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APPENDIX A-1. SECONDARY SOURCES

Cadmus reviewed many data sources to determine inputs most appropriate for the Class 1 and Class 3 DSM analyses. Table A-1.1 provides the citations and links, where available, for these sources.

Table A-1.1 Class 1 and Class 3 DSM Secondary Sources

Source	Website Link	Program
Braithwait, Stephen D., Daniel G. Hansen, and Jess D. Reaser. *2010 Load Impact Evaluation of California Statewide Demand Bidding Programs (DBP) for Non-Residential Customers: Ex Post and Ex Ante Report; CALMAC Study ID SCE0298.01.* Christensen Associates Energy Consulting, LLC, March 29, 2011.	http://www.calmac.org/publications/PY10_DBP_Ex_Post_Ex_Ante_Report_Final.pdf	Demand Buy-Back
Braithwait, Stephen D., Daniel G. Hansen, and Jess D. Reaser. *2011 Load Impact Evaluation of California Statewide Demand Bidding Programs (DBP) for Non-Residential Customers: Ex Post and Ex Ante Report; CALMAC Study ID SCE0317.* Christensen Associates Energy Consulting, LLC, May 29, 2012.	http://www.calmac.org/publications/DBP_Statewide_Progarm_Year_2011_Load_Impact_Study.pdf	Demand Buy-Back
Braithwait, Stephen D., Daniel G. Hansen, and David A. Armstrong. *2010 Load Impact Evaluation of California Statewide Aggregator Demand Response Programs: Ex Post and Ex Ante Report; Study ID SCE0295.01.* Christensen Associates Energy Consulting, LLC, March 29, 2011.	http://www.calmac.org/publications/PY10_Aggregator_Ex_Post_Ex_Ante_Report.pdf	Nonresidential Load Curtailment
Brattle Group, The, Freeman, Sullivan & Co., and Global Energy Partners, LLC. *A National Assessment of Demand Response Potential: Staff Report.* Federal Energy Regulatory Commission, June 2009.	http://www.ferc.gov/legal/staff-reports/06-09-demand-response.pdf	All programs
CenterPoint Energy Houston Electric. *"EnergyShare 2012" Program Manual.* November 7, 2011.	http://www.centerpointenergy.com/services/electricity/business/energyefficiencyprograms/loadmanagementstandardoffer/	Nonresidential Load Curtailment
Faruqui, Ahmad, Ryan Hledik, and Jenny Palmer. *WECC 20-year Demand Response Forecast.* The Brattle Group, Inc., June 19, 2012.	http://www.westgov.org/sptsc/workgroups/dsmwg/documents/2012/06-20-12WECCdrf.pdf	Residential and Small Commercial DLC
George, Steven S., Josh Bode, and Dries Berghman. *2011 Statewide Evaluation of California Aggregator Demand Response Programs, Volume II: Baseline Calculation Rules and Accuracy.* Freeman, Sullivan & Co., June 1, 2012.	http://www.calmac.org/publications/Aggregator_Statewide_Program_Year_2011_Baseline_Evaluation_Volume_II_.pdf	Nonresidential Load Curtailment

Source	Website Link	Program
George, Steven S., Josh Bode, and Elizabeth Hartmann. *2010 Load Impact Evaluation of Pacific Gas and Electric Company's Time-Based Pricing Tariffs: Final Report.* Freeman, Sullivan & Co., April 1, 2011.	http://fscgroup.com/reports/pge-2010-residential-pricing-programs-evaluation.pdf	Residential Time-of-Use
George, Steven S., Josh Bode, Josh Schellenberg, and Sam Holmberg. *2010 California Statewide Non-Residential Critical Peak Pricing Evaluation.* Freeman, Sullivan & Co., April 1, 2011.	http://www.calmac.org/publications/CPP_Statewdie_Program_Year_2011_Load_Impact_Study.pdf	Nonresidential Critical-Peak Pricing
George, Steven S., Josh Bode, Mike Perry, and Zach Mayer. *2009 Load Impact Evaluation for Pacific Gas and Electric Company's Residential SmartRate™ – Peak Day Pricing and TOU Tariffs and SmartAC Program: Volume 1: Ex Post Load Impacts, Final Report*. Freeman, Sullivan & Co., April 1, 2010.	http://www.calmac.org/publications/2009_PGE_SmartRate_SmartAC_and_Residential_TOU_Evaluation_Final_-_Volume_I_(Ex-Post).pdf	Residential Time-of-Use
Haeri, Hossein, et al. *Analysis of the Load Impacts and Economic Benefits of the TOU Rate Option.* Quantec, LLC., March 31, 2005.	N/A	Residential Time-of-Use
Hartmann, Elizabeth, Dries Berghman, Michael Perry, Josh Bode, and Stephen George. *2011 Ex Post Load Impact Evaluation of Pacific Gas and Electric Company's Residential Time-based Pricing.* Freeman, Sullivan & Co., March 29, 2012.	http://fscgroup.com/reports/2011-pge-residential-time-varying-pricing-programs-evaluation.pdf	Residential Time-of-Use
Idaho Power Company. *Irrigation Service Time-of-Use Pilot Program: Final Report.* February 4, 2003.	N/A	Irrigation Time-of-Use
Itron Inc. *A Measurement and Evaluation Study of PY 2007 Business Energy Coalition Program and PY 2005-07 Special Projects Group Program: Final Report and Appendices A-F.* October 30, 2008.	http://www.calmac.org/publications/BEC_2007_Final.pdf	Nonresidential Load Curtailment
Nelson, Jonathan, and Rachel Reiss Buckley. "Hot or Not? DLC Program Benchmarking: Results from the 2012 E Source Direct Load Control Program Study." *Focus Report, EDRP-F-41.* August 16, 2012.	http://www.slideshare.net/E_Source/direct-load-control-program-benchmarks	Residential and Small Commercial DLC
Ochsner, Heidi, et al. *Kootenai DR Pilot Evaluation: Full Pilot Report: Final Report.* The Cadmus Group, Inc., December 28, 2011.	http://www.bpa.gov/energy/n/Smart_Grid-Demand_Response/Demand_Response/Residential/Final%20Evaluation%20Report%20for%20KEC%20Peak%20Project_28Dec11.pdf	Residential and Small Commercial DLC
Owen Electric. "Simple Saver." Accessed at http://www.owenelectric.com/content/ simple-saver on November 6, 2011.	http://www.owenelectric.com/content/simple-saver	Residential and Small Commercial DLC

Source	Website Link	Program
PJM. *Load Management Performance Report 2009/2010.* December 2009.	http://www.pjm.com/markets-and-operations/demand-response/~/media/markets-ops/dsr/load-management-performance-report-2009-2010.ashx	Nonresidential Load Curtailment
PJM. *Load Management Performance Report 2010/2011.* December 2010.	http://www.pjm.com/markets-and-operations/demand-response/~/media/markets-ops/dsr/load-management-performance-report-2010-2011.ashx	Nonresidential Load Curtailment
PJM. *Load Management Performance Report 2011/2012.* December 2011.	http://www.pjm.com/markets-and-operations/demand-response/~/media/markets-ops/dsr/load-management-performance-report-2011-2012.ashx	Nonresidential Load Curtailment
Quantum Consulting Inc and Summit Blue Consulting, LLC. *Evaluation Of 2005 Statewide Large Nonresidential Day-Ahead And Reliability Demand Response Programs: Final Report.* April 28, 2006.	http://www.calmac.org/publications/2006-04-28_WG2_2005_FINAL_REPORT.pdf	Nonresidential Critical-Peak Pricing
Rocky Mountain Power. *2011 Annual Energy Efficiency and Peak Reduction Report – Utah.* April 27, 2012.	http://www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Demand_Side_Management/UT_2011_Annual_Report.pdf	Residential and Small Commercial DLC, Irrigation DLC
Rocky Mountain Power. *2011 Energy Efficiency and Peak Reduction Annual Report – Idaho.* May 24, 2012.	http://www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Demand_Side_Management/ID_2011_Annual_Report_Appendix.pdf	Irrigation DLC
Stewart, Jim, Hossein Haeri and Brian Hedman. *Impacts of Rocky Mountain Power's Idaho Irrigation Load Control Program.* The Cadmus Group, Inc., March 24, 2011.	N/A	Irrigation DLC

APPENDIX A-2. SUPPLY CURVES

The system-wide and state-specific Class 1 and Class 3 DSM supply curves are shown below. The supply curves display each resource's estimated 20-year market potential at or below a particular per-unit cost; note that the potential shown in the supply curves does not account for any interaction between competing programs within or across resource classes.

Cumulative savings within each class of DSM was created by summing the 20-year market potential of that class' programs along the horizontal axis sequentially, in the order of their levelized, per-unit costs. System-wide levelized costs are calculated as the weighted average across all states. Figure A-2.1 through Figure A-2.7 show the Class 1 DSM supply curves, with the system-wide curve shown first, followed by the Pacific Power states (California, Oregon, and Washington) and then the Rocky Mountain Power states (Idaho, Utah, and Wyoming). Figure A-2.8 through Figure A-2.14 show the Class 3 DSM supply curves, following the same organization as the Class 1 DSM curves.

The Class 1 DSM supply curves for all states present the residential and small commercial DLC air conditioning and water heater components as a single program option, with the levelized cost representing the weighted average of the separate program component (residential, small commercial, air conditioning, water heat). This approach was used to recognize the dependencies between the program components (i.e., it is impractical to offer a standalone water heating DLC program).

Figure A-2.1. Class 1 DSM: System-Wide Supply Curve (Cumulative MW in 2032)

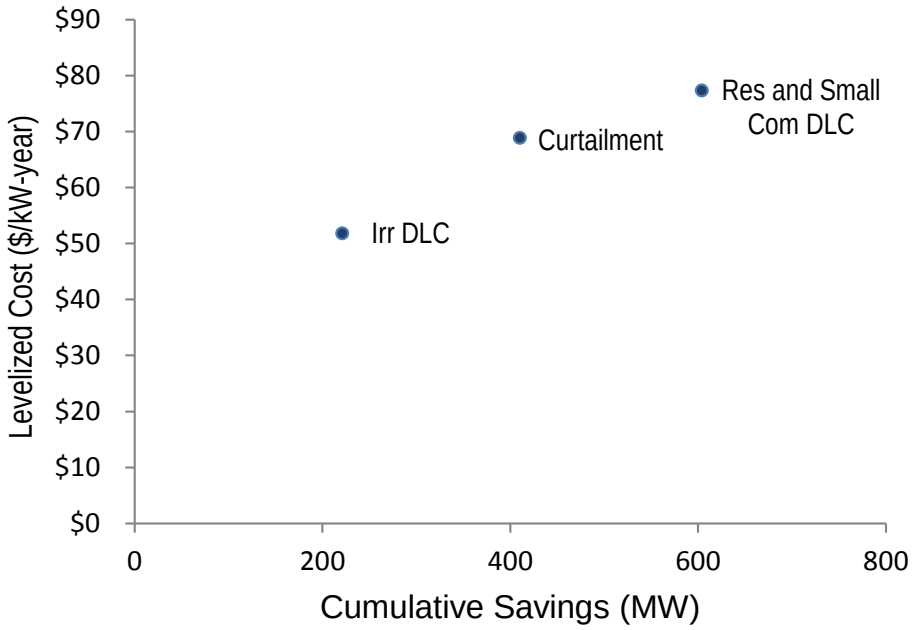


Figure A-2.2. Class 1 DSM: California Supply Curve (Cumulative MW in 2032)

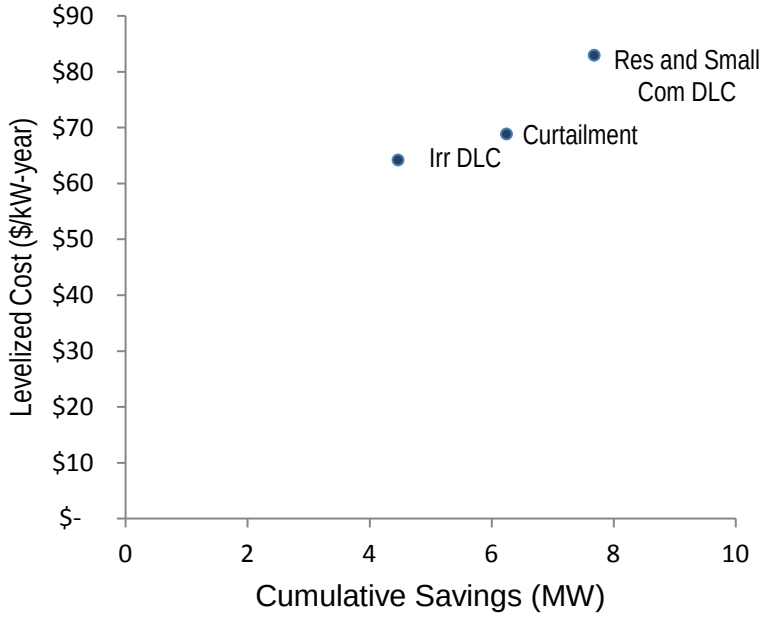


Figure A-2.3. Class 1 DSM: Oregon Supply Curve (Cumulative MW in 2032)

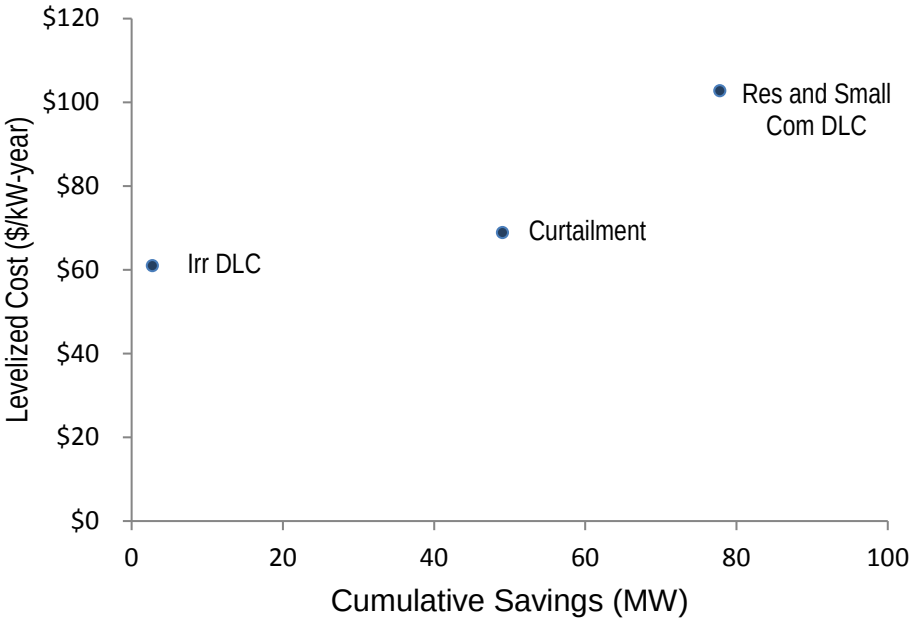


Figure A-2.4. Class 1 DSM: Washington Supply Curve (Cumulative MW in 2032)

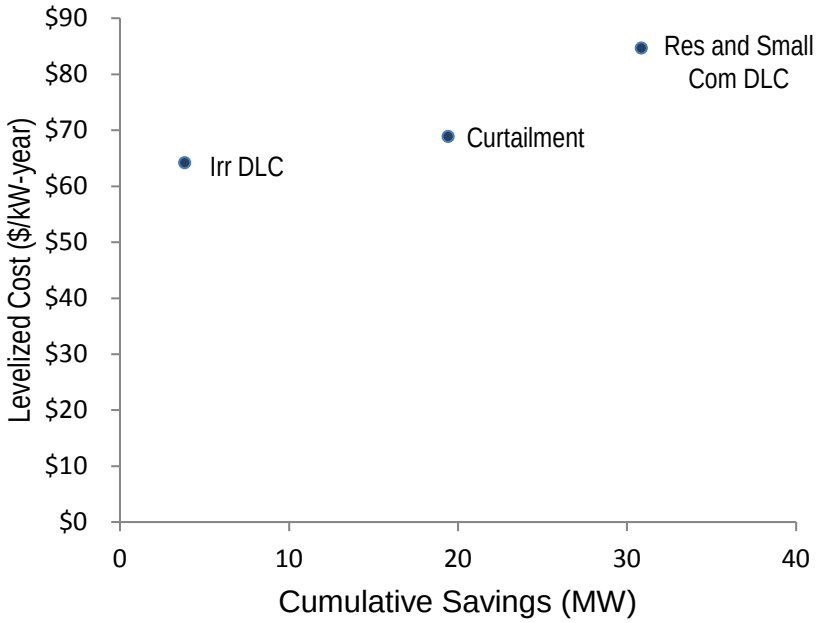


Figure A-2.5. Class 1 DSM: Idaho Supply Curve (Cumulative MW in 2032)

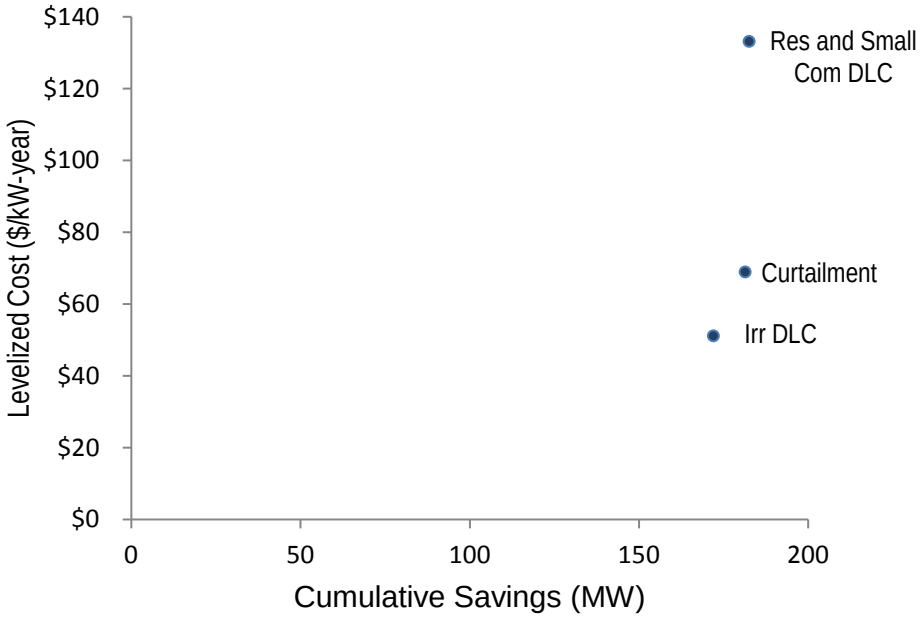


Figure A-2.6. Class 1 DSM: Utah Supply Curve (Cumulative MW in 2032)

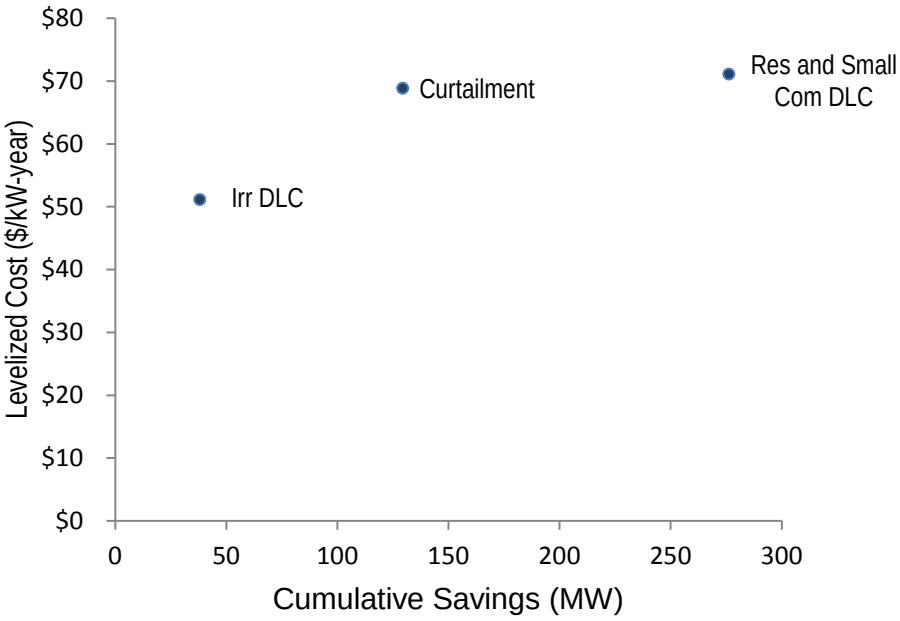


Figure A-2.7. Class 1 DSM: Wyoming Supply Curve (Cumulative MW in 2032)

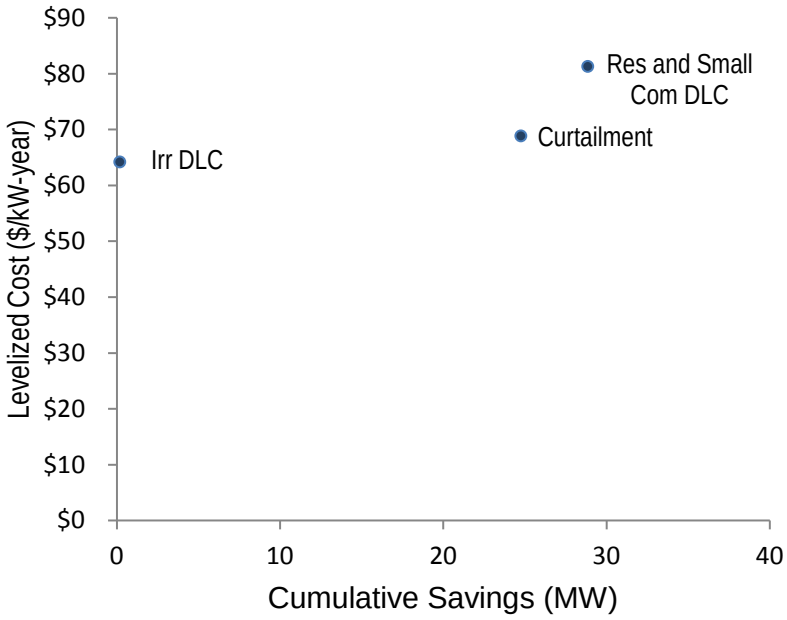


Figure A-2.8. Class 3 DSM: System-Wide Supply Curve (Cumulative MW in 2032)

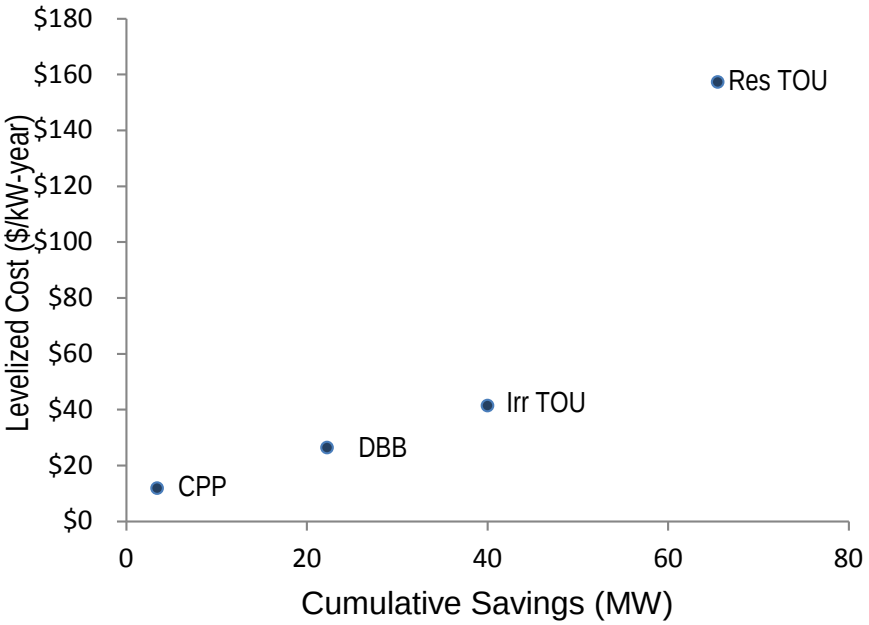


Figure A-2.9. Class 3 DSM: California Supply Curve (Cumulative MW in 2032)

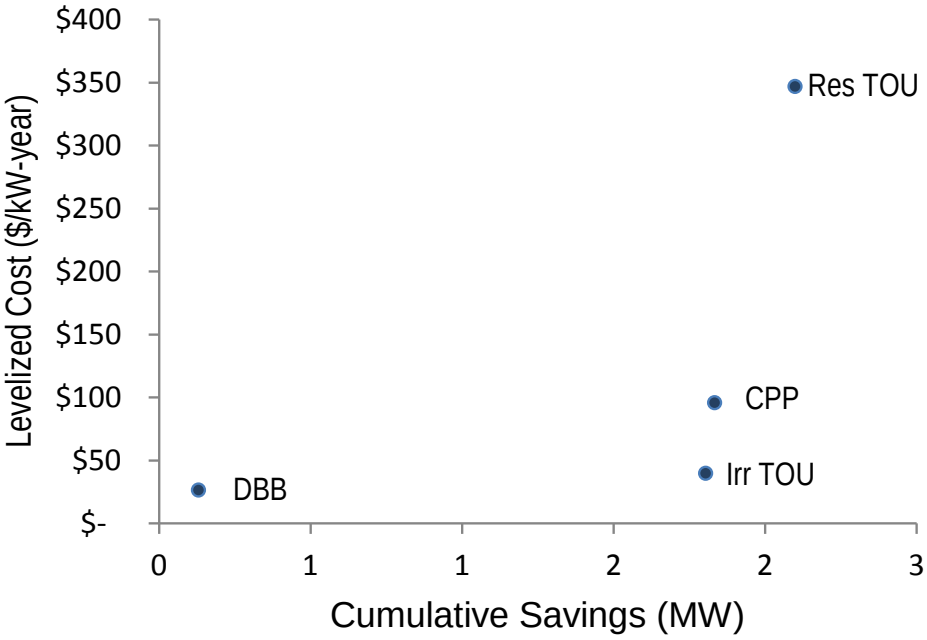


Figure A-2.10. Class 3 DSM: Oregon Supply Curve (Cumulative MW in 2032)

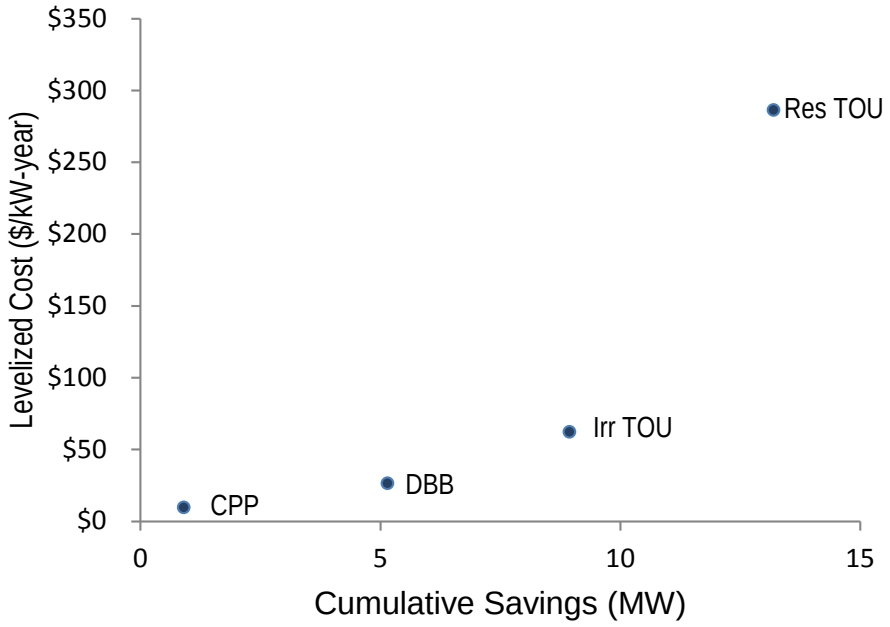


Figure A-2.11. Class 3 DSM: Washington Supply Curve (Cumulative MW in 2032)

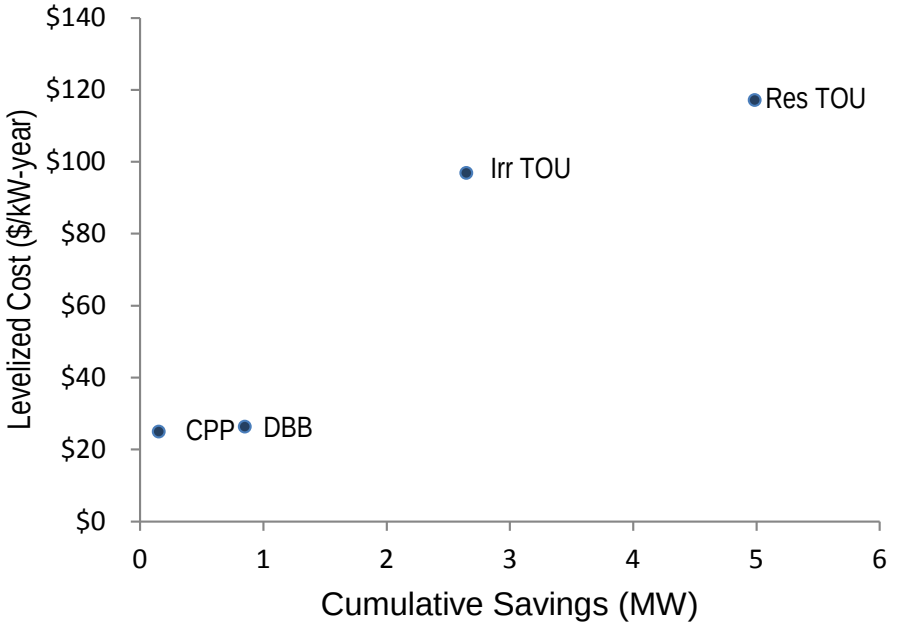


Figure A-2.12. Class 3 DSM: Idaho Supply Curve (Cumulative MW in 2032)

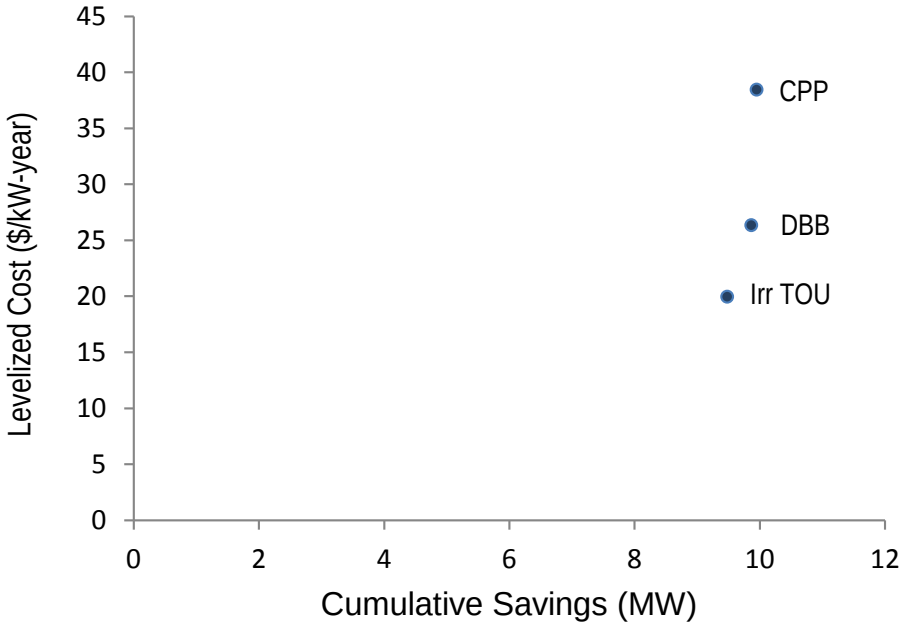


Figure A-2.13. Class 3 DSM: Utah Supply Curve (Cumulative MW in 2032)

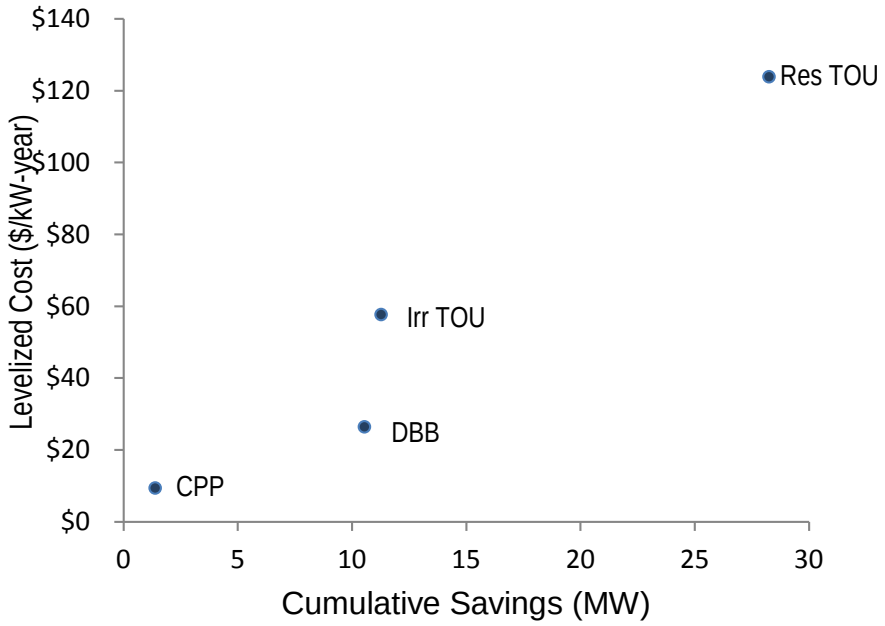
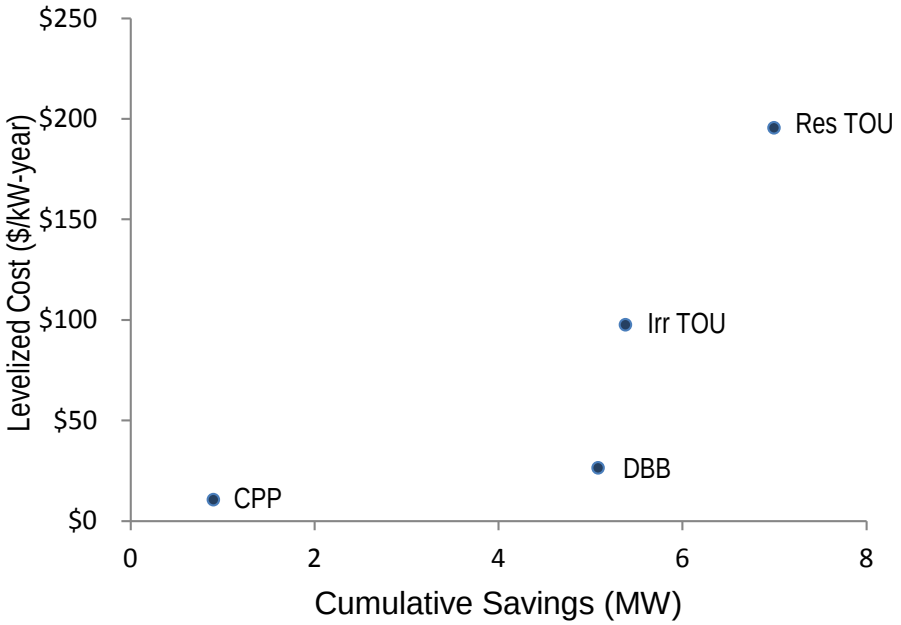


Figure A-2.14. Class 3 DSM: Wyoming Supply Curve (Cumulative MW in 2032)



APPENDIX A-3. RESIDENTIAL AND SMALL COMMERICAL DLC AC PROGRAM ASSUMPTIONS AND CALCULATIONS

As described in Volume 1 of this report, Residential and Small Commercial DLC proves unique in that, unlike other demand response options, it affects specific end uses and equipment (e.g., air conditioners). Therefore, market potential was calculated as the product of four variables:

1. Number of customers.
2. Expected per unit (kW) impacts.
3. Equipment saturation rate.
4. Expected participation.

Customer Eligibility

Customers must have a central air conditioning unit (including heat pumps, but not evaporative coolers) to participate in the AC portion of the program, while those who participate in the water heat portion of the program must have both a central air conditioning unit and an electric water heater.

All residential customers with qualifying equipment are eligible to participate. Commercial customers in the small office segment (maximum monthly demand of less than 100 kW)[1] or small retail segment (maximum monthly demand of less than 33 kW)[2] are also eligible to participate.

Derivation of Per-Unit Impacts

PacifiCorp already operates a large DLC program in its Utah service area. Measurement of program impacts has shown an average reduction of 1 kW per unit. Indexing per-unit impacts to Utah allowed estimation of per-unit impacts for other PacifiCorp service jurisdictions using the following procedure.

As PacifiCorp system peaks correlate highly to Utah weather, the average temperature for a representative location in each state was calculated during Utah's 50 hottest hours, based on TMY3 (typical meteorological year) hourly data. Manual J, the protocol used to size air conditioning equipment, was used to derive equipment design temperatures (the top 1%) for each state and equipment capacities derived from the Simple Energy Enthalpy Model (SEEM) runs completed for the Class 2 DSM analysis. The study adjusted the 1 kW impact per switch used in Utah by the ratio of system peak to design temperature and air conditioner capacity; per switch kW impacts for the other five states were estimated.

[1] The 100 kW threshold is used as a proxy for PacifiCorp's FinAnswer's program's 20,000 square foot cutoff for eligible customers as determined for the 2007 and 2011 Assessment.

[2] Thirty-three kW represents average demand for retail customers as determined for the 2007 and 2011 Assessment.

Table A-3.1 shows the assumptions used to adjust the savings per switch (kW at the meter) for the DLC AC program. Per-switch impacts for small commercial customers are 25% greater than the kW impacts in the table below because it is assumed that small commercial customers, who have larger cooling units, will shed more load during program events.

Table A-3.1 Residential DLC AC Program: Impact per Switch Adjustments

State	City	Design Temp. (F°)[a]	Average Temp. During Top 50 UT Hours (F°)[b]	Cooling Degree Days[c]	System Peak to Design Temp. Ratio[d]	AC Capacity Ratio[e]	Adjustment[f]	kW per Switch
California	Yreka	95	83	550	0.88	0.87	0.76	0.74
Idaho	Idaho Falls	89	86	322	0.96	0.45	0.44	0.43
Oregon	Portland	88	75	280	0.85	0.69	0.59	0.58
Utah	Salt Lake City	95	97	1,066	1.02	1.00	1.02	1.00
Washington	Yakima	92	79	431	0.86	0.91	0.77	0.76
Wyoming	Casper	91	90	428	0.99	0.87	0.86	0.84

[a] Manual J equipment design temperatures (top 1%) from ASHRAE 2009 design conditions.
[b] TMY3 hourly data were used to determine the average temperature in each state during the 50 hottest hours in Utah.
[c] Cooling degree days from the residential Simple Energy and Enthalpy Model (SEEM) v94 models used in the Class 2 DSM analysis.
[d] The ratio of the average temperature during the 50 hottest hours in Utah to the Design Temperature.
[e] The ratio of the assumed tonnage in each state to Utah's tonnage. Tonnages are from the SEEM v94 models.
[f] The product of the Percent of the System Peak of Design Temperature Ratio and the AC Capacity Ratio.

Program Calculations

Table A-3.2 shows calculations for the Residential DLC program. Variables are listed by state and include the number of residential customers, percent eligible for the program, participation rate, impact per switch and market potential in 2032. Table A-3.3 shows the calculations for the Small Commercial component of the program. It is important to note that the per-switch impacts have been adjusted to reflect kW savings at the generator; therefore the kW impacts shown in Table A-3.2 are greater than those in A-3.1.

Table A-3.2. Program Calculations - Residential DLC AC and WH Program

State	Customers in 2032	Customers with Eligible Cooling Equipment (%)	Percentage of Customers with Eligible Cooling Equipment who have Electric Water Heating (%)	20-Year Program Participation (%)	Impact per Switch Cooling (kW)	Impact per Switch Water Heat (kW)	Market Potential Cooling (MW)	Market Potential Water Heat (MW)
California	36,444	24%	76%	12.5%	0.84	0.56	0.9	0.5
Oregon	512,981	45%	60%	12.5%	0.64	0.56	18.4	9.6
Washington	108,323	69%	66%	12.5%	0.84	0.55	7.9	3.4
Idaho	79,767	17%	36%	12.5%	0.48	0.56	0.8	0.3
Utah	835,001	58%	10%	26.0%	1.10	0.55	138.9	6.9
Wyoming	121,655	24%	25%	12.5%	0.93	0.55	3.4	0.5

Table A-3.3. Program Calculations – Small Commercial DLC AC and WH Program

State	Small Office Customers in 2032	Small Retail Customers in 2032	Small Office Customers with Eligible Cooling Equipment (%)	Small Retail Customers with Eligible Cooling Equipment (%)	Percentage of Small Office Customers with Eligible Cooling Equipment who have Electric Water Heating (%)	Percentage of Small Retail Customers with Eligible Cooling Equipment who have Electric Water Heating (%)	20-Year Program Participation (%)	Impact per Switch Cooling (kW)	Impact per Switch Water Heat (kW)	Market Potential Cooling (MW)	Market Potential Water Heat (MW)
California	1,716	390	44%	46%	93%	70%	3.5%	1.0	0.6	0.03	0.02
Oregon	18,814	7,362	75%	53%	57%	68%	3.5%	0.8	0.6	0.5	0.2
Washington	3,103	1,095	83%	57%	67%	79%	3.5%	1.0	0.6	0.1	0.04
Idaho	1,955	575	73%	37%	36%	33%	3.5%	0.6	0.6	0.03	0.01
Utah	17,511	7,783	78%	66%	21%	26%	3.5%	1.4	0.5	0.9	0.1
Wyoming	4,174	1,565	71%	52%	27%	26%	3.5%	1.2	0.5	0.2	0.02

APPENDIX A-4. PROGRAM CALCULATIONS

Table A-4.1 through A.4-6 show the load basis, eligibility assumptions, participation rates, and the estimated potential in 2032 for all programs except the Residential and Small Commercial DLC programs, as these are shown in Appendix A-3. The market potential as well as the load basis, which represents the estimated average demand for applicable customer segments during hours targeted by each program, is shown at generation. Class 1 DSM resources are listed first, followed by Class 3 DSM resources.

Table A-4.1 Program Calculations – Irrigation DLC

State	Load Basis (MW in 2032)	Load Class Eligibility (%)	Technical Potential (%)	20-Year Program Participation (%)	Event Participation (%)	Market Potential (MW)
California	41.3	50%	92%	25%	94%	4.5
Oregon	100.1	25%	78%	15%	94%	2.8
Washington	43.6	50%	75%	25%	94%	3.8
Idaho	234.7	100%	100%	78%	94%	172.0
Utah	52.1	100%	100%	78%	94%	38.2
Wyoming	6.9	25%	82%	15%	94%	0.2

Table A-4.2 Program Calculations – Nonresidential Load Curtailment

State	Load Basis Industrial (MW in 2032)	Load Basis Commercial (MW in 2032)	Load Class Eligibility Industrial (%)	Load Class Eligibility Commercial (%)	Technical Potential (%)	20-Year Program Participation Industrial (%)	20-Year Program Participation Commercial (%)	Event Participation (%)	Market Potential Industrial (MW in 2032)	Market Potential Commercial (MW in 2023)	Market Potential Total (MW in 2032)
California	4.0	63.6	58.3%	36.3%	30%	25%	25%	95%	0.2	1.6	1.8
Oregon	350.6	1,431.9	86.2%	45.7%	30%	17%	17%	95%	14.6	31.7	46.3
Washington	124.9	252.7	70.8%	42.3%	30%	28%	28%	95%	7.1	8.5	15.6
Idaho	272.7	129.6	62.2%	38.6%	30%	15%	15%	95%	7.2	2.1	9.4
Utah	1,517.4	2,165.2	79.3%	58.4%	30%	13%	13%	95%	44.6	46.9	91.4
Wyoming	1,304.1	441.8	70.2%	50.0%	30%	7%	10%	95%	18.3	6.3	24.6

Table A-4.3 Program Calculations – Residential TOU

State	Load Basis (MW in 2032)	Load Class Eligibility (%)	Technical Potential (%)	20-Year Program Participation (%)	Event Participation (%)	Market Potential (MW)
California	59.1	100%	9%	5%	100%	0.3
Oregon	946.0	100%	9%	5%	100%	4.3
Washington	292.6	100%	16%	5%	100%	2.3
Idaho	104.0	100%	16%	0%	100%	-
Utah	2,122.8	100%	16%	5%	100%	17.0
Wyoming	201.8	100%	16%	5%	100%	1.6

Table A-4.4 Program Calculations – Irrigation TOU

State	Load Basis (MW in 2032)	Load Basis (MW in 2032)	Load Class Eligibility (%)	Technical Potential (%)	20-Year Program Participation (%)	Event Participation (%)	Market Potential (MW)
California	36.6	41.3	100%	30%	13.5%	100%	1.7
Oregon	91.1	101.1	100%	30%	12.5%	100%	3.8
Washington	40.1	44.4	100%	30%	13.5%	100%	1.8
Idaho	207.4	234.2	100%	30%	13.5%	100%	9.5
Utah	47.6	52.4	100%	30%	4.5%	100%	0.7
Wyoming	6.6	7.3	100%	30%	13.5%	100%	0.3

Table A-4.5 Program Calculations – Nonresidential CPP

State	Load Basis Industrial (MW in 2032)	Load Basis Commercial (MW in 2032)	Load Class Eligibility Industrial (%)	Load Class Eligibility Commercial (%)	Technical Potential (%)	20-Year Program Participation Industrial (%)	20-Year Program Participation Commercial (%)	Event Participation (%)	Market Potential Industrial (MW in 2032)	Market Potential Commercial (MW in 2023)	Market Potential Total (MW in 2032)
California	3.9	63.2	37.1%	20.5%	5%	4.0%	4.0%	100%	0.0	0.0	0.0
Oregon	346.7	1,396.7	72.4%	30.3%	5%	2.7%	2.7%	100%	0.3	0.6	0.9
Washington	122.2	260.1	33.0%	10.6%	5%	4.5%	4.5%	100%	0.1	0.1	0.2
Idaho	261.2	129.0	18.0%	17.3%	5%	2.4%	2.4%	100%	0.1	0.0	0.1
Utah	1,490.9	2,218.3	57.3%	21.2%	5%	2.1%	2.1%	100%	0.9	0.5	1.4
Wyoming	1,291.5	454.8	49.6%	24.2%	5%	2.4%	2.4%	100%	0.8	0.1	0.9

Table A-4.6 Program Calculations – Nonresidential DBB

State	Load Basis Industrial (MW in 2032)	Load Basis Commercial (MW in 2032)	Load Class Eligibility Industrial (%)	Load Class Eligibility Commercial (%)	Technical Potential (%)	20-Year Program Participation Industrial (%)	20-Year Program Participation Commercial (%)	Event Participation (%)	Market Potential Industrial (MW in 2032)	Market Potential Commercial (MW in 2023)	Market Potential Total (MW in 2032)
California	3.9	62.1	37.1%	20.5%	7%	13%	13%	100%	0.0	0.1	0.1
Oregon	346.7	1,396.7	72.2%	30.3%	7%	9%	9%	100%	1.6	2.7	4.2
Washington	121.2	256.2	33.0%	10.6%	7%	15%	15%	100%	0.4	0.3	0.7
Idaho	258.7	126.2	18.1%	17.2%	7%	8%	8%	100%	0.3	0.1	0.4
Utah	1,481.3	2,166.0	57.3%	21.2%	7%	10%	10%	100%	5.9	3.2	9.2
Wyoming	1,286.8	445.0	49.8%	24.1%	7%	8%	8%	100%	3.6	0.6	4.2

APPENDIX A-5. INTERACTIVE EFFECTS

While the results presented in Volume 1 of this report do not adjust potential for competition between Class 1 and 3 DSM options, the assessment considered interactions within and between Class 1 and Class 3 DSM resources to avoid overstating potential impacts in integrated resource planning (Table A-5.1). Resources were prioritized within each customer sector by the firmness of the resource and then by cost. That is, Class 1 DSM was given priority over competing Class 3 DSM options, and thus, its market potential is unaffected by this analysis as there were no competing Class 1 DSM options. The following logic allowed potential adjustments to account for these interactions:

- ***Residential:*** The Cadmus team assumed participation in the DLC air conditioning and water heating programs would take precedence over TOU rates. Customers already enrolled in the DLC program would not opt out to participate in the TOU program.
- ***Small Commercial:*** As small commercial only had one product, the study did not consider interactive effects.
- ***Large Commercial and Industrial:*** The Cadmus team assumed all available potential would likely be captured by the nonresidential load curtailment program, and no remaining potential would be available for Demand Buyback (DBB) or CPP where load curtailment is offered.
- ***Irrigation:*** The Cadmus team's analysis indicated current programs in Idaho and Utah have exhausted the market potential in this sector for those states; therefore, no potential remains for the TOU program. For the remainder of the states, the Cadmus team adjusted TOU program participation to account for interactions with the irrigation DLC opportunities.

As shown in Table A-5.1, these interactive effects decrease the system-wide 2032 market potential from 670 MW to 621 MW. Because firmness was the primary prioritization criterion and as there were no competing Class 1 DSM options, the Class 1 DSM market potential is unaffected by this interactive analysis. However, Class 3 DSM market potential decreased from 66 MW to 17 MW as a result of these considerations.

Table A-5.1. Market Potential (MW in 2032) with Interactive Effects by State

Resource Class	Program	Pacific Power			Rocky Mountain Power			System (with interactions)	System (without interactions)
		C	O	W	I	U	WY		
Class 1	DLC Air Conditioning	1	19	8	1	140	4	172	172
	DLC Water Heat	0.5	10	3	0.4	7	1	22	22
	Irrigation Load Control	4	3	4	172	38	0.2	221	221
	Load Curtailment	2	46	16	9	91	25	189	189
	Subtotal	8	78	31	183	276	29	604	604
Class 3	Demand Buyback	0	0	0	0	0	0	0	19
	Residential TOU	0.2	2	1	-	7	1	12	25
	Irrigation TOU	1	2	1	0	0	0.2	5	18
	Critical-Peak Pricing	0	0	0	0	0	0	0	3
	Subtotal	1	5	2	0	7	1	17	66
Class 1 and 3	Total	9	83	33	183	283	30	621	670