



Volume II: Colorado Springs Utilities Program Concepts and Benchmarking

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Executive Summary

As part of Cadmus' contract to conduct a demand-side management (DSM) potential study for Colorado Springs Utilities (Springs Utilities), Cadmus developed program concepts for implementing the economic and achievable measures identified in the study. We also conducted a benchmarking study to inform proposed program concepts for Springs Utilities' consideration for future implementation. This report's findings will support the program's staff in refining the DSM program portfolio.

Approach

In developing program concepts for Springs Utilities, Cadmus relied on results from a DSM potential study (Volume I of this report) and findings from a comprehensive benchmarking and best practices study. This report's (Volume II) chapters document the results, methods, and objectives of each research task, as appropriate:

- **Benchmarking** compares findings on other relevant DSM program portfolios with Springs Utilities' current program offerings.
- **Program Concepts** outlines recommended residential and commercial programs for Springs Utilities to consider for future implementation. The recommended program concepts include the following:
 - Residential Efficiency Program
 - Low Income Residential Efficiency Program
 - Upstream LED Lighting Program
 - Appliance Recycling Program
 - Residential Behavior Savings Program
 - Residential Demand Response Program
 - Small Business Lighting Program
 - C&I Prescriptive Rebate Program
 - C&I Custom Rebate Program
- This volume's Appendix includes our benchmarking study sources.

Key Findings and Recommendations

Cadmus' review revealed best practices that could contribute to Springs Utilities' program goals within the context of our recommended program concepts (see Program Concepts, below) and Springs Utilities' market conditions. This section summarizes our key findings, drawn from the study's research activities, and addresses potential areas Springs Utilities could explore to further refine program operations or expand its portfolio's benefits.

Key Finding: A well-designed implementation plan provides clear guidance for all implementation parties and can streamline internal processes (e.g., prevent disruption caused by staff turnover).

Providing detailed documentation of program processes and perceived market barriers helps program staff anticipate program elements that may deter customer and/or trade ally participation.

Recommendation:

- **Develop a comprehensive program implementation plan that details each program within Springs Utilities' energy efficiency portfolio.** Each program plan should provide complete documentation of the general operations and delivery approach, including details on target markets and eligibility criteria, available measures and incentive structure, and marketing and outreach strategy. A comprehensive implementation plan should adhere to the following best practices:
 - Clearly define program and implementer staff roles
 - Clearly define all acronyms and include program staff contact information
 - Clearly define eligibility requirements and program offerings (e.g., program measures and incentive structures)
 - Provide step-by-step instructions for each program process
 - Articulate the program theory and logic
 - Clearly define all program systems (e.g., mention database software by name, and state who will use it and when in the process)
 - Refer to the program website
 - Include or refer to inspection and verification, quality assurance/quality control, and data collection protocols
 - Include or refer to marketing materials

Key Finding: Program models with a demonstrated track record of success can quickly ramp up. Turnkey program implementation contractors replicate successful program approaches they deliver in other jurisdictions, and they tailor these to local conditions. Turnkey programs (e.g., appliance recycling, small business direct-install programs) can be launched quickly and deliver savings results within a relatively short time frame.

Recommendation:

- **Consider hiring a third-party implementation contractor to deliver turnkey program offerings on behalf of Springs Utilities.** Follow a formal procurement process, issuing a request for proposals to select an implementation firm with a track record for delivering successful DSM programs across the country.

Key Finding: Growing and maintaining a robust network of reliable trade allies is a strategic investment that can alleviate the burden of administrative tasks on a utility, enhance customer experience, and improve marketing and program awareness. Engaging trade allies as an energy efficiency sales force

provides an excellent outreach strategy that uses an existing and well-established distribution network while increasing program cost-effectiveness.

Recommendation:

- **Develop marketing tools to recruit, educate, and retain high-quality trade allies to promote Springs Utilities’ programs directly to customers.** To support trade ally recruitment and retention efforts, develop outreach materials (e.g., brochures, training materials, and newsletters) to encourage trade allies to join and become active, ongoing participants in the network.
- **Develop an online portal (or a dedicated webpage) to inform the trade ally of Springs Utilities’ training opportunities and program changes.** The portal also should serve as a central location for trade allies to access and download all program rebate applications and customer-facing promotional materials.

Key Finding: Coordination among program administrators allows for streamlined program processes that leverage opportunities for greater participation and savings. For adjacent or overlapping utilities territories, coordinated program delivery can eliminate customer and trade ally confusion and lead to greater participation.

Recommendation:

- **Consider aligning program offerings with those of neighboring utilities, such as Black Hills Energy and Xcel Energy.** Understanding that both neighboring utilities are investor-owned and provide greater resources than Springs Utilities, it is important to provide continuity of service across territories to increase customer and trade ally satisfaction. Program offerings such as home energy audits, appliance recycling, and small business direct-install could be aligned with neighboring offers without expending too many of Springs Utilities’ resources.

Key Finding: As of 2015, LED and CFL the savings baselines fully transitioned from incandescent bulbs to halogen bulbs, effectively reducing achievable lighting savings by more than 30%. Further, due to technology maturation, CFL prices have dropped and freeridership rates have increased. LEDs offer a higher savings potential due to longer lifetimes and better application for specialty applications. As a result, many utilities are shifting their program offerings’ focus from CFLs to LEDs.

Recommendation:

- **Focus lighting measure offerings on LEDs.** Weigh the costs and benefits associated with offering LEDs rather than CFLs in any self- and direct-install measure offerings. Springs Utilities’ upstream lighting program should focus on encouraging customers to purchase and install LED lighting products, deemphasizing standard CFL bulbs. Program design best practices for upstream lighting programs include developing customer-facing, in-store advertising and point-of-purchase marketing materials (e.g., aisle violators, end cap displays) that specifically highlight the savings and benefits associated with purchasing and installing LED bulbs.

Key Finding: Utilities commonly develop specific delivery channels to address the unique challenges and circumstances of various customer groups. Program administrators increasingly target specific niche markets such as small businesses. These markets (e.g., small businesses, data/server centers, industrial manufacturing) offer high savings potential within Springs Utilities' service territory.

Recommendation:

- **Develop marketing materials and delivery processes to target specific customer segments with a high savings potential.** Segment-specific materials should utilize marketing messages proven to resonate among target customers and to highlight program components specific to the market. Case studies can offer a beneficial way to highlight program successes among targeted groups. Additionally, consider partnering with installation contractors and/or implementation firms experienced in working with these target markets. Trade partners with existing relationships in the market will have achieved greater success in promoting such programs to these customers.

Benchmarking

Cadmus conducted a benchmarking analysis of DSM program portfolios similar to those of Springs Utilities’ to identify best practices and to provide insights for program improvements.

Approach

Cadmus reviewed programs similar to Springs Utilities’, comparing relevant and available program design and performance information. Table 1 identifies these comparison utilities.

Table 1. Comparison of DSM Program Portfolios

Program Sponsor	Program State	Utility Type	Fuel Type(s)
Colorado Springs Utilities	Colorado	Municipal	Electric, natural gas, water, wastewater
Black Hills Energy	Colorado	Investor-owned	Electric, natural gas
Burlington Electric Department	Vermont	Municipal	Electric
Fort Collins Utilities	Colorado	Municipal	Electric, water
Snohomish County Public Utility District	Washington	Public	Electric, water
Xcel Energy	Colorado	Investor-owned	Electric, natural gas

Cadmus identified five target utilities from which to gather data, ensuring each would match Springs Utilities’ program portfolio in at least one of the following criteria:

- The program sponsor’s service territory covers similar geography and/or demographics to those of Springs Utilities (e.g., Colorado).
- The program sponsor is a municipal or public power utility, offering services similar to those of Springs Utilities (e.g., electric, natural gas, water, wastewater services).

Additionally, Cadmus chose to include municipal utilities with exemplary program portfolio performance, as reported in ACEEE’s municipal utility energy efficiency study.¹ Table 2 lists the five comparison utilities and reasons Cadmus selected them for the benchmarking study. Cadmus used industry reports, publicly available program information (e.g., program websites, report filings, evaluation reports), and institutional knowledge to collect data on the comparison utilities.

¹ Kushler, Martin, B. Baatz, S. Nowak, and P. Witte. *Municipal Utility Energy Efficiency: Successful Examples around the Nation*. November 2015. Available online: <http://aceee.org/research-report/u1510>.

Table 2. Program Selection Criteria

Comparison Program	Geography and Demographics	Municipal/Public Power Utilities	Exemplary Municipal Utility Portfolio
Black Hills Energy	✓		
Burlington Electric Department		✓	✓
Fort Collins Utilities	✓	✓	✓
Snohomish County Public Utility District		✓	✓
Xcel Energy—Colorado	✓		

Benchmarking Results

Cadmus compared Springs Utilities’ program portfolio against comparable utilities’ portfolios for the following key elements:

- Portfolio penetration
- Portfolio impacts
- Residential program offerings
- Nonresidential program offerings

Additionally, we reviewed best practices for implementing successful DSM programs and provided examples of how the comparison utilities execute these actions.

Portfolio Penetration

Most comparison utilities possess extensive experience in administering energy efficiency programs, many having offered a DSM portfolio for at least two decades. Table 3 compares benchmarked utilities’ service territories by customer type. Xcel Energy has by far the largest territory among the comparison utilities, and Xcel Energy serves more than six times the number of customers as Springs Utilities. Notably, industrial customers make up nearly 1% of Springs Utilities’ territory—a percentage larger than for any of the compared utilities.

Table 3. Comparison of 2014 Utility Territory Customers

Program Sponsor	Number of Residential Customers	Number of Commercial Customers	Number of Industrial Customers	Number of Total Customers
Colorado Springs Utilities (CO)	185,963	29,975	1,559	217,497
Black Hills Energy (CO)	82,670	11,837	63	94,570
Burlington Electric Dept. (VT)	16,737	3,808	12	20,557
Fort Collins Utilities (CO)	61,016	8,583	16	69,615
Snohomish County PUD (WA)	301,639	30,781	76	332,496
Xcel Energy (CO)	1,195,260	210,496	333	1,406,089

Source: Energy Information Administration (EIA) 2014 form 861 “Electric power sales, revenue, and energy efficiency.”

Table 4 shows 2014 portfolio participation reported by Springs Utilities and three comparison utilities. Program sponsors do not always report participation using the same measurement units, introducing difficulties in comparing portfolio performance using this metric. Where possible, however, this report shows portfolio penetration as a percentage of the total customer base.²

Table 4. Comparison of 2014 Portfolio Participation

Program Sponsor	Total Participation	Participation Units	% of Total Customer Base
Colorado Springs Utilities (CO)	1,581,806	Measures	N/A
Burlington Electric Dept. (VT)	988	Customers	5%
Fort Collins Utilities (CO)	70,135	Projects	N/A
Xcel Energy (CO)	501,795	Customers	36%

Portfolio Impacts

Table 5 and Figure 1 show relative levels of energy efficiency spending and savings for Springs Utilities and for the comparison utilities. For the group, average spending was 2.66% of total revenue. As a percentage of total kWh sales, average annual kWh savings were 1.32%.

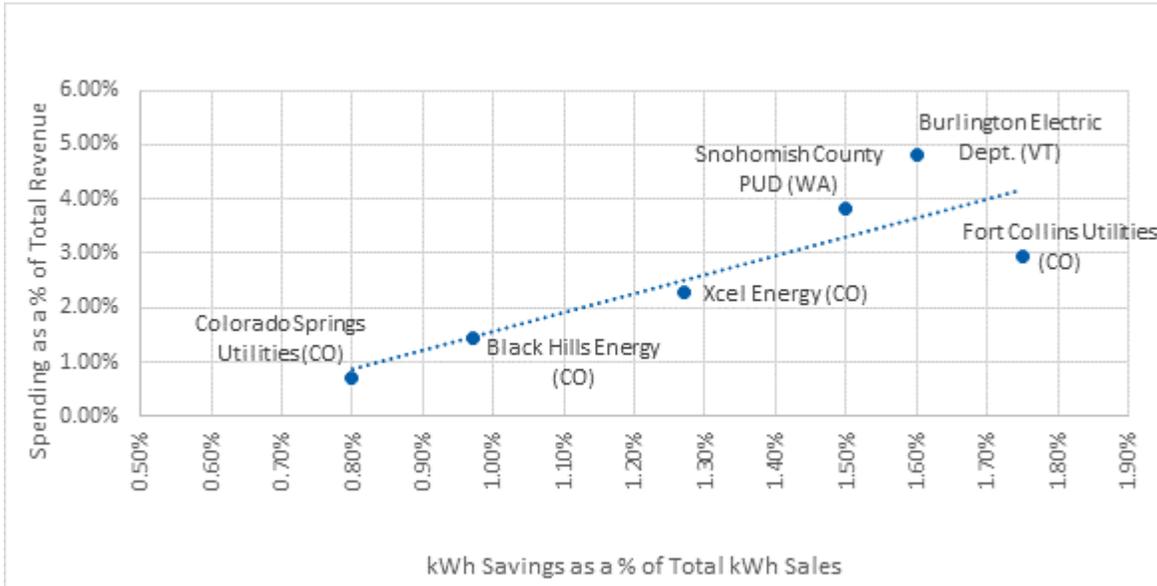
Table 5. Comparison of 2014 Energy Efficiency Spending and Savings

Utility	Spending as a % of Total Revenue	kWh Savings as a % of Total kWh Sales
Colorado Springs Utilities (CO)	0.71%	0.80%
Black Hills Energy (CO)	1.45%	0.97%
Burlington Electric Dept. (VT)	4.81%	1.60%
Fort Collins Utilities (CO)	2.93%	1.75%
Snohomish County PUD (WA)	3.81%	1.50%
Xcel Energy (CO)	2.27%	1.27%

Source: EIA 2014 forms 826 and 861.

² The 2014 portfolio participation data were not publically available for Black Hills Energy or Snohomish County Public Utility District.

Figure 1. Comparison of 2014 Energy Efficiency Spending and Savings



In 2012, the Southwest Energy Efficiency Project (SWEET) published a report recommending that Colorado’s utilities implement cost-effective energy efficiency programs that save at least 1% of sales each year.³ As Table 5 shows, Springs Utilities’ 2014 savings as a percentage of sales were below the 1% threshold. All but one comparison utilities’ 2014 savings exceeded SWEET’s 1% of sales goal (Black Hills Energy fell just below the goal).

Cost of Energy Savings

Table 6 shows actual 2014 portfolio expenditures and savings reported by four of the comparison utilities. Cadmus normalized these results to show the average cost per MWh saved by each comparison utility’s portfolio. The cost of running these energy efficiency portfolios ranged from \$108 per MWh for Fort Collins Utilities to \$408 per MWh for Burlington Electric Department. According to Burlington Electric Department’s 2014 Energy Efficiency Annual Report,⁴ a large number of commercial new construction projects primarily drove the higher cost per MWh, as these projects required larger-than-expected incentives to achieve meaningful savings.

³ Geller, Howard, et al. *The \$20 Billion Bonanza: Best Practice Electric Utility Energy Efficiency Programs and Their Benefits for the Southwest*. October 2012. Available online: <http://aceee.org/research-report/e12d>.

⁴ Burlington Electric Department. *2014 Energy Efficiency Annual Report*. Available online: https://www.burlingtonelectric.com/sites/default/files/Documents/Energy_Eff/2014-energyefficiencyannualreport.pdf

Table 6. Comparison of 2014 Cost of Energy Savings*

Program Sponsor	Total Portfolio Spending (\$)	Total Portfolio Savings (MWh)	Cost per MWh Saved (\$/MWh)
Colorado Springs Utilities (CO)	\$4,532,395	37,034	\$122.38
Burlington Electric Dept. (VT)	\$2,204,329	5,399	\$408.28
Fort Collins Utilities (CO)	\$3,556,000	32,953	\$107.91
Snohomish County PUD (WA)	\$22,504,000**	95,484	\$235.68
Xcel Energy (CO)	\$76,962,284	391,615	\$196.53

*Table sources cited in Appendix A: Benchmarking and Program Concept Sources.

**Snohomish County funds a portion of its energy efficiency programs through an agreement with the Bonneville Power Administration (BPA). In 2014, Snohomish County reported \$9,000,000 of energy efficiency reimbursements from BPA.

Table 7 shows projected portfolio expenditures and savings goals that the comparison utilities reported for 2015. Burlington Electric Department and Xcel Energy set goals in 2015 to exceed their achieved savings in 2014.

Table 7. Comparison of Projected 2015 Cost of Energy Savings*

Program Sponsor	Proposed Electric Budget (\$)	Portfolio Savings Target (MWh)	Cost per MWh Targeted (\$/MWh)
Colorado Springs Utilities (CO)	\$4,626,803	35,874	\$128.97
Burlington Electric Dept. (VT)	\$2,337,666	6,769	\$345.35
Snohomish County PUD (WA)	\$22,664,000**	73,752	\$307.30
Xcel Energy (CO)	\$95,355,683	407,555	\$233.97

*Table sources cited in Appendix A: Benchmarking and Program Concept Sources.

**An agreement with the BPA funds a portion of Snohomish County’s energy efficiency programs.

A 2014 report released by ACEEE reviewed the cost of running efficiency programs in 20 states from 2009 to 2012; this found an average cost range of 13 to 42 cents per kWh, on a first-year acquisition cost basis.⁵ Table 8 shows the cost of energy savings in cost per kWh, as reported by the comparison utilities for 2014 and 2015. As shown, all comparison utilities’ costs per first-year kWh fell into the ACEEE report’s average range. Springs Utilities’ programs, however, remain among the least expensive of the group.

⁵ American Council for an Energy-Efficient Economy. “New Report Finds Energy Efficiency is America’s Cheapest Energy Resource.” Last Modified March 25, 2014. <http://aceee.org/press/2014/03/new-report-finds-energy-efficiency-a>

Table 8. Comparison of 2014 and 2015 Cost of Energy Savings

Program Sponsor	2014 Cost per kWh (\$/kWh)	2015 Cost per kWh (\$/kWh)
Colorado Springs Utilities (CO)	\$0.12	\$0.13
Burlington Electric Dept. (VT)	\$0.41	\$0.35
Fort Collins Utilities (CO)	\$0.11	N/A
Snohomish County PUD (WA)	\$0.24	\$0.31
Xcel Energy (CO)	\$0.20	\$0.23

Residential Program Offerings

On average, residential customers comprise 86% of the comparison utilities’ service territories. As shown in Table 9, each comparison utility (and Springs Utilities) offer a wide array of residential program offerings. Many of these offerings use similar design and delivery mechanisms. One notable difference emerges in regard to the distribution of downstream incentives: Springs Utilities and Fort Collins Utilities offer downstream rebates as bill credits on a customer’s account. The other benchmarked utilities offer rebates via mailed checks.

Table 9. Comparison of Residential Program Offerings

Residential Programs	Springs Utilities	Black Hills Energy	Burlington Electric	Fort Collins	Snohomish County	Xcel Energy
Affordable Housing New Construction		✓				
Appliances	✓		✓	✓	✓	✓
Appliance Recycling		✓		✓		✓
Behavioral Modification	✓	✓	✓	✓	✓	✓
Demand Response	✓		✓	✓		✓
Financing			✓	✓		✓
HVAC	✓	✓	✓	✓	✓	✓
In-Home Energy Audit		✓	✓	✓		✓
Lighting	✓		✓	✓	✓	✓
Low Income Weatherization	✓	✓	✓	✓	✓	✓
New Construction	✓	✓	✓	✓	✓	✓
Online Audit	✓	✓	✓		✓	✓
Renewables	✓		✓	✓	✓	✓
School Education (Kits)		✓				✓
Showerheads	✓			✓	✓	✓
Smart Thermostats		✓				✓
Sprinkler Systems	✓			✓		
Toilets	✓			✓		
Thermostat Setback		✓				
Weatherization	✓	✓	✓	✓	✓	✓
Water Heating	✓	✓	✓	✓		✓
Total Residential Offerings	14	13	13	16	10	17

A Shift from CFLs to LEDs

Historically, Lighting measures have contributed to the bulk of energy efficiency savings for electric utility sponsors. As of 2015, however, the savings baseline for LEDs and CFLs fully transitioned to a halogen bulb (per the 2007 Energy Independence and Security Act standards shift. The baseline shift from 2012 (i.e., incandescent bulbs) to 2015 (halogen bulbs) reduced lighting measure savings by roughly 30%.

According to Xcel Energy’s 2015/2016 DSM plan,⁶ CFLs offer a 70% net-to-gross (NTG) ratio compared to a 100% NTG for LEDs. Table 10 demonstrates the cost increases and savings reductions for Xcel Energy’s CFL measures over the past six years.

Table 10. Historical Trends in CFL Lighting Costs and Savings

Year	CFL NTG	Average kWh Savings per Unit	Average Rebate Cost per Unit	Rebate Cost per 100 Net Generator GWh
2011	90%	48	\$0.98	\$2,024,793
2012	85%	44	\$1.34	\$3,073,394
2013	85%	40	\$1.36	\$3,421,384
2014*	70%	23	\$1.76	\$7,652,174
2015*	70%	22	\$2.67	\$12,136,364
2016*	70%	22	\$2.82	\$12,818,182

Source: Xcel Energy 2015/2016 Demand-Side Management Plan.

*Estimated savings and costs for 2014–2016.

Operating in a dynamic market, LEDs use a technology perceived as superior to CFLs in terms of certain key features (e.g., bulb shape, eliminated mercury content, measure life, fixture compatibility [i.e., dimmers, three-way switches]).⁷ Although LED lamps cost more than CFLs, therefore requiring greater per-unit incentives, LED purchasers report lower freeridership due to higher upfront costs.

As a result of the diminishing impacts achieved by CFLs, many utilities are shifting their focus to LEDs. Burlington Electric Department, Fort Collins Utilities, Snohomish County Public Utility District, and Xcel Energy as well as Springs Utilities each offer upstream lighting discounts for customers. Similar to Springs Utilities, Snohomish County Public Utility District and Xcel Energy offer discounts for both CFLs and LEDs; however, both comparison utilities are shifting focus from the CFL offerings to LEDs by developing marketing messages highlighting only the LED discounts and the benefits associated with

⁶ Public Service Company of Colorado. 2015/2016 Demand-Side Management Plan. August 20, 2015. Available online: <http://www.xcelenergy.com/staticfiles/xcel/PDF/Regulatory/CO-DSM-2015-16-DSM-Plan.pdf>

⁷ York, Dan, M. Neubauer, S. Nowak, and M. Molina. *Expanding the Energy Efficiency Pie: Serving More Customers, Saving More Energy Through High Program Participation*. January 2015. Available online: <http://aceee.org/research-report/u1501>.

purchasing and installing LEDs. Burlington Electric Department and Fort Collins Utilities no longer offer discounts for CFLs, focusing solely on encouraging LED installations among their customers.

Nonresidential Program Offerings

Table 11 compares nonresidential program offerings by utility. On average, commercial and industrial customers comprise 14% of the comparison utilities' service territories. Springs Utilities, Black Hills Energy, and Burlington Electric Department offer a similar number of offerings through their portfolios. However, Fort Collins Utilities, Snohomish County Public Utility District, and Xcel Energy offer a more comprehensive set of program offerings to business customers.

Table 11. Comparison of Nonresidential Program Offerings

Nonresidential Programs	Springs Utilities	Black Hills Energy	Burlington Electric	Fort Collins	Snohomish County	Xcel Energy
Building Envelope		✓		✓	✓	
Commercial Appliances				✓	✓	
Compressed Air Efficiency			✓	✓	✓	✓
Custom Projects	✓	✓	✓	✓	✓	✓
Data Center/ Computer Efficiency				✓	✓	✓
Design Assistance				✓		✓
Efficiency Controls/ Energy Management Systems					✓	✓
Financing			✓	✓		✓
Food Service Equipment		✓		✓	✓	
Grocery Equipment				✓	✓	✓
HVAC	✓	✓	✓	✓	✓	✓
Industrial Assessments	✓	✓		✓		✓
Sprinkler Systems	✓			✓		
Laundry Equipment				✓		
Lighting	✓		✓	✓	✓	✓
Motors/ Drives	✓		✓	✓	✓	✓
Multifamily			✓		✓	✓
New Construction			✓	✓	✓	✓
Online Audit	✓					✓
Process Efficiency				✓	✓	✓
Renewables	✓			✓	✓	✓
Restrooms				✓		

Nonresidential Programs	Springs Utilities	Black Hills Energy	Burlington Electric	Fort Collins	Snohomish County	Xcel Energy
Recommissioning/ Retro-Commissioning				✓		✓
Small Business		✓			✓	✓
Thermostat Setback		✓				
Water Heating		✓				
Total Nonresidential Offerings	8	8	8	20	16	18

Best Practices for Administering Successful DSM Programs

To identify program best practices, Cadmus reviewed published literature by third-party experts, government agencies, and nonprofit organizations, and assessed the relevancy and applicability of the literature’s cited best practices to Springs Utilities’ unique goals and circumstances. We applied our expertise and knowledge of the utility sector to further develop these best practices and to document implemented examples by the comparison utilities.

Best Practice: Develop a Comprehensive Program Implementation Plan that Details Program Design, Strategies, and Operation Processes.

A well-designed plan provides clear guidance for all participants and outlines program elements that may deter customer participation.⁸ From our extensive experience in evaluating energy efficiency programs and their materials, Cadmus developed the following list of best practices for program operations manuals and implementation plans:

- Clearly define program and implementer staff roles
- Clearly define all acronyms and include program staff contact information
- Clearly define eligibility requirements and program offerings (e.g., program measures and incentive structures)
- Provide step-by-step instructions for each program process
- Articulate the program theory and logic
- Clearly define all program systems (e.g., mention database software by name, and state who will use it and when in the process)
- Refer to the program website

⁸ Nexant and Cadmus. *Saving Energy and Money: How to Start, Expand, or Refine MOU Programs, a Guide to Best Practices for Energy Efficiency in Locally Governed Electric Service Areas in the State*. October 2011. Available online: http://www.seco.cpa.state.tx.us/resources/docs/ee_best_practices_guide.pdf.

- Include or refer to inspection and verification, quality assurance/quality control, and data collection protocols
- Include or refer to marketing materials.

Black Hills Energy and Xcel Energy each detail their program designs as part of energy efficiency plans they submitted to the Colorado Public Utilities Commission. The plans document program objectives, target markets, program offerings, market barriers, and implementation strategies. Burlington Electric Department was the only comparison municipal or publicly owned utility that published an in-depth energy efficiency plan with this level of detail. Snohomish County Public Utility District, Fort Collins Utilities, and Springs Utilities each published integrated resource plans; however, the level of detail needed for successful program implementation was not present in these documents.

Best Practice: Keep Program Offerings Simple and Streamlined

Overly complex program designs and participation processes that are not intuitive will discourage participation and limit success.⁹ When building or improving a DSM portfolio, many program administrators start with successful program approaches from other program administrators as a framework and tailor them to local conditions. Program models with a successfully demonstrated track record can ramp up quickly as the programs have established, clear messages, offerings, and participation processes that can be easily understood. Turnkey programs (e.g., appliance recycling, small business direct-install programs) can be launched quickly and deliver savings results within a relatively short time frame. Fort Collins Utilities, Xcel Energy, and Black Hills Energy each offer such turnkey programs, requiring little administrative effort.

Coordinating with other program administrators (at outside organizations) also can streamline processes for customers and generate opportunities for greater participation and savings. Specifically, coordinated program delivery for adjacent or overlapping utility territories allows for a more integrated approach to program design, a simpler marketing message, and the delivery of more uniform, straightforward offerings. Importantly, this can eliminate customer and trade ally confusion and lead to greater participation.

Fort Collins Utilities and Burlington Electric Department each partner with neighboring utility program administrators to offer their customers more expansive program offerings. As stated in its *2014 Energy Efficiency Annual Report*, Burlington Electric Department recognizes that much of its DSM success comes from effective working relationships with Efficiency Vermont, Vermont Gas Systems, and the Champlain Valley Weatherization Service. A cooperative relationship with these entities has helped all four organizations more effectively promote efficiency services and has added a noteworthy strength to their joint energy efficiency program offerings.

⁹ Schwimmer, A. and A. Fournier. *Energy Efficiency Quick Start Programs: A Guide to Best Practices*. April 2014. Available online: <http://www.seealliance.org/wp-content/uploads/Quick-Start-Best-Practices-041414-FINAL.pdf>

Best Practice: Leverage Trade Allies as Program Ambassadors

Growing and maintaining a robust network of reliable trade allies serves as a strategic investment that can alleviate the burden of administrative tasks, enhance the customer experience, and improve marketing and program awareness. The Energy Trust of Oregon—one of the nation’s leading program administrators dedicated to providing utility customers with low-cost, clean energy solutions—describes trade allies as “valued ambassadors in the field” because they often represent the utility through extensive interactions with customers.¹⁰ Countless best practice reviews and program evaluations conducted by Cadmus reveal that engaging the trade ally community proves critical to successful utility programs.

Using trade allies to market energy efficiency programs is a commonly accepted method to increase participation in efficiency programs.¹¹ Engaging trade allies to serve as an energy efficiency sales force provides an excellent outreach strategy that makes use of existing and well-established distribution networks to increase program cost-effectiveness. All of the comparison utilities leverage trade allies in their service territories to drive participation.

Program administrators can successfully engage trade allies by providing sales and marketing tools that make it easy to promote the programs directly to customers. This approach allows for consistent messaging and provides assurance that trade allies fully understand the program and can promote it accurately. All of the comparison utilities have a specific page on their websites or an online portal that includes contractor-facing program information, training resources, and marketing materials.

For example, Fort Collins Utilities encourages trade ally participation by hosting training workshops and providing materials (e.g., a program guide, rebate summary, steps for completing a project) through its Efficiency Works website.¹² Fort Collins Utilities continuously tries to identify optimal ways to achieve program savings through trade allies.

¹⁰ Energy Trust of Oregon. “We Appreciate the Job You Do.” Accessed February 2016. <http://energytrust.org/trade-ally/>

¹¹ Hartwell, Ray and R. Spring. Leverage a Regional Trade Ally Network To Help Vendors and Customers Connect with Varied Utility Efficiency Programs Across Multiple Closely-Packed Service Territories. 2010 ACEEE Summer Study on Efficiency Buildings, Pacific Grove, California, August 15-20, 2010. Available online: <http://www.aceee.org/files/proceedings/2010/data/papers/2088.pdf> .

¹² Efficiency Works is a collaborative campaign uniting the efficiency offerings of Estes Park, Fort Collins, Longmont, Loveland, and Platte River Power Authority. <http://efficiencyworks.prpa.org/>

In August 2015, Platte River Power Authority and E Source hosted a web conference for program administrators to get the most from their trade allies by offering:^{13, 14}

- An easy participation process
- A competitive advantage
- Customer leads and sales tools
- A good project experience (e.g., through support from program staff)
- Engaged customers
- Credibility (e.g., through a listing on the program website, cooperative marketing opportunities)

Additionally, many of the comparison utilities have staff (either employed internally or through a third-party implementation firm) dedicated to providing program support to participating trade allies. For example, Xcel Energy makes a trade relations manager available to assist trade allies with questions, update trade allies on program changes, and receive input on program operations.

Best Practice: Keep Trade Allies Well Informed Through Regular Communication and Education and Training Opportunities.

An industry-recognized best practice for program administrators (designed to ensure a knowledgeable trade ally network) offers ongoing technical training for contractors to ensure they remain up-to-date with current installation protocols.¹⁵ Maintaining tailored, regular communications with trade allies about energy efficiency programs serves as a best practice for sustaining trade allies' engagement and partnership. As discussed, all of the comparison utilities implement regular communications along with education and training opportunities for their trade ally networks. All of the comparison utilities help trade allies stay connected to their programs through regular program newsletters, trade ally websites, and direct contacts from program staff.

¹³ Platte River Power Authority is a not-for-profit wholesale electricity generation and transmission provider that delivers energy and services to its owner communities of Estes Park, Fort Collins, Longmont, and Loveland, Colorado, for delivery to their utility customers. Fort Collins Utilities offers programs independently and through the Platte River Power Authority.

¹⁴ E Source and Platte River Power Authority. Web Conference. *Get the Most from Your Trade Allies*. August 26, 2015. Available at: <https://www.esource.com/system/files/files/2015-08/ES-WC-2015-08-TradeAlly.pdf>

¹⁵ Nexant and Cadmus. *Saving Energy and Money: How to Start, Expand, or Refine MOU Programs, a Guide to Best Practices for Energy Efficiency in Locally Governed Electric Service Areas in the State*. October 2011. Available online: http://www.seco.cpa.state.tx.us/resources/docs/ee_best_practices_guide.pdf.

Best Practice: Proactively Address Market Barriers by Testing Innovative Delivery Channels for Hard-to-Reach Market Segments.

Successful DSM portfolios provide programs that change over time to accommodate the market and the introduction of new technologies.¹⁶ In recent years, it has become more common for utilities to develop specific delivery channels to address the unique challenges and circumstances of various customer groups. In its Third National Review of Exemplary Energy Efficiency Programs, the ACEEE found that program administrators increasingly target specific niche markets, such as the food service or hospital segments.¹⁷

Additionally, a common trend is for program administrators to offer small business direct-install programs with generous incentives to reach small businesses—typically a harder-to-reach market among nonresidential sectors. For example, Black Hills Energy’s Small Business Direct Install Lighting Program targets commercial customers with an average electric demand of 350 kW or less per year. Through the program, Black Hills Energy offers incentives of up to 70% of the installation and equipment costs for projects such as high-efficiency lighting upgrades, LED exit signs, occupancy sensors, lighting controls, and commercial refrigeration measures. The program is delivered through a turnkey energy efficiency firm, which conducts most of the program marketing, free on-site lighting assessments, and project installations.

Xcel Energy runs a similar program for small business customers with an annual peak demand of up to 100 kW. The program offers free direct installation services of LEDs and aerators in restroom and kitchen sinks.

¹⁶ U.S. Environmental Protection Agency and U.S. Department of Energy. *National Action Plan for Energy Efficiency. Chapter 6: Energy Efficiency Program Best Practices*. 2007. Available online: http://www.epa.gov/cleanenergy/documents/suca/napee_chap6.pdf.

¹⁷ Nowak, S., M. Kushler, P. Witte, and D. York. *Leaders of the Pack: ACEEE’s Third National Review of Exemplary Energy Efficiency Programs*. June 2013. Available online: <http://www.aceee.org/sites/default/files/publications/researchreports/u132.pdf>.

Program Concepts

Cadmus developed proposed residential and commercial program concepts for Springs Utilities to consider for future implementation. For each program, this section outlines a plan that provides high-level documentation of the general operations and delivery approach, including details on target markets and eligibility criteria, available measures, and marketing and outreach strategies.

Table 12 summarizes the key components of each individual program concept. Each outlined program plan includes a description of key activities and requirements that establish a program’s basic parameters.

Table 12. Program Plan Outline Parameters

Plan Component	Description
Program Eligibility	Defines prerequisites the applicants must meet to participate.
Marketing and Outreach Strategy	Describes the tactics, messaging, and channels for generating program awareness.
Program Offering	Outlines the requirements for program-qualifying measures.
Program Delivery	Describes the essential program functions and operational parameters.

Residential Efficiency Program

The Residential Efficiency Program offers discounted equipment costs to customers who seek to improve their homes’ energy efficiency and lower their utility bills. The program looks to help customers achieve immediate energy savings through installations of low-cost efficiency measures and by educating participants about methods to reduce energy consumption in their homes through the following optional energy audits:

- A free online energy audit
- A walkthrough energy audit
- A whole-house energy audit with diagnostic testing

Program Eligibility

Eligible participants include all residential customers whose homes are heated with electricity or natural gas provided by Springs Utilities. Table 13 lists additional eligibility requirements.

Table 13. Participant Eligibility Parameters for the Residential Efficiency Program

Eligibility Component	Requirements
Customer Type	Residential
Building Type	Single-family or multifamily up to four units
Building Vintage	Existing buildings*
Building Ownership	Homeowners or tenants with owner approval

*Some measures may qualify in a new construction application.

To reach customers with a high need for energy-efficient home retrofits, Cadmus recommends Springs Utilities consider targeting the following customer segments:

- Those living in older housing stock (i.e., greater than 10 years old)
- Those with above average consumption
- Those who contact Springs Utilities with high bill complaints
- Those with electric water heat

Marketing and Outreach Strategy

The Residential Efficiency Program serves as an expansion of the Springs Utilities’ existing online audit and residential prescriptive rebates. Initial marketing typically focuses on building awareness and program interest to drive customer participation. Marketing strategies and tactics can include direct mail, brochures, radio ads, social media, online ads, e-mail blasts, newspaper ads, community events, and Google search engine marketing. Additionally, cross-promotional opportunities exist through the Appliance Recycling Program and the Residential Behavior Savings Program.

Participating trade partners also are important to building program awareness, referrals, and participation. Cadmus recommends Springs Utilities develop marketing tools to recruit, educate, and retain quality auditors and contractors to promote the program to homeowners. To support trade ally recruitment and retention efforts, we recommend Springs Utilities develop outreach materials (i.e., brochures, training materials, and newsletters) to encourage auditors and contractors to join and become active, ongoing participants in the Residential Efficiency Program. Marketing materials emphasize the benefits of participating in the program, promoting a whole-house approach to energy efficiency as a successful business model.

Program Offering

The Residential Efficiency Program offers downstream, prescriptive incentives for qualifying energy-saving measures, along with self/direct installation of low-cost efficiency measures, as indicated in Table 14. Although the program encourages customers to participate in at least one of the three home energy audits, audit participation is not required to qualify for the prescriptive rebates.

Table 14. Equipment Specifications for the Residential Efficiency Program

Measure	Qualifications
Self-Install/Direct-Install Measures	
Electroluminescent nightlight	
LEDs	Screw base, ENERGY STAR, general service, and specialty
High-efficiency bathroom faucet aerators	1.5 GPM
High-efficiency kitchen faucet aerator	1.5 GPM
High-efficiency showerheads	1.5 GPM
Programmable thermostat	
Showerstart	Thermostatic shower restriction valve
Water heater tank wrap	R-10

Measure	Qualifications
Water heater thermostat setback	Turndown to 120 degrees
Prescriptive Rebate Measures	
Ceiling/attic insulation	Tier 1: R-38; Tier 2: R-49; Tier 3: R-60
Duct sealing and insulation	R-8 duct insulation
Floor insulation	Tier 1: R-30; Tier 2: R-38
Central air conditioner—maintenance	Tune up
Central air conditioner—installation	Quality installation, ENERGY STAR
High-efficiency evaporative cooler	
Smart thermostat	Web-enabled with occupancy sensing
Freezer	ENERGY STAR

Additionally, Cadmus recommends Springs Utilities offer increased incentives (e.g., 10% bonus rebate) for bundled measures, specifically smart thermostats and central air conditioners. To qualify for increased incentives, the customer (or homebuyer in a new construction application) would be required to sign up to participate in the Residential Demand Response Program. Springs Utilities should partner with builders and contractors to market these increased incentives to prospective homebuyers and retrofit customers.

Program Delivery

The Residential Efficiency Program offers three audit paths:

- Free online energy audit
- Walkthrough energy audit
- Whole-house energy audit with diagnostic testing

All residential customers, independent of their audit participation, are eligible for the program’s prescriptive rebates. Customers submit program documentation online or by mail to apply for these rebates. Supporting program documents include a user-friendly rebate application, proof of purchase, and proof of installation. To streamline the application process and to increase customer satisfaction, Cadmus recommends Springs Utilities encourage participating installation contractors to assist their customers in submitting this program documentation.

Free Online Energy Audit

Springs Utilities currently provides the free online energy audit service through its website, advertised as the Energy Depot audit tool. This tool uses information customers input about the size and characteristics of their house, along with customer billing information, to inform potential savings opportunities. The online audit could refer customers to the program’s whole-house energy audit and prescriptive rebates as well as to Springs Utilities’ other residential energy efficiency programs. Customers who complete the online energy audit may be able to request a mailed kit of low-cost, energy-efficient measures, which they independently install upon receipt.

Walkthrough Energy Audit

During the walkthrough energy audit, an on-site visual inspection of the home, an auditor works directly with customers to determine which energy-saving measures will make their homes more energy-efficient. Auditors install a suite of energy-saving items (e.g., LED bulbs, high-efficiency showerheads, faucet aerators); so customers immediately begin saving energy and money. During the walkthrough energy audit, the auditor educates participants about how to manage their home’s energy use, recommends energy-efficient home improvements, and refers customers to the program’s whole-house energy audit and prescriptive rebates, which offset the cost of recommended upgrades.

Whole-House Energy Audit

A participating auditor or contractor conducts the whole-house energy audit, provide low-cost measures (if opportunities still exist), and provides customers with an in-depth understanding of how their home uses energy. More comprehensive than the online and walkthrough audits, the whole-house energy audit includes diagnostic testing (with a blower door and an infrared scan) to quantify and more precisely identify areas in need of improvement throughout a home.

Participants receive an energy-savings report that outlines cost-effective, energy-efficiency recommendations participants could adopt to achieve energy savings in their homes; the Residential Efficiency Program rebates help offset the cost of those upgrades.

Low Income Residential Efficiency Program

The Low Income Residential Efficiency (Low Income) Program offers no-cost, energy efficiency education and equipment to income-qualified households. The program seeks to help customers lower their energy bills through installations of efficiency measures and to educate participants about ways they can reduce energy consumption in their homes through a free, in-home energy audit.

Program Eligibility

All residential, low-income customers whose homes are heated with electricity or natural gas provided by Springs Utilities become eligible to participate. To qualify as low income, the customer’s household income must be at or below 200% of the Federal Poverty Income Guidelines. Customers who qualify for the federally funded Low Income Energy Assistance Program and/or Supplemental Security Income automatically qualify for the Low Income Program. Tenants must obtain landlord approval to participate in the program. Table 15 lists additional eligibility requirements.

Table 15. Participant Eligibility Parameters for the Low Income Program

Eligibility Component	Requirements
Customer Type	Residential
Building Type	Single-family, multifamily up to four units, and mobile/manufactured/modular homes
Building Vintage	Existing buildings
Building Ownership	Homeowner or tenant with owner approval

Marketing and Outreach Strategy

The Low Income Program continues Springs Utilities’ existing low-income program offerings. Marketing typically focuses on building awareness and program interest to drive customer participation. Marketing strategies and tactics can include direct mail, brochures, online ads, e-mail blasts, and community events that target income-qualified customers.

Local weatherization agencies and community organizations also prove important to building program awareness, referrals, and participation among the low-income population. Springs Utilities should continue to partner with low-income community groups to market the program directly to income-qualified customers. Cadmus recommends Springs Utilities develop marketing tools to assist these partners in recruiting and educating qualified participants. Marketing materials emphasize the benefits of program participation, including reductions in energy costs (to make utility bills more affordable) and increased home comfort.

Program Offering

The Low Income Program offers comprehensive home energy audits and installation of efficiency measures at no cost to income-qualified homeowners and tenants.¹⁸ Participants may qualify for any combination of the measures listed in Table 16.

Table 16. Equipment Specifications for the Low Income Program

Measure	Qualifications
Electroluminescent nightlight	
LEDs	Screw base, ENERGY STAR, general service and specialty
High-efficiency bathroom faucet aerators	1.5 GPM
High-efficiency kitchen faucet aerator	1.5 GPM
High-efficiency showerheads	1.5 GPM
Programmable thermostat	
Showerstart	Thermostatic shower restriction valve
Water heater tank wrap	R-10
Water heater thermostat setback	Turndown to 120 degrees
Ceiling/attic insulation	Tier 1: R-38; Tier 2: R-49; Tier 3: R-60
Duct sealing and insulation	R-8 duct insulation
Refrigerator replacement	
Furnace replacement	80% efficient unit; replacement eligible if existing unit is 20+ years old or operating at ≤60% efficiency

Program Delivery

Springs Utilities should continue to use a third-party implementation firm, specializing in low-income weatherization, to implement the program as a turnkey service. The implementation contractor should

¹⁸ Standard-income landlords may be asked contribute to the costs of the home improvements.

be responsible for recruiting participants, verifying customers' income eligibility, conducting energy audits, scheduling installation of qualifying equipment, and tracking and reporting participation to Springs Utilities.

Once the implementation contractor determines a customer meets the program's income requirements, an auditor will conduct an on-site visual inspection of the home to determine which energy-saving measures will make the home most energy-efficient. The auditor installs a suite of energy-saving items while on-site (e.g., LED bulbs, high-efficiency showerheads, faucet aerators); so customers immediately begin saving energy and money.

During the energy audit, the auditor provides participants with educational information about how to manage their home's energy use and determines eligibility for more comprehensive home improvements (e.g., insulation upgrades, appliance replacements). If the customer qualifies, the implementation contractor works with the customer to schedule a time for certified technicians to complete the remaining upgrades.

Upstream LED Lighting Program

The Upstream LED Lighting Program is designed to reach residential customers through retail outlets. The program consists of a buy-down strategy that provides consumers with incentives to facilitate the purchase of LED lighting products. The program seeks to accelerate the adoption of proven energy-efficient technologies by providing customers cost-competitive access to these lighting options.

Program Eligibility

Though the Upstream LED Lighting Program targets residential customers, it is available to all customers via retailers located in Springs Utilities' territory. The upstream incentive mechanism does not allow for customer eligibility screening.

Marketing and Outreach Strategy

The Upstream LED Lighting Program continues Springs Utilities' current upstream lighting discounts. To increase awareness and adoption of LED lighting products, Cadmus recommends that program marketing includes in-store advertising and point-of-purchase marketing materials (e.g., aisle violators, end cap displays), continues promotion of the program through the Springs Utilities' website and through mass media advertising through radio and print channels, as program needs dictate.

Successful program delivery relies on lighting manufacturers to source eligible products and on retailers to market and sell these products to customers. To engage these trade partners, Cadmus recommends Springs Utilities provide ongoing education for participating manufacturers, retailers, and their sales personnel about program benefits and qualifying measures. Springs Utilities would continue to partner with a wide variety of retailers, including big-box stores, chain stores, grocery stores, discount stores, and small independent retailers.

Program Offering

The Upstream LED Lighting Program offers upstream discounts on a wide range of eligible LED lighting products, as listed in Table 17. The incentive varies depending on the type of bulb and the manufacturer/retailer partner. The offering focuses on encouraging customers to purchase and install LED lighting products, which have the highest technical potential in the market.

Table 17. Equipment Specifications for the Upstream LED Lighting Program

Measure	Qualifications
General service LEDs	Screw base, ENERGY STAR
Specialty LEDs	Screw base, ENERGY STAR

Program Delivery

The Upstream LED Lighting Program motivates customers to purchase LEDs by offering in-store retail discounts, provided through Springs Utilities’ collaboration with bulb manufacturers and retailers. Springs Utilities distributes program funds to participating manufacturers to buy down qualifying LEDs.

Customers need not apply to participate in the Upstream LED Lighting Program—the customer automatically receives the discounted price for eligible products at the cash register.

Appliance Recycling Program

The Appliance Recycling Program is designed to eliminate old, inefficient refrigerators, freezers, and room air conditioners from use and to prevent such equipment from being sold in a secondary market. The program offers financial incentives and free removal services to customers who safely dispose of these old and inefficient appliances. Appliances are disposed of in an environmentally responsible manner by third-party, certified agents.

Program Eligibility

The Appliance Recycling Program primarily targets residential electric customers; however, commercial customers with residential-sized equipment may also be eligible to participate. Table 18 outlines the customer eligibility requirements.

Table 18. Participant Eligibility Parameters for the Appliance Recycling Program

Eligibility Component	Requirements
Customer Type	All
Building Type	Single-family, multifamily, and commercial properties
Building Vintage	Existing buildings

Marketing and Outreach Strategy

The Appliance Recycling Program targets customers in two markets: those who currently own and operate secondary equipment; and those replacing primary appliances with new equipment. One of the

program’s key objectives is to prevent customers who currently have only one refrigerator from retaining their existing units despite purchasing new ones.

To target customers purchasing new appliances, Cadmus recommends Springs Utilities work with local appliance retailers to identify and recruit potential program participants who intend to replace or dispose of their existing equipment and to provide ongoing education for retailers and their sales personnel regarding the recycling program.

To target customers who currently own and operate secondary equipment, Cadmus recommends Springs Utilities promote the program through a variety of channels, including direct mail, mass media advertising, point-of-purchase materials (e.g., posters and flyers), and Springs Utilities’ website. Additionally, cross-promotional opportunities exist through the Residential Efficiency Program and the Residential Behavior Savings Program.

Program Offering

The Appliance Recycling Program includes free pick-up and disposal of equipment as well as incentives for each of three qualifying equipment measures: refrigerators, freezers, and room air conditioners. As shown in Table 19, equipment must be operational at the time of pick-up to qualify for a program incentive.

Table 19. Equipment Specifications for the Appliance Recycling Program

Measure	Qualifications
Refrigerators	Secondary units; must be 10 cubic feet or larger and in working order
Freezers	Primary units (without replacement); must be 10 cubic feet or larger and in working order
Room air conditioners	Retired units; must be in working order

Program Delivery

Cadmus recommends using a third-party implementation firm specializing in appliance recycling to implement the program as a turnkey service. The program contractor would be responsible for scheduling, picking up and verifying the eligibility of each recycled unit, transporting appliances to a recycling facility, recycling applicable components, safely disposing of remaining components, and tracking and reporting participation to Springs Utilities.

Residential Behavior Savings Program

The Residential Behavior Savings Program motivates behavior change and provides relevant, targeted information to customers through regularly scheduled mailed and/or e-mailed home energy reports. The home energy reports provide energy usage insights that drive customers to take action, including the following:

- A comparison against a group of similarly sized and equipped homes in the area
- Usage history

- Goal-setting tools
- Recommendations to implement energy-saving measures and actions
- Progress trackers

A third-party implementation firm generates the home energy reports by selecting the most appropriate information for each particular household, ensuring the maximum relevancy of and high response rates to recommendations.

Program Eligibility

The Residential Behavior Savings Program targets all residential customers. Table 20 lists the program’s customer eligibility requirements.

Table 20. Participant Eligibility Parameters for the Residential Behavior Savings Program

Eligibility Component	Requirements
Customer Type	All
Building Type	Single-family or multifamily
Building Vintage	All
Building Ownership	Homeowner

Marketing and Outreach Strategy

The Residential Behavior Savings Program does not require a marketing strategy as participants are randomly selected for automatic enrollment. The third-party implementation firm conducts direct outreach with participants via the home energy reports.

Program Offering

The Residential Behavior Savings Program provides education and recommendations to save energy via mailed and/or e-mailed home energy reports. The reports aim to motivate customers to reduce their energy consumption through the adoption of low-/no-cost tips and through participation in Springs Utilities’ other residential energy efficiency programs.

Program Delivery

Cadmus recommends using a third-party implementation firm, specializing in behavior-savings programs, to implement the program as a turnkey service. The program contractor could be responsible for distributing the home energy reports, customizing the reports to specific customer segments, managing program data, and tracking and reporting participation and savings to Springs Utilities.

A third-party implementation firm would randomly select a sample of customers to automatically enroll in the program. The firm would randomly assign participants to the treatment or control group: treatment customers would receive home energy reports. The program provides an opt-out option for customers who no longer wish to receive home energy reports. Control customers do not receive a

report. The implementation firm would compare energy savings achieved by the treatment customers to those achieved by the control customers.

Residential Demand Response Program

The Residential Demand Response Program is designed to allow Springs Utilities to remotely control a customer’s cooling load during periods of high demand. The program offers financial incentives to residential participants who allow Springs Utilities to control operations of their central air conditioners on days when the system approaches its peak (i.e., hot summer days).

Program Eligibility

All residential electric customers with central air conditioning are eligible to participate. Table 21 lists additional eligibility requirements.

Table 21. Participant Eligibility Parameters for the Residential Demand Response Program

Eligibility Component	Requirements
Customer Type	All
Building Type	Single-family or multifamily
Building Vintage	All
Building Ownership	Homeowner

Marketing and Outreach Strategy

The Residential Demand Response Program continues Springs Utilities’ current ECO Program. In 2015, the ECO Program became fully subscribed. Springs Utilities markets the program via the program website and through other low-cost channels (e.g., bill inserts, e-mail marketing). If the program is deemed cost-effective, Springs Utilities could target multifamily communities, expanding the program to an underserved market. Additionally, cross-promotional opportunities exist through the Residential Efficiency Program.

Program Offering

The Residential Demand Response Program includes free installation of a web-enabled programmable thermostat (which allows Springs Utilities to control the unit’s temperature settings online) and a financial incentive for participating in the program.

Program Delivery

The Residential Demand Response Program allows Springs Utilities to control operations of participating customers’ central air conditioners on days when the system approaches its peak (generally, hot summer days when Springs Utilities’ load is expected to reach near-peak capacity).

Upon enrollment, a third-party contractor installs a program-eligible thermostat in participating homes at no cost to the customer. Once the installation has been completed, customers can update their preferred temperature settings online, and Springs Utilities can access their thermostat settings.¹⁹

During an identified peak period, Springs Utilities sends a signal to interrupt participating customers’ central air conditioning loads. Customers may have their air conditioning controlled for up to three hours on a control day, typically between 4:00 p.m. to 7:00 p.m. Springs Utilities usually increases customers’ temperature settings by four degrees during these periods.

To capture additional behavioral savings during peak periods, Springs Utilities may contact participating customers directly via automated phone calls or email to remind customers of the conservation event and provide tips for additional electric savings during that time (i.e., turn off lights in unoccupied rooms, do not run clothes washers or dishwashers).

Small Business Lighting Program

The Small Business Lighting Program is designed to encourage small business customers to install affordable, energy-efficient lighting products at their business facilities. The program offers a free lighting audit, a consultation on energy-efficient lighting upgrades, and direct installation of eligible products by a third-party contractor. In addition to lighting, the customer could be informed of other energy-saving opportunities available for rebates through Springs Utilities’ other nonresidential energy-efficiency programs.

Program Eligibility

The Small Business Lighting Program targets small, commercial businesses. Utility sponsors typically define “small businesses” as those with facilities smaller than 20,000 square feet or with less than a monthly peak average demand of 100kW. The segment typically includes small offices and retail businesses. Table 22 outlines suggested customer eligibility requirements.

Table 22. Participant Eligibility Parameters for the Small Business Lighting Program

Eligibility Component	Requirements
Customer Type	Commercial
Building Type	Small commercial <20,000 square feet or <100 kW average monthly peak demand
Building Vintage	Existing buildings
Building Ownership	Building or business owners; landlords of Springs Utilities customers

¹⁹ The program provides an opt-out option for customers that choose to no longer participate in conservation events.

Marketing and Outreach Strategy

The Small Business Lighting Program’s initial marketing objective is to build awareness and program interest to drive small business customer participation. Marketing strategies and tactics can include bill inserts, email blasts, newsletters, and mass media advertisements.

Participating trade partners are also important to building program awareness, referrals, and participation. Cadmus recommends Springs Utilities rely primarily on trade partners (e.g., installation contractors or a third-party implementation contractor) to promote the program directly to small business customers. To assist with program marketing efforts Springs Utilities could provide these trade partners with marketing materials and educational and sales training.

Program Offering

Typical elements of a small business lighting program include a free lighting audit for participating customers, as well as discounts on energy-efficiency lighting products and the direct installation of implemented lighting upgrades. Table 23 lists the discounted lighting measures with achievable potential that could be included in the program.

Table 23. Equipment Specifications for the Small Business Lighting Program

Measure	Qualifications
T-8 fluorescent lamp replacements (high-performance or reduced wattage lamps)	Efficacy ≥ 90 (lm/w), Lamp life ≥ 24,000, CRI ≥ 80, and other CEE specifications
LED screw base lamps	ENERGY STAR
LED fixtures/TLED	Design Light Consortium
Exit signs	LED
Occupancy sensors	

Program administrators typically structure lighting discounts for small business programs in one of two ways:

- Participants select from a short list of co-paid package options (e.g., a predetermined package of measures available at a discounted cost [i.e., \$150]); or
- Participants select upgrades with which they choose to move forward, drawn from a list of recommended options, and the utility sponsor discounts a large portion of the project’s cost (e.g., at least 70%).

Program Delivery

During the lighting audit (an on-site visual inspection of the facility), a participating trade partner recommends energy-saving lighting upgrades and works directly with participants to determine lighting measures that will make their business more energy efficient. Once participants decide which measures to install, the trade partner installs those measures; so customers immediately begin saving energy and money. To streamline the paperwork process and to increase customer satisfaction, participating trade partners discount the project to customers (either requiring just a co-pay or just the project’s cost less

the utility discount) and then directly apply to Springs Utilities for reimbursement for program-eligible projects.

Upon close-out of the participation process, the trade partner refers customers to Springs Utilities’ other commercial energy efficiency programs (i.e., C&I Prescriptive Rebate Program) to encourage deeper energy savings.

C&I Prescriptive Rebate Program

The C&I Prescriptive Rebate Program offers prescriptive rebates to encourage nonresidential customers to purchase and install high-efficiency equipment.

Program Eligibility

The program is available to all nonresidential customers. To reach customers with a high potential for savings, we recommend Springs Utilities consider targeting small business data and/or server centers. Table 24 lists additional eligibility requirements.

Table 24. Participant Eligibility Parameters for the C&I Prescriptive Rebate Program

Eligibility Component	Requirements
Customer Type	Commercial and industrial
Building Type	Nonresidential facilities
Building Vintage	All*
Building Ownership	Building or business owners; landlords of Springs Utilities customers

*Although new construction projects qualify for C&I Prescriptive Rebate Program incentives, Cadmus recommends Springs Utilities continue to monitor market potential for a standalone Design Assistance Program in future program years.

Marketing and Outreach Strategy

The C&I Prescriptive Rebate Program expands upon Springs Utilities’ current prescriptive rebate offerings for nonresidential customers. Marketing strategies and tactics can include direct mail, brochures, radio ads, social media, online ads, e-mail blasts, newspaper ads, community events, and Google search engine marketing. Additionally, cross-promotional opportunities exist through the Small Business Lighting Program.

Participating trade partners have significant influence on business customers’ purchasing decisions. Cadmus recommends that Springs Utilities develop marketing tools to recruit, educate, and retain quality trade partners (e.g., contractors, retailers, vendors) to promote the program to business customers. To support trade ally recruitment and retention efforts, we recommend Springs Utilities develop outreach materials (e.g., brochures, training materials, newsletters) to encourage trade partners to join and become active ongoing participants in the C&I Prescriptive Rebate Program.

Additionally, Cadmus recommends Springs Utilities develop marketing materials and processes to target specific customer segments with a high savings potential (e.g., small businesses, data/server centers).

These materials could utilize marketing messages proven to resonate among these segments and to highlight program components specific to the target market.

Program Offering

The C&I Prescriptive Rebate Program offers downstream incentives for a wide range of energy efficiency measures, as listed in Table 25. Tenants must obtain the building owner’s approval for any permanently installed measures.

Table 25. Equipment Specifications for the C&I Prescriptive Rebate Program

Measure	Qualifications
Lighting Measures	
T-8 fluorescent lamp replacements (high-performance or reduced wattage lamps)	Efficacy ≥ 90 (lm/w), Lamp life ≥ 24,000, CRI ≥ 80, and other CEE specifications
Interior LEDs	Design Light Consortium
Exterior LEDs	Design Light Consortium
Exit sign	LED or photo-luminescent (retrofit only)
Occupancy sensors	Minimum of 150 watts per control
Daylighting controls	Minimum of 150 watts per control
HVAC Measures	
Smart thermostats	Web-enabled with occupancy sensing
Air conditioning	CEE unitary air conditioner specifications
Direct evaporative cooling	Must remove existing AC system
Chiller	Must be 5% more efficient than 2009 IECC efficiency requirements in kW/Ton and/or IPLV
Motor	CEE Premium-Efficiency Plus (1-200 horsepower [HP])
Envelope Measures	
Ceiling insulation	Tier 1: R-20 c.i.; Tier 2: R-30 c.i.
High-efficiency windows	Tier 1: U-0.55; Tier 2: U-0.40
Server Measures	
Computers	ENERGY STAR
Energy-efficient servers	ENERGY STAR

Program Delivery

Any nonresidential customer that purchases and installs qualifying high-efficiency measures is eligible for the program’s prescriptive rebates. Customers participating in the program submit a program rebate application to Springs Utilities along with documentation on the equipment purchase/installation. The participating trade partner verifies that customers and measures meet all applicable program eligibility requirements.

C&I Custom Rebate Program

The C&I Custom Rebate Program promotes energy efficiency products and practices among commercial and industrial customers. The program’s custom incentive structure offers energy users the flexibility to

install a broad range of high-efficiency equipment not covered through the C&I Prescriptive Rebate Program.

Program Eligibility

The C&I Custom Rebate Program is available to all nonresidential customers. To reach customers with a high potential for savings, Cadmus recommends Springs Utilities consider targeting data and/or server centers and industrial manufacturers. Table 26 lists additional eligibility requirements.

Table 26. Participant Eligibility Parameters for the C&I Custom Rebate Program

Eligibility Component	Requirements
Customer Type	Commercial and industrial
Building Type	Nonresidential facilities
Building Vintage	All
Building Ownership	Building or business owners; landlords of Springs Utilities customers

Marketing and Outreach Strategy

The C&I Custom Rebate Program continues Springs Utilities’ existing business custom rebates. Marketing strategies rely on direct contact with managed commercial accounts via in-person visits, seminars at trade associations, direct mail, and placing ads in association newsletters and other targeted media outlets.

Participating trade partners have significant influence on business customers’ purchasing decisions. Cadmus recommends Springs Utilities develop marketing tools to recruit, educate, and retain quality trade partners (e.g., contractors, vendors) to promote the program to business customers. To support trade ally recruitment and retention efforts, we recommend Springs Utilities develop outreach materials (e.g., brochures, training materials, newsletters) to encourage trade partners to join and become active, ongoing participants in the C&I Custom Rebate Program.

Additionally, we recommend Springs Utilities develop marketing materials and processes to target specific customer segments with a high potential for savings (e.g., data/server centers, industrial manufacturing). We recommend designing these materials using marketing messages proven to resonate among these segments and to highlight program components specific to the target market.

Program Offering

The program offers incentives for any measure or project not included in Springs Utilities’ C&I Prescriptive Rebate Program due to the size, scope, or unique characteristics of the energy efficiency equipment or measure. Table 27 lists specific program measures.

Table 27. Equipment Specifications for the C&I Custom Rebate Program

Measure	Qualifications
HVAC Measures	
Pump and fan system optimization	Variable speed drive
Motor replacement	Premium Efficiency; 250-500 HP
Automated ventilation variable frequency drive control	Demand-controlled ventilation; occupancy sensors and CO ₂ sensors
Custom HVAC improvements and controls	Enhanced custom controls (e.g., direct digital controls with enhanced functions)
Fuel switching	Conversion from electric to natural gas systems
Refrigeration Measures	
Refrigeration commissioning	New and existing buildings
Refrigeration case replacement	Low and medium temperature
Floating head pressure controls	
Compressed Air Measures	
Air compressor optimization	
Variable speed compressor systems	
Other Industrial Measures	
Synchronous belts	
Data Center Measures	
Air flow optimization	Optimization hot or cold aisle configuration and/or air flow containment (e.g., strip curtains or rigid enclosures)
Server optimization	Virtualization, consolidation, and/or decommissioning
Cooling equipment improvements	Upgrade of HVAC equipment, install/optimize economizer, and/or install supplemental cooling equipment (e.g., misters, foggers, or ultrasonic humidifiers)

Program Delivery

Operations for the C&I Custom Rebate Program vary, depending on the size and type of project customers plan to install. Prior to installation, customers submit project specifications and all applicable program documentation and then obtain Springs Utilities’ approval prior to implementing a custom project. Springs Utilities works with customers to determine equipment eligibility, measurement and verification processes, and potential rebate amounts prior to a project’s beginning.

Once projects have been implemented, the customer submits incentive claims along with all necessary documentation to Springs Utilities, which reviews the application; a qualified engineer verifies engineering calculations are correct prior to payment.

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