245   407.7069     0.52   0.602     -595.566    1021.615
       fire1 |  -3923.326   421.7699    -9.30   0.000    -4759.807   -3086.845
       fire2 |  -1707.262   262.4002    -6.51   0.000    -2227.671   -1186.853
         dt2 |   228.4071   89.20841     2.56   0.012     51.48323    405.3309
         dt3 |   244.4167   103.4497     2.36   0.020     39.24858    449.5849
         dt4 |   361.6459   102.8016     3.52   0.001     157.7632    565.5286
         dt5 |  -13.11548   87.20082    -0.15   0.881    -186.0577    159.8268
          m6 |   46.05021   193.0671     0.24   0.812    -336.8528    428.9532
          m7 |    286.323   228.3482     1.25   0.213    -166.5518    739.1977
          m8 |  -84.66307   263.9303    -0.32   0.749    -608.1065    438.7804
          m9 |   237.1711   216.5528     1.10   0.276    -192.3103    666.6524
         m10 |  -99.91383   216.0114    -0.46   0.645    -528.3214    328.4938
       _cons |   10867.39   159.6178    68.08   0.000     10550.82    11183.95
-------------+----------------------------------------------------------------
         rho |   .4618958
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.225480
Durbin-Watson statistic (transformed) 1.955629


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     125
-------------+------------------------------           F( 21,   103) =   18.69
       Model |    55847835    21  2659420.72           Prob > F      =  0.0000
    Residual |  14655037.7   103  142281.919           R-squared     =  0.7921
-------------+------------------------------           Adj R-squared =  0.7498
       Total |  70502872.7   124  568571.554           Root MSE      =   377.2

------------------------------------------------------------------------------
      load11 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
cdd_bldNAI~t |   221.3162   25.19894     8.78   0.000     171.3401    271.2924
       evtd1 |   215.6068   388.8373     0.55   0.580    -555.5602    986.7738
       evtd2 |   46.93076   427.7979     0.11   0.913    -801.5054    895.3669
       evtd3 |  -106.6944   388.0082    -0.27   0.784    -876.2172    662.8283
       evtd4 |  -242.3932   348.2505    -0.70   0.488    -933.0659    448.2795
       evtd5 |  -122.0118   391.8075    -0.31   0.756    -899.0695    655.0459
       evtd6 |  -448.1935   445.9414    -1.01   0.317    -1332.613    436.2261
       evtd7 |  -504.5849   459.4168    -1.10   0.275     -1415.73      406.56
       evtd8 |  -213.9659    438.987    -0.49   0.627    -1084.593    656.6614
       evtd9 |   -261.324   411.9887    -0.63   0.527    -1078.406    555.7584
       fire1 |  -4012.837   445.0936    -9.02   0.000    -4895.575   -3130.099
       fire2 |   -1938.56   285.3812    -6.79   0.000    -2504.547   -1372.574
```

```
         dt2 |   177.9145   90.85724     1.96   0.053    -2.279416    358.1084
         dt3 |   248.3951   106.3837     2.33   0.021     37.40802    459.3821
         dt4 |   384.4886   105.6155     3.64   0.000     175.0252     593.952
         dt5 |  -18.52802   88.82171    -0.21   0.835    -194.6849    157.6289
          m6 |  -118.6902   215.2284    -0.55   0.583    -545.5449    308.1645
          m7 |   149.1383   254.0641     0.59   0.558     -354.738    653.0146
          m8 |  -35.07352   290.5673    -0.12   0.904    -611.3451    541.1981
          m9 |    287.351   243.0096     1.18   0.240    -194.6011    769.3032
         m10 |   301.5918   242.7065     1.24   0.217    -179.7593    782.9429
       _cons |   10779.95   177.3491    60.78   0.000     10428.22    11131.68
-------------+----------------------------------------------------------------
         rho |   .5117096
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.161913
Durbin-Watson statistic (transformed) 1.955045


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     125
-------------+------------------------------           F( 21,   103) =   16.58
       Model |  56634508.2    21  2696881.34           Prob > F      =  0.0000
    Residual |  16758138.4   103  162700.373           R-squared     =  0.7717
-------------+------------------------------           Adj R-squared =  0.7251
       Total |  73392646.7   124  591876.183           Root MSE      =  403.36

------------------------------------------------------------------------------
      load12 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
cdd_bldNAI~t |   216.7803   28.30738     7.66   0.000     160.6392    272.9213
       evtd1 |   316.1914   408.4847     0.77   0.441    -493.9416    1126.324
       evtd2 |   519.8822   458.2729     1.13   0.259    -388.9939    1428.758
       evtd3 |  -313.7031   407.7214    -0.77   0.443    -1122.322    494.9161
       evtd4 |  -346.6999   354.6529    -0.98   0.331     -1050.07    356.6705
       evtd5 |   173.2772   415.8802     0.42   0.678    -651.5232    998.0775
       evtd6 |  -3.804142   492.0958    -0.01   0.994    -979.7601    972.1518
       evtd7 |  -540.4174   511.8076    -1.06   0.293    -1555.467    474.6322
       evtd8 |   1.761555   463.8727     0.00   0.997    -918.2206    921.7437
       evtd9 |  -136.5654   414.4281    -0.33   0.742    -958.4857    685.3549
       fire1 |  -4286.015   495.2435    -8.65   0.000    -5268.214   -3303.817
       fire2 |  -2280.529   337.6634    -6.75   0.000    -2950.205   -1610.853
         dt2 |   105.5164   92.76345     1.14   0.258    -78.45807    289.4908
         dt3 |   124.2867   110.5251     1.12   0.263    -94.91375    343.4872
         dt4 |   233.4425   109.5233     2.13   0.035     16.22896    450.6561
         dt5 |  -84.53362   90.88278    -0.93   0.354    -264.7782    95.71093
          m6 |  -331.2265   270.9328    -1.22   0.224    -868.5577    206.1047
          m7 |   80.62999   320.7982     0.25   0.802    -555.5975    716.8575
          m8 |    10.4907   358.1919     0.03   0.977    -699.8984    720.8798
          m9 |   184.2349   315.3661     0.58   0.560    -441.2194    809.6892
         m10 |   539.9865   315.3055     1.71   0.090    -85.34765    1165.321
       _cons |   10727.67   226.5717    47.35   0.000     10278.32    11177.02
-------------+----------------------------------------------------------------
         rho |   .6219034
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.014485
Durbin-Watson statistic (transformed) 1.923031


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     125
-------------+------------------------------           F( 21,   103) =   21.70
       Model |  58206723.2    21  2771748.72           Prob > F      =  0.0000
```

```
    Residual |  13157508.4   103    127742.8           R-squared     =  0.8156
-------------+------------------------------           Adj R-squared =  0.7780
       Total |  71364231.6   124  575517.997           Root MSE      =  357.41

------------------------------------------------------------------------------
      load13 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
cdd_bldNAI~t |   220.6776   24.83415     8.89   0.000     171.4249    269.9302
       evtd1 |  -122.5777   363.6546    -0.34   0.737    -843.8007    598.6454
       evtd2 |    144.681   406.3707     0.36   0.723    -661.2595    950.6216
       evtd3 |  -545.5939   362.9465    -1.50   0.136    -1265.413    174.2249
       evtd4 |  -311.4653   317.7987    -0.98   0.329     -941.744    318.8134
       evtd5 |  -167.8044   369.2248    -0.45   0.650    -900.0747    564.4658
       evtd6 |  -135.1686   433.1293    -0.31   0.756    -994.1784    723.8411
       evtd7 |  -699.2131   449.2759    -1.56   0.123    -1590.246    191.8197
       evtd8 |  -199.5917   412.3495    -0.48   0.629     -1017.39    618.2062
       evtd9 |  -1383.973    372.239    -3.72   0.000    -2122.221   -645.7249
       fire1 |  -4499.458   434.6847   -10.35   0.000    -5361.552   -3637.363
       fire2 |  -2335.323    292.529    -7.98   0.000    -2915.485   -1755.161
         dt2 |   68.48677   83.07051     0.82   0.412    -96.26399    233.2375
         dt3 |   118.4107    98.6314     1.20   0.233    -77.20138    314.0229
         dt4 |   187.3453   97.77334     1.92   0.058    -6.565032    381.2557
         dt5 |  -111.3878   81.32487    -1.37   0.174    -272.6765    49.90086
          m6 |  -48.86707   231.2814    -0.21   0.833    -507.5592    409.8251
          m7 |   307.4319   273.3348     1.12   0.263    -234.6633     849.527
          m8 |   311.5697   306.7649     1.02   0.312     -296.826    919.9655
          m9 |   508.1014   266.6739     1.91   0.060    -20.78331    1036.986
         m10 |   839.6226    266.622     3.15   0.002     310.8407    1368.404
       _cons |   10582.77   192.1241    55.08   0.000     10201.73     10963.8
-------------+----------------------------------------------------------------
         rho |   .5972054
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.116712
Durbin-Watson statistic (transformed) 1.885511


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     125
-------------+------------------------------           F( 21,   103) =   20.77
       Model |  61398345.4    21  2923730.73           Prob > F      =  0.0000
    Residual |  14495735.5   103  140735.296           R-squared     =  0.8090
-------------+------------------------------           Adj R-squared =  0.7701
       Total |  75894080.8   124  612049.039           Root MSE      =  375.15

------------------------------------------------------------------------------
      load14 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
cdd_bldNAI~t |   216.2561   25.08406     8.62   0.000     166.5078    266.0044
       evtd1 |  -19.91286   386.6301    -0.05   0.959    -786.7025    746.8768
       evtd2 |   200.4277   425.5204     0.47   0.639    -643.4916    1044.347
       evtd3 |  -275.5349   385.8066    -0.71   0.477    -1040.691    489.6216
       evtd4 |  -120.2064    346.087    -0.35   0.729    -806.5882    566.1755
       evtd5 |  -140.5325   389.6343    -0.36   0.719    -913.2802    632.2153
       evtd6 |  -93.64896   443.7498    -0.21   0.833    -973.7221    786.4241
       evtd7 |  -795.0071   457.2107    -1.74   0.085    -1701.777    111.7624
       evtd8 |  -676.0787   436.5303    -1.55   0.125    -1541.834    189.6762
       evtd9 |   -1779.26    409.331    -4.35   0.000    -2591.072   -967.4489
       fire1 |   -4365.69   442.9274    -9.86   0.000    -5244.132   -3487.248
       fire2 |  -2242.312   284.2942    -7.89   0.000    -2806.142   -1678.481
         dt2 |   142.3055   90.29563     1.58   0.118    -36.77456    321.3856
         dt3 |   153.8826   105.7606     1.46   0.149    -55.86851    363.6338
         dt4 |   234.0153   104.9933     2.23   0.028      25.7859    442.2447
```

```
         dt5 |  -77.44513   88.27381    -0.88   0.382    -252.5154    97.62516
          m6 |  -17.55381   214.6077    -0.08   0.935    -443.1776      408.07
          m7 |   369.5061    253.321     1.46   0.148    -132.8964    871.9086
          m8 |    405.441   289.6035     1.40   0.165    -168.9192    979.8013
          m9 |   630.3141   242.3813     2.60   0.011     149.6079     1111.02
         m10 |   908.5148   242.0882     3.75   0.000     428.3901     1388.64
       _cons |   10522.09   176.8332    59.50   0.000     10171.38     10872.8
-------------+----------------------------------------------------------------
         rho |   .5135053
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.244580
Durbin-Watson statistic (transformed) 1.887471


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     125
-------------+------------------------------           F( 21,   103) =   16.21
       Model |  52418439.2    21  2496116.15           Prob > F      =  0.0000
    Residual |  15864787.1   103  154027.059           R-squared     =  0.7677
-------------+------------------------------           Adj R-squared =  0.7203
       Total |  68283226.3   124   550671.18           Root MSE      =  392.46

------------------------------------------------------------------------------
      load15 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
cdd_bldNAI~t |   199.8542    28.8642     6.92   0.000     142.6088    257.0995
       evtd1 |   226.7305   381.2982     0.59   0.553    -529.4846    982.9457
       evtd2 |   134.0612   435.9158     0.31   0.759     -730.475    998.5974
       evtd3 |  -427.4271   380.8443    -1.12   0.264    -1182.742    327.8878
       evtd4 |  -281.7068   320.2129    -0.88   0.381    -916.7735    353.3599
       evtd5 |  -259.8335   397.8568    -0.65   0.515    -1048.889    529.2217
       evtd6 |     490.11   497.4735     0.99   0.327    -496.5115    1476.731
       evtd7 |  -302.4656   533.6949    -0.57   0.572    -1360.924    755.9923
       evtd8 |   -369.111   438.9185    -0.84   0.402    -1239.602    501.3803
       evtd9 |   -2011.09   370.2325    -5.43   0.000    -2745.359   -1276.821
       fire1 |  -4674.154   512.9046    -9.11   0.000     -5691.38   -3656.929
       fire2 |  -3486.286   376.0287    -9.27   0.000     -4232.05   -2740.522
         dt2 |   139.8734   84.08811     1.66   0.099    -26.89558    306.6423
         dt3 |   160.1168   102.0435     1.57   0.120    -42.26253     362.496
         dt4 |    231.445   100.9919     2.29   0.024     31.15135    431.7387
         dt5 |  -68.80718   83.14632    -0.83   0.410    -233.7083    96.09394
          m6 |   196.5263   333.9605     0.59   0.558    -465.8056    858.8582
          m7 |   372.7394   411.7699     0.91   0.367     -443.909    1189.388
          m8 |   456.6121   454.2943     1.01   0.317    -444.3735    1357.598
          m9 |   601.1038   446.1082     1.35   0.181    -283.6465    1485.854
         m10 |   1516.438   445.9341     3.40   0.001     632.0325    2400.843
       _cons |   10519.03   317.2265    33.16   0.000     9889.885    11148.17
-------------+----------------------------------------------------------------
         rho |   .7806685
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.312933
Durbin-Watson statistic (transformed) 1.957078


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     125
-------------+------------------------------           F( 21,   103) =   16.23
       Model |  52854673.4    21  2516889.21           Prob > F      =  0.0000
    Residual |  15973764.9   103  155085.096           R-squared     =  0.7679
-------------+------------------------------           Adj R-squared =  0.7206
       Total |  68828438.3   124  555068.051           Root MSE      =  393.81
```

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------------------------------------------------------------------------------
      load16 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
cdd_bldNAI~t |   194.4122   28.15043     6.91   0.000     138.5825     250.242
       evtd1 |   298.3881   394.3716     0.76   0.451    -483.7551    1080.531
       evtd2 |  -25.72313    445.695    -0.06   0.954     -909.654    858.2078
       evtd3 |  -633.5391     393.71    -1.61   0.111     -1414.37    147.2918
       evtd4 |  -286.1897   338.1495    -0.85   0.399    -956.8295    384.4501
       evtd5 |   -520.548   404.1371    -1.29   0.201    -1322.059    280.9626
       evtd6 |   282.9195   486.7634     0.58   0.562    -682.4608      1248.3
       evtd7 |  -521.4802   509.7972    -1.02   0.309    -1532.543    489.5823
       evtd8 |  -494.3066   449.4141    -1.10   0.274    -1385.614    397.0004
       evtd9 |  -1850.862   393.4746    -4.70   0.000    -2631.226   -1070.497
       fire1 |  -4317.541   493.4327    -8.75   0.000    -5296.149   -3338.934
       fire2 |  -2914.356   345.1519    -8.44   0.000    -3598.883   -2229.829
         dt2 |   120.6473   88.56664     1.36   0.176    -55.00371    296.2984
         dt3 |   179.0623   106.2238     1.69   0.095    -31.60764    389.7322
         dt4 |   260.6062    105.194     2.48   0.015     51.97867    469.2337
         dt5 |  -93.92366   86.95629    -1.08   0.283     -266.381    78.53363
          m6 |   89.14926   285.9322     0.31   0.756    -477.9298    656.2283
          m7 |   375.3576   340.9271     1.10   0.273    -300.7909    1051.506
          m8 |   565.5263   377.2525     1.50   0.137     -182.665    1313.718
          m9 |   491.8354   341.9293     1.44   0.153    -186.3008    1169.972
         m10 |   1114.264    341.741     3.26   0.002     436.5018    1792.027
       _cons |   10437.94   244.5297    42.69   0.000     9952.977    10922.91
-------------+----------------------------------------------------------------
         rho |   .6731153
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.321077
Durbin-Watson statistic (transformed) 1.978573


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     125
-------------+------------------------------           F( 21,   103) =   15.32
       Model |  46244570.1    21  2202122.39           Prob > F      =  0.0000
    Residual |  14804473.8   103  143732.755           R-squared     =  0.7575
-------------+------------------------------           Adj R-squared =  0.7081
       Total |  61049043.9   124  492330.999           Root MSE      =  379.12

------------------------------------------------------------------------------
      load17 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
cdd_bldNAI~t |   189.4054   27.42009     6.91   0.000     135.0242    243.7867
       evtd1 |   309.5428   375.9899     0.82   0.412    -436.1446     1055.23
       evtd2 |   117.7947   426.9272     0.28   0.783    -728.9146     964.504
       evtd3 |  -518.1609   375.4201    -1.38   0.171    -1262.718    226.3964
       evtd4 |  -365.2289    319.721    -1.14   0.256    -999.3201    268.8622
       evtd5 |    -219.88   387.4905    -0.57   0.572    -988.3761    548.6161
       evtd6 |  -7.244035   472.9091    -0.02   0.988    -945.1477    930.6596
       evtd7 |  -360.5398   498.6722    -0.72   0.471    -1349.539    628.4588
       evtd8 |  -324.4265   429.7814    -0.75   0.452    -1176.797    527.9436
       evtd9 |  -1557.761   371.0517    -4.20   0.000    -2293.655   -821.8676
       fire1 |  -4036.911   482.3957    -8.37   0.000    -4993.629   -3080.193
       fire2 |  -2608.027   343.4935    -7.59   0.000    -3289.266   -1926.789
         dt2 |   143.4965   83.82258     1.71   0.090    -22.74582    309.7388
         dt3 |    129.848   100.9842     1.29   0.201    -70.43037    330.1265
         dt4 |   215.0038   99.97109     2.15   0.034     16.73469    413.2729
         dt5 |  -164.2184    82.4736    -1.99   0.049    -327.7854   -.6514909
          m6 |   153.9871   291.6968     0.53   0.599    -424.5247    732.4989
          m7 |   396.8554   350.8016     1.13   0.261    -298.8768    1092.588
```

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          m8 |   537.3991   386.5201     1.39   0.167    -229.1723     1303.97
          m9 |   449.7795   359.0816     1.25   0.213    -262.3743    1161.933
         m10 |   792.5156    358.746     2.21   0.029     81.02754    1504.004
       _cons |   10132.54    256.141    39.56   0.000     9624.541    10640.53
-------------+----------------------------------------------------------------
         rho |   .7114493
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.040440
Durbin-Watson statistic (transformed) 2.065455


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     125
-------------+------------------------------           F( 21,   103) =   14.06
       Model |  37765609.7    21  1798362.37           Prob > F      =  0.0000
    Residual |  13170706.4   103  127870.936           R-squared     =  0.7414
-------------+------------------------------           Adj R-squared =  0.6887
       Total |  50936316.1   124  410776.743           Root MSE      =  357.59

------------------------------------------------------------------------------
      load18 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
cdd_bldNAI~t |   181.5628   26.33603     6.89   0.000     129.3315    233.7941
       evtd1 |   133.3019   346.6213     0.38   0.701    -554.1397    820.7436
       evtd2 |   287.4894   396.4977     0.73   0.470    -498.8703    1073.849
       evtd3 |  -37.93481   346.2209    -0.11   0.913    -724.5823    648.7126
       evtd4 |  -304.5422   290.7796    -1.05   0.297    -881.2349    272.1506
       evtd5 |  -268.7782   362.1997    -0.74   0.460    -987.1158    449.5594
       evtd6 |   48.08315   454.0418     0.11   0.916    -852.4018    948.5681
       evtd7 |  -484.2217   488.1728    -0.99   0.324    -1452.397     483.954
       evtd8 |   -501.717   399.3459    -1.26   0.212    -1293.725    290.2914
       evtd9 |  -1324.017   336.0962    -3.94   0.000    -1990.584   -657.4491
       fire1 |  -3659.081   468.5168    -7.81   0.000    -4588.274   -2729.889
       fire2 |   -2298.72   344.4276    -6.67   0.000    -2981.811   -1615.629
         dt2 |   103.3689   76.37038     1.35   0.179    -48.09373    254.8315
         dt3 |   122.3689   92.74146     1.32   0.190    -61.56194    306.2997
         dt4 |    227.593   91.78542     2.48   0.015     45.55825    409.6277
         dt5 |  -143.4429   75.55817    -1.90   0.060    -293.2947    6.408892
          m6 |   99.12655   307.2446     0.32   0.748    -510.2207    708.4738
          m7 |    191.049   380.0785     0.50   0.616     -562.747    944.8451
          m8 |   334.7175   419.7382     0.80   0.427    -497.7343    1167.169
          m9 |   298.4501   415.0078     0.72   0.474    -524.6199     1121.52
         m10 |    466.268    414.962     1.12   0.264    -356.7113    1289.247
       _cons |     9645.8   295.0545    32.69   0.000     9060.629    10230.97
-------------+----------------------------------------------------------------
         rho |   .7876632
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    0.920520
Durbin-Watson statistic (transformed) 2.148649


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     125
-------------+------------------------------           F( 21,   103) =   13.22
       Model |  30292089.8    21  1442480.47           Prob > F      =  0.0000
    Residual |  11236539.2   103  109092.613           R-squared     =  0.7294
-------------+------------------------------           Adj R-squared =  0.6743
       Total |    41528629   124  334908.298           Root MSE      =  330.29

------------------------------------------------------------------------------
      load19 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
```

```
-------------+----------------------------------------------------------------
cdd_bldNAI~t |   159.5696   24.09914     6.62   0.000     111.7747    207.3646
       evtd1 |   310.6066   324.4845     0.96   0.341    -332.9319    954.1451
       evtd2 |   384.2867   369.7584     1.04   0.301    -349.0419    1117.615
       evtd3 |   277.0559   324.0421     0.85   0.395    -365.6053     919.717
       evtd4 |  -168.3642   274.1503    -0.61   0.540    -712.0767    375.3483
       evtd5 |  -468.1929   336.2813    -1.39   0.167    -1135.127    198.7418
       evtd6 |  -127.3582    415.184    -0.31   0.760    -950.7778    696.0613
       evtd7 |  -512.7572   441.0535    -1.16   0.248    -1387.483    361.9683
       evtd8 |  -407.0731   372.0567    -1.09   0.276     -1144.96    330.8136
       evtd9 |  -740.0522    317.541    -2.33   0.022     -1369.82   -110.2845
       fire1 |  -3087.146   425.8506    -7.25   0.000     -3931.72   -2242.572
       fire2 |  -2043.011   307.6791    -6.64   0.000     -2653.22   -1432.803
         dt2 |   136.6159   71.93373     1.90   0.060    -6.047732    279.2794
         dt3 |   243.8426   86.97611     2.80   0.006     71.34604    416.3392
         dt4 |   330.9446   86.08722     3.84   0.000     160.2109    501.6783
         dt5 |   73.99081   70.93379     1.04   0.299    -66.68964    214.6713
          m6 |   164.3488   267.0413     0.62   0.540    -365.2646    693.9622
          m7 |   477.1203   324.5014     1.47   0.145    -166.4517    1120.692
          m8 |   564.8112   357.1496     1.58   0.117    -143.5108    1273.133
          m9 |   387.8495   340.0233     1.14   0.257    -286.5066    1062.206
         m10 |   269.6072   339.6711     0.79   0.429    -404.0504    943.2647
       _cons |   8996.679   242.1245    37.16   0.000     8516.483    9476.876
-------------+----------------------------------------------------------------
         rho |   .7448778
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    0.984278
Durbin-Watson statistic (transformed) 1.958369


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     125
-------------+------------------------------           F( 21,   103) =   18.63
       Model |  33948782.4    21  1616608.69           Prob > F      =  0.0000
    Residual |   8936134.6   103  86758.5883           R-squared     =  0.7916
-------------+------------------------------           Adj R-squared =  0.7491
       Total |    42884917   124  345846.105           Root MSE      =  294.55

------------------------------------------------------------------------------
      load20 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
cdd_bldNAI~t |   137.1883   20.50346     6.69   0.000     96.52454    177.8521
       evtd1 |   252.1421    299.453     0.84   0.402    -341.7523    846.0365
       evtd2 |   431.2773   334.8691     1.29   0.201    -232.8566    1095.411
       evtd3 |   19.17818   298.8739     0.06   0.949    -573.5677     611.924
       evtd4 |   298.0671   261.3836     1.14   0.257    -220.3257    816.4598
       evtd5 |  -337.1443   304.1823    -1.11   0.270    -940.4181    266.1296
       evtd6 |   -243.515   357.3795    -0.68   0.497     -952.293     465.263
       evtd7 |  -242.7755   370.8682    -0.65   0.514    -978.3052    492.7542
       evtd8 |  -291.5893    339.638    -0.86   0.393    -965.1812    382.0027
       evtd9 |  -342.4243   306.0266    -1.12   0.266     -949.356    264.5074
       fire1 |  -2751.299   358.8274    -7.67   0.000    -3462.949    -2039.65
       fire2 |   -1686.73   242.0483    -6.97   0.000    -2166.776   -1206.685
         dt2 |   104.0592   68.33167     1.52   0.131    -31.46055    239.5789
         dt3 |   253.3236   81.18328     3.12   0.002     92.31575    414.3315
         dt4 |   298.4873   80.47155     3.71   0.000     138.8909    458.0836
         dt5 |   54.05841   66.90391     0.81   0.421    -78.62971    186.7465
          m6 |   414.9088   191.8656     2.16   0.033     34.38866    795.4289
          m7 |   956.4528    226.814     4.22   0.000     506.6206    1406.285
          m8 |   774.1808   254.3166     3.04   0.003     269.8037    1278.558
          m9 |   701.8861   221.5683     3.17   0.002     262.4577    1141.314
         m10 |   14.11065   221.5275     0.06   0.949    -425.2368    453.4581
```

```
       _cons |   8868.432   159.5442    55.59   0.000     8552.014     9184.85
-------------+----------------------------------------------------------------
         rho |   .6015945
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.070466
Durbin-Watson statistic (transformed) 1.920633


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     125
-------------+------------------------------           F( 21,   103) =   18.58
       Model |  33650389.9    21  1602399.52           Prob > F      =  0.0000
    Residual |  8881154.76   103  86224.8035           R-squared     =  0.7912
-------------+------------------------------           Adj R-squared =  0.7486
       Total |  42531544.7   124  342996.328           Root MSE      =  293.64

------------------------------------------------------------------------------
      load21 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
cdd_bldNAI~t |    130.531   20.20518     6.46   0.000     90.45882    170.6032
       evtd1 |   273.3529   299.9495     0.91   0.364    -321.5261    868.2319
       evtd2 |   225.2788   333.8903     0.67   0.501    -436.9139    887.4715
       evtd3 |  -261.2126   299.3465    -0.87   0.385    -854.8957    332.4705
       evtd4 |    144.373    263.773     0.55   0.585    -378.7585    667.5044
       evtd5 |  -208.6886   303.8438    -0.69   0.494     -811.291    393.9139
       evtd6 |  -295.9919   353.5908    -0.84   0.404    -997.2559    405.2721
       evtd7 |    34.6076    365.986     0.09   0.925    -691.2393    760.4545
       evtd8 |  -406.0961   339.6813    -1.20   0.235    -1079.774    267.5817
       evtd9 |  -515.4355   309.6907    -1.66   0.099    -1129.634    98.76294
       fire1 |  -2599.278   354.1149    -7.34   0.000    -3301.581   -1896.975
       fire2 |   -1753.69   235.3699    -7.45   0.000    -2220.491   -1286.889
         dt2 |   82.60501   68.90944     1.20   0.233     -54.0606    219.2706
         dt3 |   196.1465   81.53902     2.41   0.018      34.4331    357.8599
         dt4 |    306.376   80.85937     3.79   0.000     146.0106    466.7415
         dt5 |    118.384   67.42425     1.76   0.082    -15.33605    252.1041
          m6 |   310.4751   183.6594     1.69   0.094     -53.7701    674.7203
          m7 |   744.9637   216.8293     3.44   0.001      314.934    1174.993
          m8 |   648.2093   244.5554     2.65   0.009     163.1913    1133.227
          m9 |   613.4448   210.2553     2.92   0.004      196.453    1030.437
         m10 |  -72.10555   210.1885    -0.34   0.732    -488.9648    344.7537
       _cons |   9029.555   151.9217    59.44   0.000     8728.254    9330.856
-------------+----------------------------------------------------------------
         rho |   .5744705
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.081908
Durbin-Watson statistic (transformed) 1.880550


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     125
-------------+------------------------------           F( 21,   103) =   17.06
       Model |  31178963.7    21  1484712.56           Prob > F      =  0.0000
    Residual |   8965066.9   103  87039.4844           R-squared     =  0.7767
-------------+------------------------------           Adj R-squared =  0.7311
       Total |  40144030.6   124  323742.182           Root MSE      =  295.02

------------------------------------------------------------------------------
      load22 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
cdd_bldNAI~t |   128.7923   20.49511     6.28   0.000     88.14506    169.4395
       evtd1 |  -325.0807   300.2048    -1.08   0.281    -920.4661    270.3047
```

```
       evtd2 |   276.4751   335.4407     0.82   0.412    -388.7923    941.7426
       evtd3 |  -402.8603   299.6198    -1.34   0.182    -997.0856    191.3649
       evtd4 |   88.92191   262.3846     0.34   0.735     -431.456    609.2998
       evtd5 |   -235.985   304.7873    -0.77   0.441    -840.4587    368.4886
       evtd6 |  -271.5307   357.4774    -0.76   0.449    -980.5029    437.4415
       evtd7 |  -16.06039   370.7855    -0.04   0.966     -751.426    719.3053
       evtd8 |  -559.3282   340.3938    -1.64   0.103    -1234.419    115.7627
       evtd9 |  -249.4576   307.3473    -0.81   0.419    -859.0085    360.0934
       fire1 |  -2625.923   358.7431    -7.32   0.000    -3337.405   -1914.441
       fire2 |  -1624.472    241.359    -6.73   0.000    -2103.151   -1145.793
         dt2 |   151.4105   68.58477     2.21   0.029     15.38883    287.4322
         dt3 |   227.7905   81.42633     2.80   0.006     66.30057    389.2804
         dt4 |   330.5469   80.71857     4.10   0.000     170.4606    490.6331
         dt5 |   156.9255   67.14263     2.34   0.021      23.7639     290.087
          m6 |   422.8496     190.77     2.22   0.029     44.50235    801.1969
          m7 |   592.5372   225.4507     2.63   0.010     145.4088    1039.666
          m8 |   550.5994   253.0509     2.18   0.032     48.73259    1052.466
          m9 |   533.0028   219.9258     2.42   0.017     96.83185    969.1738
         m10 |  -21.91457   219.8827    -0.10   0.921    -458.0001     414.171
       _cons |   8820.016   158.4541    55.66   0.000      8505.76    9134.273
-------------+----------------------------------------------------------------
         rho |   .5967144
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.036842
Durbin-Watson statistic (transformed) 1.981804


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     125
-------------+------------------------------           F( 21,   103) =   17.88
       Model |  30899504.4    21  1471404.97           Prob > F      =  0.0000
    Residual |  8475485.37   103  82286.2657           R-squared     =  0.7847
-------------+------------------------------           Adj R-squared =  0.7409
       Total |  39374989.8   124   317540.24           Root MSE      =  286.86

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      load23 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
cdd_bldNAI~t |   101.5301   18.78117     5.41   0.000     64.28206    138.7781
       evtd1 |  -455.5869   297.0431    -1.53   0.128    -1044.702     133.528
       evtd2 |      261.6   324.2117     0.81   0.422    -381.3974    904.5974
       evtd3 |  -355.0635   296.4001    -1.20   0.234    -942.9031    232.7762
       evtd4 |  -17.28239   269.2243    -0.06   0.949    -551.2252    516.6604
       evtd5 |  -185.3507   298.5484    -0.62   0.536     -777.451    406.7496
       evtd6 |  -313.0219   335.1463    -0.93   0.352    -977.7055    351.6617
       evtd7 |   124.5171    344.509     0.36   0.719    -558.7352    807.7694
       evtd8 |  -481.7334    334.802    -1.44   0.153    -1145.734    182.2674
       evtd9 |  -39.86213   320.2796    -0.12   0.901    -675.0613     595.337
       fire1 |  -2197.427   334.3848    -6.57   0.000      -2860.6   -1534.254
       fire2 |  -1346.166   209.4068    -6.43   0.000    -1761.475   -930.8565
         dt2 |   143.6213   70.20114     2.05   0.043     4.393869    282.8487
         dt3 |   175.8238   81.58567     2.16   0.033     14.01789    337.6298
         dt4 |   270.5556   81.05748     3.34   0.001     109.7972     431.314
         dt5 |   109.1528   68.62014     1.59   0.115    -26.93908    245.2447
          m6 |   354.2502   154.8703     2.29   0.024     47.10148    661.3989
          m7 |   734.1852   183.0734     4.01   0.000     371.1023    1097.268
          m8 |   716.7466   211.1343     3.39   0.001     298.0114    1135.482
          m9 |   702.0744   173.9131     4.04   0.000     357.1588     1046.99
         m10 |  -112.5059   173.5306    -0.65   0.518    -456.6629    231.6511
       _cons |   8501.272   127.8965    66.47   0.000      8247.62    8754.925
-------------+----------------------------------------------------------------
         rho |   .4726014
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Durbin-Watson statistic (original)    1.220670
Durbin-Watson statistic (transformed) 2.057147


Prais-Winsten AR(1) regression -- iterated estimates

      Source |       SS       df       MS              Number of obs =     125
-------------+------------------------------           F( 21,   103) =   12.87
       Model |  21218008.7    21  1010381.37           Prob > F      =  0.0000
    Residual |  8083984.37   103  78485.2852           R-squared     =  0.7241
-------------+------------------------------           Adj R-squared =  0.6679
       Total |    29301993   124  236306.395           Root MSE      =  280.15

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      load24 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
cdd_bldNAI~t |   75.63552   18.47033     4.09   0.000     39.00397    112.2671
       evtd1 |  -462.8134   289.6839    -1.60   0.113    -1037.333    111.7063
       evtd2 |   311.3107   317.0505     0.98   0.328    -317.4841    940.1055
       evtd3 |  -125.5876   289.0589    -0.43   0.665    -698.8678    447.6926
       evtd4 |  -94.83603   261.4897    -0.36   0.718    -613.4393    423.7672
       evtd5 |  -281.0793   291.3866    -0.96   0.337    -858.9759    296.8172
       evtd6 |  -384.6509   328.6325    -1.17   0.245    -1036.416    267.1141
       evtd7 |   78.50507   338.0504     0.23   0.817    -591.9383    748.9484
       evtd8 |  -269.8636   326.6827    -0.83   0.411    -917.7618    378.0345
       evtd9 |  -249.5994   310.4674    -0.80   0.423    -865.3383    366.1394
       fire1 |   -1870.54   327.8811    -5.70   0.000    -2520.815   -1220.265
       fire2 |  -1205.479   206.9968    -5.82   0.000    -1616.008   -794.9494
         dt2 |   109.4446   68.19477     1.60   0.112     -25.8037    244.6928
         dt3 |   213.4206   79.46155     2.69   0.008     55.82731    371.0138
         dt4 |   281.6502   78.92674     3.57   0.001     125.1176    438.1828
         dt5 |   113.3163   66.65949     1.70   0.092    -18.88706    245.5197
          m6 |   291.0831   154.0847     1.89   0.062    -14.50758    596.6738
          m7 |   537.7645   182.0391     2.95   0.004     176.7328    898.7961
          m8 |   650.3458    209.358     3.11   0.002     235.1335    1065.558
          m9 |   553.2801   173.3124     3.19   0.002      209.556    897.0043
         m10 |   154.6457   172.9918     0.89   0.373    -188.4426    497.7341
       _cons |   8197.125   127.1094    64.49   0.000     7945.033    8449.216
-------------+----------------------------------------------------------------
         rho |   .4858514
------------------------------------------------------------------------------
Durbin-Watson statistic (original)    1.273889
Durbin-Watson statistic (transformed) 2.092384
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SCE DBP Model

```
      Source |       SS       df       MS              Number of obs =    2016
-------------+------------------------------           F(629,  1386) =   55.97
       Model |  1.3236e+13   629  2.1043e+10           Prob > F      =  0.0000
    Residual |  5.2113e+11  1386   375994452           R-squared     =  0.9621
-------------+------------------------------           Adj R-squared =  0.9449
       Total |  1.3757e+13  2015  6.8274e+09           Root MSE      =   19391

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         kwh |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
      dbp1_1 |    7167.91   19725.66     0.36   0.716    -31527.46    45863.28
      dbp1_2 |   177.0191   19725.66     0.01   0.993    -38518.35    38872.39
      dbp1_3 |   7848.687   19725.66     0.40   0.691    -30846.68    46544.05
      dbp1_4 |   9794.926   19725.66     0.50   0.620    -28900.44    48490.29
      dbp1_5 |    13747.4   19725.66     0.70   0.486    -24947.97    52442.76
      dbp1_6 |   4365.479   19725.66     0.22   0.825    -34329.89    43060.85
      dbp1_7 |   -2777.19   19725.66    -0.14   0.888    -41472.56    35918.18
      dbp1_8 |   5538.781   19725.66     0.28   0.779    -33156.59    44234.15
      dbp1_9 |   551.7148   19725.66     0.03   0.978    -38143.65    39247.08
     dbp1_10 |    3650.76   19725.66     0.19   0.853    -35044.61    42346.13
     dbp1_11 |  -25107.51   19725.66    -1.27   0.203    -63802.87    13587.86
     dbp1_12 |    5438.92   19725.66     0.28   0.783    -33256.45    44134.29
     dbp1_13 |   3441.309   19725.66     0.17   0.862    -35254.06    42136.68
     dbp1_14 |   12116.58   19725.66     0.61   0.539    -26578.78    50811.95
     dbp1_15 |   17793.49   19725.66     0.90   0.367    -20901.88    56488.85
     dbp1_16 |   24606.41   19725.66     1.25   0.212    -14088.96    63301.78
     dbp1_17 |   20971.49   19725.66     1.06   0.288    -17723.87    59666.86
     dbp1_18 |   37457.24   19725.66     1.90   0.058    -1238.131     76152.6
     dbp1_19 |   29230.58   19725.66     1.48   0.139    -9464.784    67925.95
     dbp1_20 |   30038.97   19725.66     1.52   0.128    -8656.393    68734.34
     dbp1_21 |  -20297.66   19725.66    -1.03   0.304    -58993.03     18397.7
     dbp1_22 |   21153.84   19725.66     1.07   0.284    -17541.53     59849.2
     dbp1_23 |  -29689.24   19725.66    -1.51   0.133    -68384.61    9006.122
     dbp1_24 |   2260.168   19725.66     0.11   0.909     -36435.2    40955.53
      dbp2_1 |   18277.56   20216.66     0.90   0.366       -21381    57936.12
      dbp2_2 |   8222.707   20216.66     0.41   0.684    -31435.85    47881.27
      dbp2_3 |   9171.915   20216.66     0.45   0.650    -30486.64    48830.48
      dbp2_4 |   8096.971   20216.66     0.40   0.689    -31561.59    47755.53
      dbp2_5 |    -4041.2   20216.66    -0.20   0.842    -43699.76    35617.36
      dbp2_6 |  -15683.62   20216.66    -0.78   0.438    -55342.18    23974.94
      dbp2_7 |   -14790.8   20216.66    -0.73   0.465    -54449.36    24867.76
      dbp2_8 |   -13953.1   20216.66    -0.69   0.490    -53611.66    25705.46
      dbp2_9 |  -17877.62   20216.66    -0.88   0.377    -57536.18    21780.94
     dbp2_10 |  -3092.894   20216.66    -0.15   0.878    -42751.45    36565.67
     dbp2_11 |  -7077.197   20216.66    -0.35   0.726    -46735.76    32581.36
     dbp2_12 |  -4998.034   20216.66    -0.25   0.805    -44656.59    34660.53
     dbp2_13 |   12269.99   20216.66     0.61   0.544    -27388.57    51928.55
     dbp2_14 |   14481.45   20216.66     0.72   0.474    -25177.11    54140.01
     dbp2_15 |    16073.3   20216.66     0.80   0.427    -23585.26    55731.86
     dbp2_16 |  -10301.61   20216.66    -0.51   0.610    -49960.17    29356.95
     dbp2_17 |   16179.82   20216.66     0.80   0.424    -23478.74    55838.38
     dbp2_18 |   25024.38   20216.66     1.24   0.216    -14634.18    64682.94
     dbp2_19 |   29090.12   20216.66     1.44   0.150    -10568.44    68748.68
     dbp2_20 |      22601   20216.66     1.12   0.264    -17057.56    62259.56
     dbp2_21 |   25616.32   20216.66     1.27   0.205    -14042.24    65274.88
     dbp2_22 |   11746.18   20216.66     0.58   0.561    -27912.38    51404.74
     dbp2_23 |  -22237.46   20216.66    -1.10   0.272    -61896.02     17421.1
     dbp2_24 |  -37112.07   20216.66    -1.84   0.067    -76770.63    2546.495
      dbp3_1 |   10547.23   20101.17     0.52   0.600    -28884.76    49979.23
      dbp3_2 |  -4940.232   20101.17    -0.25   0.806    -44372.23    34491.76
      dbp3_3 |  -8732.048   20101.17    -0.43   0.664    -48164.04    30699.95
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dbp3_4	2753.145	20101.17	0.14	0.891	-36678.85	42185.14
dbp3_5	-11561.8	20101.17	-0.58	0.565	-50993.8	27870.2
dbp3_6	-14484.18	20101.17	-0.72	0.471	-53916.17	24947.82
dbp3_7	-15834.77	20101.17	-0.79	0.431	-55266.77	23597.22
dbp3_8	285.447	20101.17	0.01	0.989	-39146.55	39717.44
dbp3_9	-4215.49	20101.17	-0.21	0.834	-43647.49	35216.51
dbp3_10	13796.16	20101.17	0.69	0.493	-25635.83	53228.16
dbp3_11	3816.521	20101.17	0.19	0.849	-35615.48	43248.52
dbp3_12	-12554.5	20101.17	-0.62	0.532	-51986.5	26877.49
dbp3_13	-20117.03	20101.17	-1.00	0.317	-59549.02	19314.97
dbp3_14	-68408.62	20101.17	-3.40	0.001	-107840.6	-28976.63
dbp3_15	-72298.11	20101.17	-3.60	0.000	-111730.1	-32866.11
dbp3_16	-81950.64	20101.17	-4.08	0.000	-121382.6	-42518.65
dbp3_17	-87170.3	20101.17	-4.34	0.000	-126602.3	-47738.3
dbp3_18	-79827.06	20101.17	-3.97	0.000	-119259.1	-40395.07
dbp3_19	-70249.99	20101.17	-3.49	0.000	-109682	-30817.99
dbp3_20	-56804.18	20101.17	-2.83	0.005	-96236.18	-17372.19
dbp3_21	-56435.46	20101.17	-2.81	0.005	-95867.46	-17003.47
dbp3_22	-47417.64	20101.17	-2.36	0.018	-86849.63	-7985.64
dbp3_23	-62369.69	20101.17	-3.10	0.002	-101801.7	-22937.69
dbp3_24	-85171.53	20101.17	-4.24	0.000	-124603.5	-45739.53
dbp4_1	-77354.02	20149.22	-3.84	0.000	-116880.3	-37827.76
dbp4_2	-67563.65	20149.22	-3.35	0.001	-107089.9	-28037.39
dbp4_3	-56259.43	20149.22	-2.79	0.005	-95785.69	-16733.17
dbp4_4	-42081.1	20149.22	-2.09	0.037	-81607.36	-2554.839
dbp4_5	-39743.29	20149.22	-1.97	0.049	-79269.55	-217.026
dbp4_6	-39166.61	20149.22	-1.94	0.052	-78692.87	359.6542
dbp4_7	-28323.3	20149.22	-1.41	0.160	-67849.56	11202.96
dbp4_8	-17024.79	20149.22	-0.84	0.398	-56551.05	22501.47
dbp4_9	-29147.13	20149.22	-1.45	0.148	-68673.39	10379.13
dbp4_10	-32396.94	20149.22	-1.61	0.108	-71923.2	7129.322
dbp4_11	-37679.15	20149.22	-1.87	0.062	-77205.41	1847.107
dbp4_12	-41312.43	20149.22	-2.05	0.041	-80838.69	-1786.169
dbp4_13	-36565.53	20149.22	-1.81	0.070	-76091.79	2960.735
dbp4_14	-40459.31	20149.22	-2.01	0.045	-79985.57	-933.0471
dbp4_15	-48942.66	20149.22	-2.43	0.015	-88468.92	-9416.402
dbp4_16	-44935.49	20149.22	-2.23	0.026	-84461.75	-5409.224
dbp4_17	-35227.33	20149.22	-1.75	0.081	-74753.59	4298.928
dbp4_18	-25435.36	20149.22	-1.26	0.207	-64961.63	14090.9
dbp4_19	-22634.51	20149.22	-1.12	0.261	-62160.77	16891.75
dbp4_20	-16562.86	20149.22	-0.82	0.411	-56089.12	22963.4
dbp4_21	-15026.52	20149.22	-0.75	0.456	-54552.78	24499.74
dbp4_22	-12190.45	20149.22	-0.61	0.545	-51716.71	27335.81
dbp4_23	-21206.53	20149.22	-1.05	0.293	-60732.79	18319.73
dbp4_24	-26065.93	20149.22	-1.29	0.196	-65592.19	13460.33
dbp5_1	-54508.21	20582.56	-2.65	0.008	-94884.55	-14131.87
dbp5_2	-45254.88	20582.56	-2.20	0.028	-85631.22	-4878.544
dbp5_3	-38028.69	20582.56	-1.85	0.065	-78405.02	2347.653
dbp5_4	-23603.25	20582.56	-1.15	0.252	-63979.59	16773.09
dbp5_5	-33688.82	20582.56	-1.64	0.102	-74065.16	6687.519
dbp5_6	-26986.01	20582.56	-1.31	0.190	-67362.35	13390.33
dbp5_7	-12153.61	20582.56	-0.59	0.555	-52529.95	28222.73
dbp5_8	-13176.78	20582.56	-0.64	0.522	-53553.11	27199.56
dbp5_9	-26231.8	20582.56	-1.27	0.203	-66608.14	14144.54
dbp5_10	-29273.57	20582.56	-1.42	0.155	-69649.9	11102.77
dbp5_11	-21909.76	20582.56	-1.06	0.287	-62286.1	18466.58
dbp5_12	-21479.85	20582.56	-1.04	0.297	-61856.19	18896.48
dbp5_13	-34330.81	20582.56	-1.67	0.096	-74707.15	6045.526
dbp5_14	-32877.79	20582.56	-1.60	0.110	-73254.13	7498.545
dbp5_15	-43782.88	20582.56	-2.13	0.034	-84159.22	-3406.545
dbp5_16	-44511.3	20582.56	-2.16	0.031	-84887.64	-4134.963
dbp5_17	-39310.14	20582.56	-1.91	0.056	-79686.48	1066.194
dbp5_18	-39839.4	20582.56	-1.94	0.053	-80215.74	536.9349

dbp5_19	-37512.56	20582.56	-1.82	0.069	-77888.9	2863.78
dbp5_20	-31353.33	20582.56	-1.52	0.128	-71729.67	9023.004
dbp5_21	-33156.6	20582.56	-1.61	0.107	-73532.94	7219.738
dbp5_22	-40371.3	20582.56	-1.96	0.050	-80747.64	5.035262
dbp5_23	-47515.67	20582.56	-2.31	0.021	-87892	-7139.328
dbp5_24	-41880.93	20582.56	-2.03	0.042	-82257.27	-1504.592
dbp6_1	18252.52	20231.45	0.90	0.367	-21435.05	57940.08
dbp6_2	24727.02	20231.45	1.22	0.222	-14960.54	64414.59
dbp6_3	24794.06	20231.45	1.23	0.221	-14893.51	64481.62
dbp6_4	28860.84	20231.45	1.43	0.154	-10826.73	68548.4
dbp6_5	21001.28	20231.45	1.04	0.299	-18686.28	60688.85
dbp6_6	-9198.019	20231.45	-0.45	0.649	-48885.58	30489.55
dbp6_7	33624.76	20231.45	1.66	0.097	-6062.805	73312.32
dbp6_8	33873.62	20231.45	1.67	0.094	-5813.945	73561.18
dbp6_9	3303.315	20231.45	0.16	0.870	-36384.25	42990.88
dbp6_10	-20294.69	20231.45	-1.00	0.316	-59982.25	19392.88
dbp6_11	3235.823	20231.45	0.16	0.873	-36451.74	42923.39
dbp6_12	19146.11	20231.45	0.95	0.344	-20541.45	58833.68
dbp6_13	6440.864	20231.45	0.32	0.750	-33246.7	46128.43
dbp6_14	18020.13	20231.45	0.89	0.373	-21667.43	57707.7
dbp6_15	-17466.74	20231.45	-0.86	0.388	-57154.31	22220.82
dbp6_16	-27434.79	20231.45	-1.36	0.175	-67122.36	12252.77
dbp6_17	-19203.86	20231.45	-0.95	0.343	-58891.43	20483.7
dbp6_18	4509.317	20231.45	0.22	0.824	-35178.25	44196.88
dbp6_19	9408.549	20231.45	0.47	0.642	-30279.02	49096.11
dbp6_20	12666.65	20231.45	0.63	0.531	-27020.92	52354.21
dbp6_21	24385.4	20231.45	1.21	0.228	-15302.17	64072.96
dbp6_22	40256.08	20231.45	1.99	0.047	568.5106	79943.64
dbp6_23	29907.32	20231.45	1.48	0.140	-9780.241	69594.89
dbp6_24	23171.66	20231.45	1.15	0.252	-16515.91	62859.22
dbp7_1	28324.78	19708.99	1.44	0.151	-10337.89	66987.44
dbp7_2	27823.52	19708.99	1.41	0.158	-10839.15	66486.19
dbp7_3	15327.04	19708.99	0.78	0.437	-23335.62	53989.71
dbp7_4	26413.22	19708.99	1.34	0.180	-12249.45	65075.88
dbp7_5	13560.31	19708.99	0.69	0.492	-25102.35	52222.98
dbp7_6	17914.8	19708.99	0.91	0.364	-20747.86	56577.47
dbp7_7	4443.522	19708.99	0.23	0.822	-34219.14	43106.19
dbp7_8	3597.567	19708.99	0.18	0.855	-35065.1	42260.23
dbp7_9	3728.866	19708.99	0.19	0.850	-34933.8	42391.53
dbp7_10	-1424.819	19708.99	-0.07	0.942	-40087.49	37237.85
dbp7_11	-6100.45	19708.99	-0.31	0.757	-44763.12	32562.22
dbp7_12	-4827.418	19708.99	-0.24	0.807	-43490.08	33835.25
dbp7_13	-1010.503	19708.99	-0.05	0.959	-39673.17	37652.16
dbp7_14	-485.0178	19708.99	-0.02	0.980	-39147.68	38177.65
dbp7_15	4698.162	19708.99	0.24	0.812	-33964.5	43360.83
dbp7_16	4555.446	19708.99	0.23	0.817	-34107.22	43218.11
dbp7_17	-8845.547	19708.99	-0.45	0.654	-47508.21	29817.12
dbp7_18	-941.4006	19708.99	-0.05	0.962	-39604.07	37721.27
dbp7_19	-5798.475	19708.99	-0.29	0.769	-44461.14	32864.19
dbp7_20	5799.372	19708.99	0.29	0.769	-32863.29	44462.04
dbp7_21	18235	19708.99	0.93	0.355	-20427.67	56897.66
dbp7_22	9538.238	19708.99	0.48	0.628	-29124.43	48200.9
dbp7_23	-7905.057	19708.99	-0.40	0.688	-46567.72	30757.61
dbp7_24	5122.041	19708.99	0.26	0.795	-33540.63	43784.71
dbp8_1	22101.52	20262.62	1.09	0.276	-17647.2	61850.24
dbp8_2	28744.54	20262.62	1.42	0.156	-11004.18	68493.25
dbp8_3	27907.05	20262.62	1.38	0.169	-11841.66	67655.77
dbp8_4	40231.66	20262.62	1.99	0.047	482.9446	79980.38
dbp8_5	42961.27	20262.62	2.12	0.034	3212.55	82709.99
dbp8_6	31966.21	20262.62	1.58	0.115	-7782.507	71714.93
dbp8_7	-6837.129	20262.62	-0.34	0.736	-46585.85	32911.59
dbp8_8	49469.29	20262.62	2.44	0.015	9720.568	89218
dbp8_9	2794.238	20262.62	0.14	0.890	-36954.48	42542.96

dbp8_10	-2974.317	20262.62	-0.15	0.883	-42723.04	36774.4
dbp8_11	19072.05	20262.62	0.94	0.347	-20676.67	58820.77
dbp8_12	-28815.3	20262.62	-1.42	0.155	-68564.02	10933.42
dbp8_13	-31526.25	20262.62	-1.56	0.120	-71274.97	8222.465
dbp8_14	-38208.19	20262.62	-1.89	0.060	-77956.91	1540.531
dbp8_15	-34279.57	20262.62	-1.69	0.091	-74028.29	5469.147
dbp8_16	-29092.12	20262.62	-1.44	0.151	-68840.84	10656.6
dbp8_17	-27487.71	20262.62	-1.36	0.175	-67236.43	12261.01
dbp8_18	-26301.06	20262.62	-1.30	0.195	-66049.77	13447.66
dbp8_19	-26537.2	20262.62	-1.31	0.191	-66285.92	13211.52
dbp8_20	-21134.18	20262.62	-1.04	0.297	-60882.9	18614.54
dbp8_21	-16140.4	20262.62	-0.80	0.426	-55889.12	23608.32
dbp8_22	-12775.73	20262.62	-0.63	0.528	-52524.44	26972.99
dbp8_23	-14672.76	20262.62	-0.72	0.469	-54421.48	25075.96
dbp8_24	20401.65	20262.62	1.01	0.314	-19347.07	60150.37
dbp9_1	-40995.94	20457.69	-2.00	0.045	-81127.32	-864.5547
dbp9_2	-5866.049	20457.69	-0.29	0.774	-45997.43	34265.33
dbp9_3	1744.126	20457.69	0.09	0.932	-38387.26	41875.51
dbp9_4	21783.49	20457.69	1.06	0.287	-18347.9	61914.87
dbp9_5	30589.04	20457.69	1.50	0.135	-9542.338	70720.43
dbp9_6	33153.91	20457.69	1.62	0.105	-6977.474	73285.29
dbp9_7	44373.97	20457.69	2.17	0.030	4242.592	84505.36
dbp9_8	42650.72	20457.69	2.08	0.037	2519.338	82782.1
dbp9_9	27953.75	20457.69	1.37	0.172	-12177.64	68085.13
dbp9_10	16579.61	20457.69	0.81	0.418	-23551.77	56710.99
dbp9_11	6638.069	20457.69	0.32	0.746	-33493.31	46769.45
dbp9_12	-1511.645	20457.69	-0.07	0.941	-41643.03	38619.74
dbp9_13	-20578.31	20457.69	-1.01	0.315	-60709.69	19553.07
dbp9_14	-7315.965	20457.69	-0.36	0.721	-47447.35	32815.42
dbp9_15	-19697	20457.69	-0.96	0.336	-59828.38	20434.38
dbp9_16	7254.391	20457.69	0.35	0.723	-32876.99	47385.77
dbp9_17	7507.92	20457.69	0.37	0.714	-32623.46	47639.3
dbp9_18	9538.298	20457.69	0.47	0.641	-30593.08	49669.68
dbp9_19	2734.778	20457.69	0.13	0.894	-37396.6	42866.16
dbp9_20	4438.574	20457.69	0.22	0.828	-35692.81	44569.96
dbp9_21	-20684.11	20457.69	-1.01	0.312	-60815.49	19447.27
dbp9_22	22536.44	20457.69	1.10	0.271	-17594.94	62667.82
dbp9_23	12877.85	20457.69	0.63	0.529	-27253.53	53009.23
dbp9_24	-36745.72	20457.69	-1.80	0.073	-76877.1	3385.661
dbp10_1	-10547.11	20845.15	-0.51	0.613	-51438.56	30344.34
dbp10_2	-16762.11	20845.15	-0.80	0.421	-57653.55	24129.34
dbp10_3	-5236.373	20845.15	-0.25	0.802	-46127.82	35655.07
dbp10_4	2180.413	20845.15	0.10	0.917	-38711.03	43071.86
dbp10_5	-11862.38	20845.15	-0.57	0.569	-52753.83	29029.06
dbp10_6	-4799.448	20845.15	-0.23	0.818	-45690.9	36092
dbp10_7	11698.09	20845.15	0.56	0.575	-29193.36	52589.54
dbp10_8	5852.451	20845.15	0.28	0.779	-35039	46743.9
dbp10_9	1522.444	20845.15	0.07	0.942	-39369	42413.89
dbp10_10	-11647.7	20845.15	-0.56	0.576	-52539.15	29243.74
dbp10_11	7876.835	20845.15	0.38	0.706	-33014.61	48768.28
dbp10_12	-12306.82	20845.15	-0.59	0.555	-53198.27	28584.63
dbp10_13	-3878.683	20845.15	-0.19	0.852	-44770.13	37012.76
dbp10_14	-15526.43	20845.15	-0.74	0.456	-56417.87	25365.02
dbp10_15	6102.708	20845.15	0.29	0.770	-34788.74	46994.16
dbp10_16	-12978.96	20845.15	-0.62	0.534	-53870.41	27912.49
dbp10_17	9048.29	20845.15	0.43	0.664	-31843.16	49939.74
dbp10_18	4824.243	20845.15	0.23	0.817	-36067.2	45715.69
dbp10_19	-17871.03	20845.15	-0.86	0.391	-58762.48	23020.42
dbp10_20	-28610.5	20845.15	-1.37	0.170	-69501.95	12280.94
dbp10_21	17595.16	20845.15	0.84	0.399	-23296.29	58486.61
dbp10_22	11511.44	20845.15	0.55	0.581	-29380.01	52402.89
dbp10_23	-23422.25	20845.15	-1.12	0.261	-64313.7	17469.2
dbp10_24	-24030.9	20845.15	-1.15	0.249	-64922.34	16860.55

dbp11_1	-24677.68	20372.85	-1.21	0.226	-64642.64	15287.29
dbp11_2	-25899.57	20372.85	-1.27	0.204	-65864.54	14065.39
dbp11_3	-22105.8	20372.85	-1.09	0.278	-62070.76	17859.16
dbp11_4	-18637.27	20372.85	-0.91	0.360	-58602.23	21327.69
dbp11_5	-15060.54	20372.85	-0.74	0.460	-55025.5	24904.42
dbp11_6	-11349.83	20372.85	-0.56	0.578	-51314.79	28615.13
dbp11_7	-9378.602	20372.85	-0.46	0.645	-49343.56	30586.36
dbp11_8	-17021.74	20372.85	-0.84	0.404	-56986.71	22943.22
dbp11_9	-19582.49	20372.85	-0.96	0.337	-59547.45	20382.48
dbp11_10	-25048.54	20372.85	-1.23	0.219	-65013.5	14916.43
dbp11_11	-22039.88	20372.85	-1.08	0.280	-62004.84	17925.08
dbp11_12	-9682.771	20372.85	-0.48	0.635	-49647.73	30282.19
dbp11_13	-8231.281	20372.85	-0.40	0.686	-48196.24	31733.68
dbp11_14	-2559.782	20372.85	-0.13	0.900	-42524.74	37405.18
dbp11_15	82.23311	20372.85	0.00	0.997	-39882.73	40047.19
dbp11_16	-5143.671	20372.85	-0.25	0.801	-45108.63	34821.29
dbp11_17	-21917.65	20372.85	-1.08	0.282	-61882.61	18047.31
dbp11_18	-9715.046	20372.85	-0.48	0.634	-49680.01	30249.91
dbp11_19	-11244.88	20372.85	-0.55	0.581	-51209.84	28720.08
dbp11_20	-338.0222	20372.85	-0.02	0.987	-40302.98	39626.94
dbp11_21	7849.043	20372.85	0.39	0.700	-32115.92	47814
dbp11_22	9160.162	20372.85	0.45	0.653	-30804.8	49125.12
dbp11_23	32309.42	20372.85	1.59	0.113	-7655.543	72274.38
dbp11_24	27004.97	20372.85	1.33	0.185	-12959.99	66969.93
dbp12_1	8430.102	20334.28	0.41	0.679	-31459.19	48319.39
dbp12_2	5361.22	20334.28	0.26	0.792	-34528.07	45250.51
dbp12_3	12507.93	20334.28	0.62	0.539	-27381.36	52397.22
dbp12_4	20348.13	20334.28	1.00	0.317	-19541.16	60237.42
dbp12_5	20713.57	20334.28	1.02	0.309	-19175.72	60602.86
dbp12_6	12770.49	20334.28	0.63	0.530	-27118.8	52659.77
dbp12_7	-9649.074	20334.28	-0.47	0.635	-49538.36	30240.22
dbp12_8	-36377.77	20334.28	-1.79	0.074	-76267.06	3511.522
dbp12_9	-16556.74	20334.28	-0.81	0.416	-56446.03	23332.55
dbp12_10	-666.1608	20334.28	-0.03	0.974	-40555.45	39223.13
dbp12_11	6374.026	20334.28	0.31	0.754	-33515.26	46263.32
dbp12_12	-26128.83	20334.28	-1.28	0.199	-66018.12	13760.46
dbp12_13	-60564.83	20334.28	-2.98	0.003	-100454.1	-20675.54
dbp12_14	-50805.88	20334.28	-2.50	0.013	-90695.17	-10916.59
dbp12_15	-40989.19	20334.28	-2.02	0.044	-80878.48	-1099.9
dbp12_16	-45543.99	20334.28	-2.24	0.025	-85433.28	-5654.7
dbp12_17	-47265.69	20334.28	-2.32	0.020	-87154.98	-7376.398
dbp12_18	-46981.78	20334.28	-2.31	0.021	-86871.07	-7092.492
dbp12_19	-48302.81	20334.28	-2.38	0.018	-88192.1	-8413.519
dbp12_20	-46231.5	20334.28	-2.27	0.023	-86120.78	-6342.205
dbp12_21	-27235.14	20334.28	-1.34	0.181	-67124.43	12654.15
dbp12_22	-19284.74	20334.28	-0.95	0.343	-59174.03	20604.55
dbp12_23	-11997.95	20334.28	-0.59	0.555	-51887.23	27891.34
dbp12_24	22737.38	20334.28	1.12	0.264	-17151.91	62626.67
dbp13_1	20040.38	20371.73	0.98	0.325	-19922.37	60003.13
dbp13_2	18793.97	20371.73	0.92	0.356	-21168.78	58756.72
dbp13_3	11440.32	20371.73	0.56	0.574	-28522.42	51403.07
dbp13_4	21105.54	20371.73	1.04	0.300	-18857.21	61068.29
dbp13_5	15014.08	20371.73	0.74	0.461	-24948.66	54976.83
dbp13_6	11294.71	20371.73	0.55	0.579	-28668.04	51257.46
dbp13_7	18005.02	20371.73	0.88	0.377	-21957.73	57967.76
dbp13_8	13421.71	20371.73	0.66	0.510	-26541.04	53384.46
dbp13_9	2267.327	20371.73	0.11	0.911	-37695.42	42230.08
dbp13_10	-4861.06	20371.73	-0.24	0.811	-44823.81	35101.69
dbp13_11	-14613.39	20371.73	-0.72	0.473	-54576.14	25349.36
dbp13_12	-27591.26	20371.73	-1.35	0.176	-67554.01	12371.49
dbp13_13	-62156.88	20371.73	-3.05	0.002	-102119.6	-22194.13
dbp13_14	-54554.32	20371.73	-2.68	0.007	-94517.07	-14591.57
dbp13_15	-46094.15	20371.73	-2.26	0.024	-86056.9	-6131.4

dbp13_16	-49783.89	20371.73	-2.44	0.015	-89746.64	-9821.14
dbp13_17	-50997.29	20371.73	-2.50	0.012	-90960.04	-11034.54
dbp13_18	-45171.71	20371.73	-2.22	0.027	-85134.46	-5208.962
dbp13_19	-50990.45	20371.73	-2.50	0.012	-90953.2	-11027.71
dbp13_20	-41957.08	20371.73	-2.06	0.040	-81919.83	-1994.333
dbp13_21	-27953.85	20371.73	-1.37	0.170	-67916.6	12008.9
dbp13_22	-5664.023	20371.73	-0.28	0.781	-45626.77	34298.73
dbp13_23	7401.867	20371.73	0.36	0.716	-32560.88	47364.62
dbp13_24	-224.9177	20371.73	-0.01	0.991	-40187.67	39737.83
dbp14_1	-715.7136	20881.37	-0.03	0.973	-41678.21	40246.78
dbp14_2	-643.8725	20881.37	-0.03	0.975	-41606.37	40318.62
dbp14_3	-4766.585	20881.37	-0.23	0.819	-45729.08	36195.91
dbp14_4	10703.49	20881.37	0.51	0.608	-30259.01	51665.98
dbp14_5	8782.888	20881.37	0.42	0.674	-32179.61	49745.39
dbp14_6	6347.009	20881.37	0.30	0.761	-34615.49	47309.51
dbp14_7	15232.75	20881.37	0.73	0.466	-25729.75	56195.25
dbp14_8	8496.98	20881.37	0.41	0.684	-32465.52	49459.48
dbp14_9	9250.495	20881.37	0.44	0.658	-31712	50212.99
dbp14_10	-13995.36	20881.37	-0.67	0.503	-54957.86	26967.13
dbp14_11	1925.982	20881.37	0.09	0.927	-39036.52	42888.48
dbp14_12	17309.53	20881.37	0.83	0.407	-23652.96	58272.03
dbp14_13	4309.03	20881.37	0.21	0.837	-36653.47	45271.53
dbp14_14	-17428.4	20881.37	-0.83	0.404	-58390.9	23534.1
dbp14_15	-51217.92	20881.37	-2.45	0.014	-92180.42	-10255.42
dbp14_16	-65903.77	20881.37	-3.16	0.002	-106866.3	-24941.27
dbp14_17	-66887.95	20881.37	-3.20	0.001	-107850.4	-25925.45
dbp14_18	-59152.09	20881.37	-2.83	0.005	-100114.6	-18189.59
dbp14_19	-62483.35	20881.37	-2.99	0.003	-103445.9	-21520.86
dbp14_20	-48099.67	20881.37	-2.30	0.021	-89062.17	-7137.175
dbp14_21	-44898.9	20881.37	-2.15	0.032	-85861.4	-3936.403
dbp14_22	-34422.54	20881.37	-1.65	0.099	-75385.03	6539.96
dbp14_23	-31142.32	20881.37	-1.49	0.136	-72104.82	9820.173
dbp14_24	-30909.46	20881.37	-1.48	0.139	-71871.96	10053.04
dbp15_1	3239.935	20666.42	0.16	0.875	-37300.91	43780.78
dbp15_2	-2146.839	20666.42	-0.10	0.917	-42687.68	38394.01
dbp15_3	3374.826	20666.42	0.16	0.870	-37166.02	43915.67
dbp15_4	5035.45	20666.42	0.24	0.808	-35505.39	45576.29
dbp15_5	4520.241	20666.42	0.22	0.827	-36020.6	45061.09
dbp15_6	9.321431	20666.42	0.00	1.000	-40531.52	40550.17
dbp15_7	-658.0002	20666.42	-0.03	0.975	-41198.84	39882.84
dbp15_8	12005.95	20666.42	0.58	0.561	-28534.89	52546.8
dbp15_9	7865.507	20666.42	0.38	0.704	-32675.34	48406.35
dbp15_10	-6350.56	20666.42	-0.31	0.759	-46891.4	34190.28
dbp15_11	-716.3344	20666.42	-0.03	0.972	-41257.18	39824.51
dbp15_12	-6942.374	20666.42	-0.34	0.737	-47483.22	33598.47
dbp15_13	-33973.68	20666.42	-1.64	0.100	-74514.53	6567.163
dbp15_14	-28056.46	20666.42	-1.36	0.175	-68597.31	12484.38
dbp15_15	-28343.86	20666.42	-1.37	0.170	-68884.71	12196.98
dbp15_16	-27007.99	20666.42	-1.31	0.191	-67548.84	13532.85
dbp15_17	-28374.3	20666.42	-1.37	0.170	-68915.15	12166.54
dbp15_18	-31400.27	20666.42	-1.52	0.129	-71941.12	9140.572
dbp15_19	-39993.86	20666.42	-1.94	0.053	-80534.7	546.9888
dbp15_20	-30927.86	20666.42	-1.50	0.135	-71468.7	9612.989
dbp15_21	-27955.35	20666.42	-1.35	0.176	-68496.19	12585.49
dbp15_22	-26280.13	20666.42	-1.27	0.204	-66820.97	14260.72
dbp15_23	-40066.89	20666.42	-1.94	0.053	-80607.74	473.9537
dbp15_24	9616.019	20666.42	0.47	0.642	-30924.83	50156.86
dbp16_1	-10036.51	20121.76	-0.50	0.618	-49508.91	29435.89
dbp16_2	193.2879	20121.76	0.01	0.992	-39279.11	39665.69
dbp16_3	4028.7	20121.76	0.20	0.841	-35443.7	43501.1
dbp16_4	5528.565	20121.76	0.27	0.784	-33943.83	45000.96
dbp16_5	-3333.775	20121.76	-0.17	0.868	-42806.17	36138.62
dbp16_6	-1557.027	20121.76	-0.08	0.938	-41029.43	37915.37

dbp16_7	7739.254	20121.76	0.38	0.701	-31733.15	47211.65
dbp16_8	7097.858	20121.76	0.35	0.724	-32374.54	46570.26
dbp16_9	9974.239	20121.76	0.50	0.620	-29498.16	49446.64
dbp16_10	-14099.03	20121.76	-0.70	0.484	-53571.43	25373.37
dbp16_11	-1971.879	20121.76	-0.10	0.922	-41444.28	37500.52
dbp16_12	-35391.86	20121.76	-1.76	0.079	-74864.26	4080.54
dbp16_13	-37822.79	20121.76	-1.88	0.060	-77295.19	1649.607
dbp16_14	-32832.12	20121.76	-1.63	0.103	-72304.52	6640.283
dbp16_15	-34132.55	20121.76	-1.70	0.090	-73604.94	5339.854
dbp16_16	-24331.39	20121.76	-1.21	0.227	-63803.79	15141.01
dbp16_17	-28205.62	20121.76	-1.40	0.161	-67678.02	11266.78
dbp16_18	-21929.54	20121.76	-1.09	0.276	-61401.94	17542.85
dbp16_19	-32688.01	20121.76	-1.62	0.104	-72160.41	6784.393
dbp16_20	-25340.01	20121.76	-1.26	0.208	-64812.41	14132.39
dbp16_21	-25375.37	20121.76	-1.26	0.207	-64847.77	14097.03
dbp16_22	-6531.316	20121.76	-0.32	0.746	-46003.72	32941.08
dbp16_23	-7735.344	20121.76	-0.38	0.701	-47207.74	31737.06
dbp16_24	-19283.82	20121.76	-0.96	0.338	-58756.22	20188.58
dbp17_1	12607.73	20151.43	0.63	0.532	-26922.87	52138.32
dbp17_2	14987.4	20151.43	0.74	0.457	-24543.2	54518
dbp17_3	14637.79	20151.43	0.73	0.468	-24892.81	54168.39
dbp17_4	19093.5	20151.43	0.95	0.344	-20437.1	58624.1
dbp17_5	5220.414	20151.43	0.26	0.796	-34310.18	44751.01
dbp17_6	-17751.48	20151.43	-0.88	0.379	-57282.08	21779.11
dbp17_7	33845.77	20151.43	1.68	0.093	-5684.83	73376.37
dbp17_8	-14137.9	20151.43	-0.70	0.483	-53668.5	25392.69
dbp17_9	-26268.89	20151.43	-1.30	0.193	-65799.49	13261.71
dbp17_10	-26039.87	20151.43	-1.29	0.197	-65570.47	13490.73
dbp17_11	-17514.78	20151.43	-0.87	0.385	-57045.38	22015.82
dbp17_12	-23746.35	20151.43	-1.18	0.239	-63276.95	15784.25
dbp17_13	-19232.64	20151.43	-0.95	0.340	-58763.24	20297.96
dbp17_14	-14233.79	20151.43	-0.71	0.480	-53764.39	25296.81
dbp17_15	-8885.685	20151.43	-0.44	0.659	-48416.28	30644.91
dbp17_16	-10200.8	20151.43	-0.51	0.613	-49731.4	29329.8
dbp17_17	-13126.12	20151.43	-0.65	0.515	-52656.72	26404.48
dbp17_18	-10432.63	20151.43	-0.52	0.605	-49963.23	29097.97
dbp17_19	-15375.14	20151.43	-0.76	0.446	-54905.74	24155.45
dbp17_20	7340.543	20151.43	0.36	0.716	-32190.06	46871.14
dbp17_21	-414.1624	20151.43	-0.02	0.984	-39944.76	39116.44
dbp17_22	-2027.224	20151.43	-0.10	0.920	-41557.82	37503.37
dbp17_23	-20857.34	20151.43	-1.04	0.301	-60387.94	18673.26
dbp17_24	-32049.63	20151.43	-1.59	0.112	-71580.23	7480.973
dbp18_1	-21765.73	20504.2	-1.06	0.289	-61988.34	18456.88
dbp18_2	-19124.18	20504.2	-0.93	0.351	-59346.79	21098.43
dbp18_3	-16931.81	20504.2	-0.83	0.409	-57154.42	23290.8
dbp18_4	-12931.35	20504.2	-0.63	0.528	-53153.96	27291.27
dbp18_5	-22193.52	20504.2	-1.08	0.279	-62416.13	18029.09
dbp18_6	-16895.79	20504.2	-0.82	0.410	-57118.4	23326.82
dbp18_7	-4115.153	20504.2	-0.20	0.841	-44337.76	36107.46
dbp18_8	-1120.067	20504.2	-0.05	0.956	-41342.68	39102.54
dbp18_9	-7033.482	20504.2	-0.34	0.732	-47256.09	33189.13
dbp18_10	-18534.97	20504.2	-0.90	0.366	-58757.58	21687.64
dbp18_11	-9042.365	20504.2	-0.44	0.659	-49264.98	31180.25
dbp18_12	2102.542	20504.2	0.10	0.918	-38120.07	42325.15
dbp18_13	-8677.513	20504.2	-0.42	0.672	-48900.12	31545.1
dbp18_14	-10561.89	20504.2	-0.52	0.607	-50784.5	29660.72
dbp18_15	-11404.68	20504.2	-0.56	0.578	-51627.29	28817.94
dbp18_16	-31873.97	20504.2	-1.55	0.120	-72096.58	8348.646
dbp18_17	-52335.03	20504.2	-2.55	0.011	-92557.64	-12112.42
dbp18_18	-49943.61	20504.2	-2.44	0.015	-90166.22	-9721.001
dbp18_19	-49014.09	20504.2	-2.39	0.017	-89236.7	-8791.475
dbp18_20	-22954.21	20504.2	-1.12	0.263	-63176.82	17268.4
dbp18_21	-17375.21	20504.2	-0.85	0.397	-57597.82	22847.4

dbp18_22	-8253.797	20504.2	-0.40	0.687	-48476.41	31968.81
dbp18_23	-22088.21	20504.2	-1.08	0.282	-62310.83	18134.4
dbp18_24	-34148.56	20504.2	-1.67	0.096	-74371.17	6074.056
dbp19_1	-49018.16	20888.96	-2.35	0.019	-89995.55	-8040.766
dbp19_2	3325.393	20888.96	0.16	0.874	-37652	44302.78
dbp19_3	82.44145	20888.96	0.00	0.997	-40894.95	41059.83
dbp19_4	5730.277	20888.96	0.27	0.784	-35247.11	46707.67
dbp19_5	-4342.243	20888.96	-0.21	0.835	-45319.63	36635.15
dbp19_6	8620.365	20888.96	0.41	0.680	-32357.03	49597.75
dbp19_7	23209.17	20888.96	1.11	0.267	-17768.22	64186.56
dbp19_8	21802.14	20888.96	1.04	0.297	-19175.25	62779.53
dbp19_9	25147.09	20888.96	1.20	0.229	-15830.3	66124.48
dbp19_10	10636.54	20888.96	0.51	0.611	-30340.85	51613.93
dbp19_11	12372.98	20888.96	0.59	0.554	-28604.42	53350.37
dbp19_12	-32899.15	20888.96	-1.57	0.115	-73876.54	8078.242
dbp19_13	-39650.62	20888.96	-1.90	0.058	-80628.01	1326.772
dbp19_14	-40293.35	20888.96	-1.93	0.054	-81270.74	684.0428
dbp19_15	-44590.23	20888.96	-2.13	0.033	-85567.63	-3612.844
dbp19_16	-59184.52	20888.96	-2.83	0.005	-100161.9	-18207.13
dbp19_17	-61063.06	20888.96	-2.92	0.004	-102040.4	-20085.67
dbp19_18	-54563.42	20888.96	-2.61	0.009	-95540.81	-13586.03
dbp19_19	-67365.86	20888.96	-3.22	0.001	-108343.2	-26388.47
dbp19_20	-52495.47	20888.96	-2.51	0.012	-93472.86	-11518.08
dbp19_21	-55929.04	20888.96	-2.68	0.008	-96906.43	-14951.65
dbp19_22	-34318.85	20888.96	-1.64	0.101	-75296.24	6658.543
dbp19_23	-9757.927	20888.96	-0.47	0.640	-50735.32	31219.46
dbp19_24	-19248.69	20888.96	-0.92	0.357	-60226.08	21728.7
dbp20_1	-15173.85	21795.87	-0.70	0.486	-57930.31	27582.6
dbp20_2	-12134.86	21795.87	-0.56	0.578	-54891.31	30621.59
dbp20_3	-18505.55	21795.87	-0.85	0.396	-61262.01	24250.9
dbp20_4	-5336.856	21795.87	-0.24	0.807	-48093.31	37419.6
dbp20_5	-9702.68	21795.87	-0.45	0.656	-52459.13	33053.77
dbp20_6	-1376.95	21795.87	-0.06	0.950	-44133.4	41379.5
dbp20_7	15147.38	21795.87	0.69	0.487	-27609.07	57903.83
dbp20_8	12613.44	21795.87	0.58	0.563	-30143.01	55369.89
dbp20_9	-13451.25	21795.87	-0.62	0.537	-56207.7	29305.2
dbp20_10	-2619.604	21795.87	-0.12	0.904	-45376.06	40136.85
dbp20_11	9277.245	21795.87	0.43	0.670	-33479.21	52033.7
dbp20_12	-5480.053	21795.87	-0.25	0.802	-48236.5	37276.4
dbp20_13	-46310.96	21795.87	-2.12	0.034	-89067.42	-3554.511
dbp20_14	-43331.72	21795.87	-1.99	0.047	-86088.17	-575.2706
dbp20_15	-39870.76	21795.87	-1.83	0.068	-82627.21	2885.69
dbp20_16	-67059.1	21795.87	-3.08	0.002	-109815.5	-24302.64
dbp20_17	-96849.33	21795.87	-4.44	0.000	-139605.8	-54092.87
dbp20_18	-82536.57	21795.87	-3.79	0.000	-125293	-39780.12
dbp20_19	-83907.78	21795.87	-3.85	0.000	-126664.2	-41151.33
dbp20_20	-84172.58	21795.87	-3.86	0.000	-126929	-41416.13
dbp20_21	-87163.37	21795.87	-4.00	0.000	-129919.8	-44406.92
dbp20_22	-84371.16	21795.87	-3.87	0.000	-127127.6	-41614.7
dbp20_23	-107956.2	21795.87	-4.95	0.000	-150712.7	-65199.79
dbp20_24	-92258.89	21795.87	-4.23	0.000	-135015.3	-49502.44
dbp21_1	-110308.5	20538.65	-5.37	0.000	-150598.7	-70018.31
dbp21_2	-83783.26	20538.65	-4.08	0.000	-124073.5	-43493.07
dbp21_3	-73431.74	20538.65	-3.58	0.000	-113721.9	-33141.54
dbp21_4	-52931.74	20538.65	-2.58	0.010	-93221.93	-12641.54
dbp21_5	-41521.44	20538.65	-2.02	0.043	-81811.63	-1231.243
dbp21_6	-22169.87	20538.65	-1.08	0.281	-62460.06	18120.32
dbp21_7	8210.155	20538.65	0.40	0.689	-32080.04	48500.35
dbp21_8	18694.91	20538.65	0.91	0.363	-21595.28	58985.1
dbp21_9	39558.94	20538.65	1.93	0.054	-731.2543	79849.13
dbp21_10	37353.38	20538.65	1.82	0.069	-2936.815	77643.57
dbp21_11	34883.15	20538.65	1.70	0.090	-5407.042	75173.34
dbp21_12	21810.9	20538.65	1.06	0.288	-18479.29	62101.09

dbp21_13	4757.499	20538.65	0.23	0.817	-35532.69	45047.69
dbp21_14	15121.87	20538.65	0.74	0.462	-25168.32	55412.06
dbp21_15	6935.591	20538.65	0.34	0.736	-33354.6	47225.78
dbp21_16	-777.1805	20538.65	-0.04	0.970	-41067.37	39513.01
dbp21_17	-7643.271	20538.65	-0.37	0.710	-47933.46	32646.92
dbp21_18	-5120.833	20538.65	-0.25	0.803	-45411.02	35169.36
dbp21_19	-10176.4	20538.65	-0.50	0.620	-50466.59	30113.8
dbp21_20	-3259.406	20538.65	-0.16	0.874	-43549.6	37030.79
dbp21_21	-15144.4	20538.65	-0.74	0.461	-55434.59	25145.79
dbp21_22	-11889.79	20538.65	-0.58	0.563	-52179.99	28400.4
dbp21_23	-31094.89	20538.65	-1.51	0.130	-71385.08	9195.306
dbp21_24	-44062.49	20538.65	-2.15	0.032	-84352.68	-3772.3
dbp22_1	10855.16	19725.99	0.55	0.582	-27840.85	49551.17
dbp22_2	13389.15	19725.99	0.68	0.497	-25306.86	52085.17
dbp22_3	19365.62	19725.99	0.98	0.326	-19330.4	58061.63
dbp22_4	26489.49	19725.99	1.34	0.180	-12206.52	65185.51
dbp22_5	24727.37	19725.99	1.25	0.210	-13968.64	63423.38
dbp22_6	27557.51	19725.99	1.40	0.163	-11138.51	66253.52
dbp22_7	-7701.252	19725.99	-0.39	0.696	-46397.26	30994.76
dbp22_8	25644.06	19725.99	1.30	0.194	-13051.95	64340.08
dbp22_9	31758.43	19725.99	1.61	0.108	-6937.583	70454.44
dbp22_10	34625.05	19725.99	1.76	0.079	-4070.961	73321.07
dbp22_11	28869.96	19725.99	1.46	0.144	-9826.057	67565.97
dbp22_12	-4827.775	19725.99	-0.24	0.807	-43523.79	33868.24
dbp22_13	-29392.71	19725.99	-1.49	0.136	-68088.73	9303.301
dbp22_14	-26798.42	19725.99	-1.36	0.175	-65494.43	11897.6
dbp22_15	-20854.31	19725.99	-1.06	0.291	-59550.33	17841.7
dbp22_16	-26228.29	19725.99	-1.33	0.184	-64924.3	12467.72
dbp22_17	-29486.84	19725.99	-1.49	0.135	-68182.85	9209.175
dbp22_18	-26649.11	19725.99	-1.35	0.177	-65345.12	12046.91
dbp22_19	-32145.06	19725.99	-1.63	0.103	-70841.08	6550.95
dbp22_20	-11029.72	19725.99	-0.56	0.576	-49725.74	27666.29
dbp22_21	-12489.44	19725.99	-0.63	0.527	-51185.45	26206.58
dbp22_22	673.6516	19725.99	0.03	0.973	-38022.36	39369.67
dbp22_23	16377.6	19725.99	0.83	0.407	-22318.41	55073.61
dbp22_24	1870.085	19725.99	0.09	0.924	-36825.93	40566.1
morn_load	.5682316	.023269	24.42	0.000	.5225853	.6138779
wcdd_h1	2936.592	690.5461	4.25	0.000	1581.964	4291.22
wcdd_h2	2804.718	690.5461	4.06	0.000	1450.09	4159.347
wcdd_h3	2768.547	690.5461	4.01	0.000	1413.918	4123.175
wcdd_h4	1964.768	690.5461	2.85	0.005	610.1398	3319.397
wcdd_h5	2474.381	690.5461	3.58	0.000	1119.753	3829.01
wcdd_h6	2237.364	690.5461	3.24	0.001	882.7355	3591.992
wcdd_h7	1719.087	690.5461	2.49	0.013	364.4586	3073.715
wcdd_h8	2339.553	690.5461	3.39	0.001	984.9248	3694.182
wcdd_h9	3411.13	690.5461	4.94	0.000	2056.502	4765.758
wcdd_h10	4720.873	690.5461	6.84	0.000	3366.245	6075.501
wcdd_h11	4865.133	690.5461	7.05	0.000	3510.505	6219.762
wcdd_h12	4700.426	690.5461	6.81	0.000	3345.798	6055.055
wcdd_h13	5777.657	690.5461	8.37	0.000	4423.029	7132.286
wcdd_h14	5589.005	690.5461	8.09	0.000	4234.377	6943.633
wcdd_h15	5841.395	690.5461	8.46	0.000	4486.767	7196.023
wcdd_h16	5972.79	690.5461	8.65	0.000	4618.162	7327.418
wcdd_h17	6095.41	690.5461	8.83	0.000	4740.781	7450.038
wcdd_h18	5686.592	690.5461	8.23	0.000	4331.963	7041.22
wcdd_h19	5432.163	690.5461	7.87	0.000	4077.535	6786.792
wcdd_h20	4294.615	690.5461	6.22	0.000	2939.986	5649.243
wcdd_h21	3954.198	690.5461	5.73	0.000	2599.57	5308.826
wcdd_h22	2705.627	690.5461	3.92	0.000	1350.998	4060.255
wcdd_h23	2744.747	690.5461	3.97	0.000	1390.118	4099.375
wcdd_h24	3056.894	690.5461	4.43	0.000	1702.266	4411.522
dt2	59175.83	6617.578	8.94	0.000	46194.28	72157.38
dt3	60970.14	6605.718	9.23	0.000	48011.86	73928.43

dt4	58346.94	6687.743	8.72	0.000	45227.75	71466.14
dt5	69796	7918.757	8.81	0.000	54261.96	85330.05
m7	-5603.256	1800.825	-3.11	0.002	-9135.893	-2070.619
m8	-5363.989	1811.463	-2.96	0.003	-8917.494	-1810.483
m9	-4405.732	1333.631	-3.30	0.001	-7021.887	-1789.578
mon_h2	8911.448	9109.875	0.98	0.328	-8959.185	26782.08
mon_h3	20456.2	9109.875	2.25	0.025	2585.563	38326.83
mon_h4	27985.48	9109.875	3.07	0.002	10114.85	45856.11
mon_h5	32369.01	9109.875	3.55	0.000	14498.38	50239.65
mon_h6	39418.33	9109.875	4.33	0.000	21547.7	57288.96
mon_h7	43987	9109.875	4.83	0.000	26116.36	61857.63
mon_h8	52367.02	9109.875	5.75	0.000	34496.39	70237.65
mon_h9	61871.95	9109.875	6.79	0.000	44001.32	79742.59
mon_h10	67306.67	9109.875	7.39	0.000	49436.03	85177.3
mon_h11	64553.29	9109.875	7.09	0.000	46682.66	82423.92
mon_h12	69596.27	9109.875	7.64	0.000	51725.63	87466.9
mon_h13	77447.57	9109.875	8.50	0.000	59576.94	95318.21
mon_h14	78135.22	9109.875	8.58	0.000	60264.59	96005.85
mon_h15	83573.27	9109.875	9.17	0.000	65702.63	101443.9
mon_h16	80713.34	9109.875	8.86	0.000	62842.71	98583.98
mon_h17	84580.81	9109.875	9.28	0.000	66710.18	102451.4
mon_h18	87345.09	9109.875	9.59	0.000	69474.46	105215.7
mon_h19	84813.67	9109.875	9.31	0.000	66943.03	102684.3
mon_h20	81090.73	9109.875	8.90	0.000	63220.09	98961.36
mon_h21	78074.59	9109.875	8.57	0.000	60203.96	95945.22
mon_h22	76096.67	9109.875	8.35	0.000	58226.04	93967.31
mon_h23	74438.39	9109.875	8.17	0.000	56567.75	92309.02
mon_h24	73330.47	9109.875	8.05	0.000	55459.84	91201.1
fri_h2	3858.751	8885.814	0.43	0.664	-13572.35	21289.85
fri_h3	6036.998	8885.814	0.68	0.497	-11394.1	23468.1
fri_h4	-1963.355	8885.814	-0.22	0.825	-19394.45	15467.74
fri_h5	-2018.762	8885.814	-0.23	0.820	-19449.86	15412.34
fri_h6	-9262.248	8885.814	-1.04	0.297	-26693.35	8168.849
fri_h7	-13860.89	8885.814	-1.56	0.119	-31291.98	3570.212
fri_h8	-16906.11	8885.814	-1.90	0.057	-34337.21	524.989
fri_h9	-19281.16	8885.814	-2.17	0.030	-36712.26	-1850.062
fri_h10	-13593.28	8885.814	-1.53	0.126	-31024.38	3837.813
fri_h11	-18241.38	8885.814	-2.05	0.040	-35672.48	-810.2874
fri_h12	-25554.67	8885.814	-2.88	0.004	-42985.77	-8123.575
fri_h13	-24742.35	8885.814	-2.78	0.005	-42173.45	-7311.253
fri_h14	-26783.29	8885.814	-3.01	0.003	-44214.39	-9352.195
fri_h15	-26283.81	8885.814	-2.96	0.003	-43714.91	-8852.714
fri_h16	-29330.76	8885.814	-3.30	0.001	-46761.86	-11899.66
fri_h17	-30781.52	8885.814	-3.46	0.001	-48212.62	-13350.43
fri_h18	-29109.83	8885.814	-3.28	0.001	-46540.93	-11678.73
fri_h19	-31676.79	8885.814	-3.56	0.000	-49107.88	-14245.69
fri_h20	-31501.27	8885.814	-3.55	0.000	-48932.37	-14070.17
fri_h21	-33433.38	8885.814	-3.76	0.000	-50864.48	-16002.29
fri_h22	-25116.66	8885.814	-2.83	0.005	-42547.76	-7685.565
fri_h23	-17130.22	8885.814	-1.93	0.054	-34561.31	300.8805
fri_h24	-27419.12	8885.814	-3.09	0.002	-44850.21	-9988.018
h2	-10804.69	8565.597	-1.26	0.207	-27607.62	5998.249
h3	-24657.9	8565.597	-2.88	0.004	-41460.83	-7854.961
h4	-21652.38	8565.597	-2.53	0.012	-38455.32	-4849.449
h5	-5682.433	8565.597	-0.66	0.507	-22485.37	11120.5
h6	34892.13	8565.597	4.07	0.000	18089.19	51695.06
h7	80375.14	8565.597	9.38	0.000	63572.2	97178.08
h8	115714.9	8565.597	13.51	0.000	98911.92	132517.8
h9	144775.1	8565.597	16.90	0.000	127972.2	161578
h10	158075.7	8565.597	18.45	0.000	141272.7	174878.6
h11	178069.2	8565.597	20.79	0.000	161266.3	194872.2
h12	177012.4	8565.597	20.67	0.000	160209.5	193815.3
h13	142112.9	8565.597	16.59	0.000	125309.9	158915.8

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         h14 |   146420.7   8565.597    17.09   0.000     129617.8    163223.6
         h15 |   136473.1   8565.597    15.93   0.000     119670.2    153276.1
         h16 |   121892.2   8565.597    14.23   0.000     105089.3    138695.2
         h17 |   100476.6   8565.597    11.73   0.000     83673.65    117279.5
         h18 |   74716.94   8565.597     8.72   0.000     57914.01    91519.88
         h19 |   61081.78   8565.597     7.13   0.000     44278.84    77884.71
         h20 |   62425.34   8565.597     7.29   0.000     45622.41    79228.28
         h21 |   67091.52   8565.597     7.83   0.000     50288.59    83894.46
         h22 |   62806.12   8565.597     7.33   0.000     46003.18    79609.05
         h23 |   43977.91   8565.597     5.13   0.000     27174.97    60780.84
         h24 |   23359.58   8565.597     2.73   0.006     6556.644    40162.51
       _cons |   237792.8   19043.26    12.49   0.000     200436.1    275149.5
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PG&E DBP Model

Source	SS	df	MS		
Model	8.7265e+12	127	6.8713e+10	Number of obs	3096
Residual	1.8725e+11	2968	63089479.5	F(127, 2968)	1089.13
Total	8.9138e+12	3095	2.8801e+09	Prob > F	0.0000
				R-squared	0.9790
				Adj R-squared	0.9781
				Root MSE	7942.9

load	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
morn_load	.8527758	.010209	83.53	0.000	.8327584	.8727931
evt_h1	2359.71	8278.608	0.29	0.776	-13872.68	18592.1
evt_h2	906.1038	8278.608	0.11	0.913	-15326.29	17138.5
evt_h3	-8014.059	8278.608	-0.97	0.333	-24246.45	8218.333
evt_h4	-4865.539	8278.608	-0.59	0.557	-21097.93	11366.85
evt_h5	-8448.801	8278.608	-1.02	0.308	-24681.19	7783.591
evt_h6	-2896.457	8278.608	-0.35	0.726	-19128.85	13335.94
evt_h7	10599.95	8278.608	1.28	0.201	-5632.441	26832.34
evt_h8	11409.76	8278.608	1.38	0.168	-4822.635	27642.15
evt_h9	7039.109	8278.608	0.85	0.395	-9193.283	23271.5
evt_h10	2589.965	8278.608	0.31	0.754	-13642.43	18822.36
evt_h11	-9032.294	8278.608	-1.09	0.275	-25264.69	7200.099
evt_h12	-12900.21	8278.608	-1.56	0.119	-29132.6	3332.184
evt_h13	-12473.78	8278.608	-1.51	0.132	-28706.17	3758.613
evt_h14	-24708.85	8278.608	-2.98	0.003	-40941.24	-8476.454
evt_h15	-57002.61	8278.608	-6.89	0.000	-73235	-40770.22
evt_h16	-58577.2	8278.608	-7.08	0.000	-74809.59	-42344.81
evt_h17	-28084.15	8278.608	-3.39	0.001	-44316.55	-11851.76
evt_h18	-25226.77	8278.608	-3.05	0.002	-41459.16	-8994.377
evt_h19	-20318.62	8278.608	-2.45	0.014	-36551.02	-4086.231
evt_h20	-9836.132	8278.608	-1.19	0.235	-26068.52	6396.261
evt_h21	-11728.94	8278.608	-1.42	0.157	-27961.34	4503.448
evt_h22	-13434.55	8278.608	-1.62	0.105	-29666.94	2797.846
evt_h23	-11376.43	8278.608	-1.37	0.169	-27608.82	4855.962
evt_h24	-8486.384	8278.608	-1.03	0.305	-24718.78	7746.009
cdd_h1	-88.76825	175.4626	-0.51	0.613	-432.8089	255.2724
cdd_h2	-259.4288	175.4626	-1.48	0.139	-603.4695	84.61189
cdd_h3	-314.1688	175.4626	-1.79	0.073	-658.2094	29.87192
cdd_h4	-284.9077	175.4626	-1.62	0.105	-628.9484	59.13299
cdd_h5	-66.16072	175.4626	-0.38	0.706	-410.2014	277.88
cdd_h6	312.7143	175.4626	1.78	0.075	-31.32637	656.755
cdd_h7	307.6865	175.4626	1.75	0.080	-36.35417	651.7272
cdd_h8	866.3451	175.4626	4.94	0.000	522.3044	1210.386
cdd_h9	1601.965	175.4626	9.13	0.000	1257.925	1946.006
cdd_h10	2286.37	175.4626	13.03	0.000	1942.33	2630.411
cdd_h11	2743.347	175.4626	15.63	0.000	2399.306	3087.388
cdd_h12	2897.396	175.4626	16.51	0.000	2553.355	3241.437
cdd_h13	2677.328	175.4626	15.26	0.000	2333.287	3021.368
cdd_h14	2751.059	175.4626	15.68	0.000	2407.018	3095.1
cdd_h15	2779.078	175.4626	15.84	0.000	2435.037	3123.119
cdd_h16	2738.133	175.4626	15.61	0.000	2394.092	3082.174
cdd_h17	2827.082	175.4626	16.11	0.000	2483.041	3171.123
cdd_h18	2655.035	175.4626	15.13	0.000	2310.995	2999.076
cdd_h19	2106.524	175.4626	12.01	0.000	1762.483	2450.565
cdd_h20	1538.547	175.4626	8.77	0.000	1194.506	1882.588
cdd_h21	1352.749	175.4626	7.71	0.000	1008.709	1696.79
cdd_h22	1189.432	175.4626	6.78	0.000	845.3917	1533.473
cdd_h23	825.2586	175.4626	4.70	0.000	481.2179	1169.299
cdd_h24	737.7807	175.4626	4.20	0.000	393.74	1081.821
dt2	30631.76	1894.648	16.17	0.000	26916.8	34346.72
dt3	31242.77	1905.898	16.39	0.000	27505.76	34979.79

dt4	30345.24	1907.93	15.90	0.000	26604.24	34086.24
dt5	33013.31	2270.267	14.54	0.000	28561.85	37464.77
m6	-1307.219	526.335	-2.48	0.013	-2339.238	-275.2005
m7	-818.6843	599.4123	-1.37	0.172	-1993.99	356.6216
m8	3638.436	708.7115	5.13	0.000	2248.821	5028.052
m9	8182.694	768.5994	10.65	0.000	6675.653	9689.736
m10	2146.795	562.1445	3.82	0.000	1044.562	3249.027
mon_h2	6746.008	2622.377	2.57	0.010	1604.147	11887.87
mon_h3	13999.39	2622.377	5.34	0.000	8857.528	19141.25
mon_h4	19522.95	2622.377	7.44	0.000	14381.09	24664.81
mon_h5	25892.84	2622.377	9.87	0.000	20750.98	31034.7
mon_h6	32473.78	2622.377	12.38	0.000	27331.92	37615.64
mon_h7	34742.38	2622.377	13.25	0.000	29600.52	39884.24
mon_h8	39508.02	2622.377	15.07	0.000	34366.16	44649.89
mon_h9	43835.21	2622.377	16.72	0.000	38693.35	48977.08
mon_h10	45363.33	2622.377	17.30	0.000	40221.47	50505.19
mon_h11	47726.88	2622.377	18.20	0.000	42585.02	52868.74
mon_h12	49656.61	2622.377	18.94	0.000	44514.75	54798.47
mon_h13	50491.5	2622.377	19.25	0.000	45349.64	55633.36
mon_h14	49790.84	2622.377	18.99	0.000	44648.98	54932.7
mon_h15	50540.9	2622.377	19.27	0.000	45399.04	55682.76
mon_h16	52080.08	2622.377	19.86	0.000	46938.22	57221.94
mon_h17	54666.5	2622.377	20.85	0.000	49524.64	59808.36
mon_h18	56522.69	2622.377	21.55	0.000	51380.83	61664.56
mon_h19	57478.31	2622.377	21.92	0.000	52336.45	62620.17
mon_h20	56705.06	2622.377	21.62	0.000	51563.19	61846.92
mon_h21	55981.7	2622.377	21.35	0.000	50839.84	61123.56
mon_h22	56887.95	2622.377	21.69	0.000	51746.09	62029.82
mon_h23	57737.38	2622.377	22.02	0.000	52595.52	62879.24
mon_h24	58112.47	2622.377	22.16	0.000	52970.61	63254.33
fri_h2	-366.1552	2543.768	-0.14	0.886	-5353.883	4621.573
fri_h3	95.95078	2543.768	0.04	0.970	-4891.777	5083.679
fri_h4	133.9959	2543.768	0.05	0.958	-4853.732	5121.724
fri_h5	-1446.384	2543.768	-0.57	0.570	-6434.112	3541.344
fri_h6	-2279.129	2543.768	-0.90	0.370	-7266.857	2708.599
fri_h7	-4360.973	2543.768	-1.71	0.087	-9348.7	626.7552
fri_h8	-4693.403	2543.768	-1.85	0.065	-9681.13	294.325
fri_h9	-5364.868	2543.768	-2.11	0.035	-10352.6	-377.1399
fri_h10	-6378.139	2543.768	-2.51	0.012	-11365.87	-1390.411
fri_h11	-8680.894	2543.768	-3.41	0.001	-13668.62	-3693.166
fri_h12	-9517.306	2543.768	-3.74	0.000	-14505.03	-4529.578
fri_h13	-11907.51	2543.768	-4.68	0.000	-16895.23	-6919.779
fri_h14	-15040.57	2543.768	-5.91	0.000	-20028.3	-10052.84
fri_h15	-16398.58	2543.768	-6.45	0.000	-21386.31	-11410.85
fri_h16	-17594.64	2543.768	-6.92	0.000	-22582.37	-12606.91
fri_h17	-18969.04	2543.768	-7.46	0.000	-23956.77	-13981.31
fri_h18	-18699.28	2543.768	-7.35	0.000	-23687.01	-13711.56
fri_h19	-16876.54	2543.768	-6.63	0.000	-21864.27	-11888.81
fri_h20	-15828.06	2543.768	-6.22	0.000	-20815.79	-10840.33
fri_h21	-17132.03	2543.768	-6.73	0.000	-22119.75	-12144.3
fri_h22	-18099.07	2543.768	-7.12	0.000	-23086.79	-13111.34
fri_h23	-19379.73	2543.768	-7.62	0.000	-24367.46	-14392
fri_h24	-21694.23	2543.768	-8.53	0.000	-26681.96	-16706.5
h2	-8237.79	1773.061	-4.65	0.000	-11714.34	-4761.237
h3	-17320.15	1773.061	-9.77	0.000	-20796.71	-13843.6
h4	-21510.35	1773.061	-12.13	0.000	-24986.9	-18033.8
h5	-16079.27	1773.061	-9.07	0.000	-19555.82	-12602.72
h6	435.0534	1773.061	0.25	0.806	-3041.499	3911.606
h7	26044.22	1773.061	14.69	0.000	22567.67	29520.77
h8	44320.57	1773.061	25.00	0.000	40844.02	47797.13
h9	59122.02	1773.061	33.34	0.000	55645.47	62598.58
h10	70930.05	1773.061	40.00	0.000	67453.5	74406.6
h11	82532.59	1773.061	46.55	0.000	79056.03	86009.14

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         h12 |   85357.24   1773.061    48.14   0.000     81880.69    88833.79
         h13 |   84508.01   1773.061    47.66   0.000     81031.46    87984.56
         h14 |   91034.81   1773.061    51.34   0.000     87558.25    94511.36
         h15 |   91292.53   1773.061    51.49   0.000     87815.98    94769.08
         h16 |    83269.3   1773.061    46.96   0.000     79792.75    86745.86
         h17 |   75272.93   1773.061    42.45   0.000     71796.38    78749.48
         h18 |   62845.29   1773.061    35.44   0.000     59368.74    66321.84
         h19 |   54383.24   1773.061    30.67   0.000     50906.69    57859.79
         h20 |    50245.9   1773.061    28.34   0.000     46769.35    53722.45
         h21 |   44262.98   1773.061    24.96   0.000     40786.42    47739.53
         h22 |   34583.27   1773.061    19.50   0.000     31106.72    38059.82
         h23 |   22155.42   1773.061    12.50   0.000     18678.86    25631.97
         h24 |   9207.079   1773.061     5.19   0.000     5730.526    12683.63
       _cons |   26095.89   4869.882     5.36   0.000      16547.2    35644.58
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