APPENDIX B

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Self-Direct Programs for Large Energy Users

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Introduction

Energy efficiency programs are largely paid for by ratepayers in the form of a small fee on their bills or a small amount embedded in their rates (an "energy efficiency fee" for purposes of this paper). These fees are then aggregated to fund cost-effective energy efficiency programs and projects across all sectors. *Self-direct programs* allow some customers, usually large industrial or commercial ones, to "self-direct" those fees directly into energy efficiency investments in their facilities instead of into a broader aggregated pool of funds. *Opt-out programs*, on the other hand, allow large customers to fully opt out of paying their energy efficiency fees with no corresponding obligation to make energy efficiency investments on their own. While self-direct programs can be, if properly-structured, effective tools to capture industrial energy efficiency, opt-out programs are never appropriate policy tools for doing so.

Like other utility system resources, energy efficiency is a resource that can benefit all users and is paid for by all users. However, many states do not fully treat efficiency as a resource but rather as a customer benefit. Against this backdrop, some industrial and large commercial customers have contended that they should not have to pay energy efficiency fees. Their reasoning includes four main perceptions: (1) program offerings do not meet their needs; (2) energy efficiency fees are sometimes subjected to "legislative raids," in which lawmakers co-opt the funds to cover budget deficits; (3) their payment of the fees subsidizes other customer classes; and (4) as a matter of business practice, they will invest in all cost-effective energy efficiency for their facilities on their own anyway, and so paying for programs is unnecessary. For more information on these claims, see Chittum (2011).

Due in large part to these concerns being expressed by industrial customers, many states developed self-direct and opt-out provisions. Of the 41 states in the United States that have energy efficiency fees, 24 have some sort of self-direct or opt-out provision in place. While opt-out programs allow a customer to avoid paying their energy efficiency fee entirely, with no requirement that energy efficiency investments are made in exchange, self-direct programs typically at least assume or require that customers make their own energy efficiency investments in exchange for an exemption of or credit against their energy efficiency fees. Self-direct program administrators often employ at least minimal efforts to measure and verify energy efficiency savings.

Unfortunately, most of these self-direct programs, and all of the opt-out programs, are not structured to maximize cost-effective energy efficiency and ensure that retained energy efficiency fees are used in a manner that benefits all users of a given public utility system. Opt-out and poorly structured self-direct programs cannot claim with certainty that they are achieving energy efficiency investments equal to that which would have been achieved had the customers remained within traditional energy efficiency programming, or that the industrial customer is being well-served by the program. Neither can they claim that the industrial efficiency investments are cost-effective.

Fortunately, self-direct programs can be structured to yield cost-effective energy efficiency savings and truly yield a public good of greater energy efficiency. In some particular cases, well-structured self-direct programs can offer certain tools and a level of flexibility that helps overcome long-standing barriers to greater energy efficiency in the industrial sector. When coupled with strong oversight and extensive measurement and verification of claimed savings, these programs can serve an entire public utility system very well. Specific examples of such programs are discussed later in this paper.

States that do treat energy efficiency as a resource understand that energy efficiency is a resource that benefits all users, so energy efficiency deployed anywhere in a system benefits everyone, regardless of where the actual energy efficiency investment was made. The industrial sector offers some of the most cost-effective energy efficiency available, and states that work to capture that potential (through programs funded by energy efficiency fees, self-direct programs, or a combination of both) are best positioned to provide their energy users with the benefits of increased industrial energy efficiency.

Allowing large customers to opt out of energy efficiency fees and programs or self-direct their funds without substantial oversight by regulators or adherence to cost-effectiveness tests, as is found in programs around the country, is unfair to other customers who would benefit from cost-effective energy efficiency investments made anywhere in the system. It is critical, then, that state regulators and policymakers, as representatives working on behalf of all of the state's residents, work to develop offerings to large energy consumers that are still fair to all other classes of customers.

The Opt-Out/Self-Direct Continuum

Today, 24 states with energy efficiency fees have some option that exempts large energy consumers from paying all or part of their energy efficiency fees or to self-direct the spending of those fees. Opt-out programs are those that simply exempt customers from their energy efficiency fees and require no investment in energy efficiency in exchange. Self-direct programs are called "self-direct" because they allow customers to self-direct some or all of their energy efficiency fees instead of paying into the aggregated pool.

Opt-out and self-direct programs are typically designed by utilities in concert with their regulatory bodies, though legislative bodies sometimes stipulate how such programs ought to be structured. Since no one model prevails, states and utilities have developed a wide array of program structures and approaches. Appendix III of Chittum (2011) offers details of every known opt-out or self-direct program currently operating in the US. Opt-out programs specifically are not effective ways to capture energy efficiency and thus warrant no additional discussion.

Self-Direct Programs

Self-direct programs come in many different flavors, but generally have four common elements to qualify them as self-direct programs:

- **They define who is eligible**, either by setting an annual kilowatt-hour consumption minimum threshold or an average megawatt demand minimum threshold, or establishing an entire sector or

tariff schedule (industrial, transmission customers—usually those representing the largest energy demand) as eligible.

- **They offer some "relief" from energy efficiency fees** by offering an exemption from, rebate against, escrow of, or credit to the energy efficiency fees paid by the participating customer.
- **They are officially sanctioned and administered** by a utility, public service commission, or state energy department.
- **They expect some energy savings in return** by assuming, requesting, or requiring that the participating customer invest some or all of the saved money back into energy efficiency projects on site.[1]

Not all self-direct programs are created equal and not all are fair and prudent uses of public funds. However, some self-direct programs have been thoughtfully developed by utilities and states and serve their large industrial customers well, in additional to the public at large.

Best Practices

Effective program design depends upon many factors unique to the state or program administrator. There are many programs that are good at what they do. The best self-direct programs encourage equal or greater amounts of energy savings through the self-direct option than they would have otherwise achieved through traditional programs offerings, or acquire savings of similar cost-effectiveness as more traditional industrial energy efficiency programs. These programs generally:

- Develop a program structure that allows facility managers to treat their energy efficiency fee payments as dedicated funds for energy efficiency, either through dedicated escrow accounts, rebates earned only upon project completion, or rate credits earned concurrently with measurable energy efficiency investments and/or energy savings,
- Include a mechanism to recoup paid funds from self-direct customers if it is determined that savings were claimed erroneously or if planned savings did not actually occur.
- Collect and establish self-direct customers' baseline energy use data.
- Focus on energy savings rather than funds expended towards energy efficiency, so that each self-direct customer is held accountable to a certain level of energy savings rather than a level of spending.
- Measure and verify all claimed savings, using the same standards for data collection as industrial energy efficiency fee-funded energy efficiency programs.
- Retain a portion of a customer's energy efficiency fees to ensure self-direct customers contribute to funding a program's administrative costs and other prioritized program costs (such as low-income programming or market transformation) that all other customer classes pay for via their energy efficiency fees.

[1] For programs that allow industrial customers to aggregate multiple sites to qualify for a self-direct program, the energy efficiency investments are often made at only one or some sites, and the customer may use their aggregated savings from all sites to pay for the investments at one or some of their sites.

- Generally do not allow credit for efficiency investments made prior to the commencement of a self-direct program.
- Offer self-direct customers multi-year time frames (e.g., 4 years) in which to expend aggregated energy efficiency fees.
- Make any unused fees available to other customers for cost-effective projects.
- Employ the same cost-effectiveness tests for self-direct projects as are used for other fee-supported programs, and develop a reliable account of the cost of saved energy within the program.

While no self-direct program today features all ten of these aspects, many feature at least seven or eight. What follows are descriptions of several of the best self-direct programs in place today, all of which can confidently state to all of their customers that their participating self-direct customers are doing their part to help acquire cost-effective energy efficiency for all users of the system.

Examples of Self-Direct Programs

The following descriptions summarize some of the better self-direct programs in the United States. For additional details on specific elements of good self-direct language, refer to Appendix II in Chittum (2011).

Xcel Energy

Xcel Energy runs its self-direct program like any other industrial offering. The same staff offer custom, prescriptive, and self-direct programs to industrial and large commercial customers with average demand greater than 2MW and annual consumption greater than 10 GWh. Several hundred customers are large enough to qualify for the self-direct program, but less than 0.5% have chosen to actually self-direct. Ten self-direct projects were completed in 2010.

Self-direct customers continue to pay their assigned energy efficiency fee, and self-direct projects are reimbursed through a rebate. Customers may earn rebates of up to 50% of the incremental project costs, either $525 per kW or 10 cents per kWh. If customers choose to self-direct, they are not allowed to take advantage of Xcel Energy's other incentive and rebate programs. The self-direct rebates are more lucrative than those offered through other incentive programs, in exchange for the in-house engineering analysis required of a self-direct customer.

Xcel Energy holds its self-direct customers to the same cost-effectiveness tests as any of its other efficiency customers. While self-direct customers provide their own engineering analysis, they must meet the same total resource cost tests as all the other industrial and commercial offerings. Customers can get pre-approval for self-direct projects and have two years to complete the project and earn their rebate. Xcel is responsible for reviewing project implementation and monitoring plans and project total resource cost analyses. It tasks its most-senior engineer with review of all major technical details and works directly with the self-directing customer to come to an agreement on what data will be required of the project.

New Jersey Clean Energy Program Pilot

In New Jersey, a pilot self-direct program run by TRC, a contractor to the energy efficiency fee-funded New Jersey Clean Energy Program, targets large customers in multiple sectors. To qualify for the 2011 program, customers had to have contributed at least $300,000 in energy efficiency fee funds during the 2010 calendar year. Customers could aggregate multiple buildings or sites together to meet the threshold. Individual facilities had to have annual billed peak demand of 400 kW or greater as well. Additionally, all applicants were ranked by the value of energy efficiency fee contributions in 2010, and approximately the 25 top contributors were allowed to participate in the program pilot.

The pilot program reserves a specific amount of energy efficiency fee contributions for use as a grant towards future energy efficiency investments. Participants in the program developed a draft self-direct investment plan, called a Draft Energy Efficiency Plan (DEEP), outlining, among other things, the proposed projects and its estimated savings and costs in dollars and energy, the facility's baseline energy use, and a description of additional financing the project will receive. Upon approval of the DEEP, program funds are reserved for the customer.

Funds are committed to the customer only once a customer completes a Final Energy Efficiency Plan (FEEP), which must be certified by a professional engineer and incorporate measurement and verification (M&V) plans. Once the DEEP is approved, customers have 120 days to submit the FEEP. Once the FEEP has been approved, customers have one year to install the measure(s) and satisfy the remaining program requirements. Incentives are paid once the customer submits all of the invoices for the installed measure(s), the complete M&V report described in the FEEP (certified by a professional engineer), a certificate of compliance with the prevailing wage, and any descriptions of differences between the project as completed and what was described in the FEEP. If necessary, customers may be granted a six-month extension to install the measure(s).

All projects must demonstrate a simple payback of eight years, and no credit is given for previously installed measures. Combined heat and power projects are eligible for this program. Evaluation and M&V will be similar to that of other projects funded by the New Jersey Clean Energy Program. While M&V may be done by the customer's external engineers, TRC will have a dedicated program manager to monitor and review all FEEPs and M&V reports. Customers must comply with all external evaluation activities as requested. Pre- and post-inspections will be conducted as needed.

Eugene Water and Electric Board

The Eugene Water and Electric Board's (EWEB) unique self-direct program makes an important distinction between financial parity and energy savings parity. Most self-direct programs aim to have the self-directors spend on efficiency measures a dollar amount equal to or similar to what they would have spent on systems benefits charges as typical full rate-paying customers.

In contrast, EWEB eschews any discussion of financial parity and instead develops customized energy savings goals with each self-directing customer. These goals are contractual obligations to achieve a certain kWh of savings annually and each project is validated by a M&V plan. The goals are based largely

on the percentage of load each customer represents and the average conservation savings achieved by the industrial sector in prior years. If customers fail to meet these goals, they must repay a proportional amount of the rate credit back. While such customized efforts might be difficult for larger utilities, EWEB's two self-direct customers make such an approach manageable.

EWEB's self-director customers continue to pay the regular conservation rate (energy efficiency fee) of 5%, but receive a rate credit on each monthly bill equal to the conservation rate minus utility M&V costs. In this way, companies are directly encouraged to implement efficiency projects because otherwise they'll simply be "losing" their 5%. Such an approach helps facility managers sell efficiency projects to a company's decision-makers, because not meeting the goal will require self-direct customers to pay EWEB a penalty proportional to the unmet goal. When self-direct customers meet their goal, they keep most of the conservation fee and the project benefits. Conversely, an unmet goal results in a payment to EWEB and no benefits from the conservation project. This leverage of a penalty payment with no project benefits has been used to obtain internal corporate funding for projects. The self-direct customers use their own money to pay for the efficiency projects. They may also bank energy savings forward, into future years if applicable.

Rocky Mountain Power

Rocky Mountain Power (RMP) views its self-direct option as one of a suite of programs targeted at industrial and large commercial entities. RMP's self-direct program is a project-based rate credit program that offers up to an 80% credit of eligible project costs back to customers as a rate credit against the 3.7% energy efficiency fee all customers pay. Customers earn a credit up to 100% of their fee, but do pay a flat $500/project administrative fee for each self-directed project. RMP lets customers choose to engage its self-direct and other, more traditional energy efficiency fee-funded programs simultaneously provided the different programs are used to deploy different projects.

RMP believes that over 25% of its eligible customers are participating in the self-direct program, and interest has increased as the energy efficiency fee has risen. Interestingly, RMP allows customers to aggregate multiple meters to meet the program's minimum use requirements, and customers can also spread the rate credit among multiple meters if desired. One example of this approach can be found among a large chain of convenience stores, which has aggregated its load together to qualify. Eligible self-direct projects must have a payback of 1-5 years and must meet other cost-effectiveness tests as required.

RMP also offers a self-direct approach that is a true opt-out. If a customer can prove, using an external auditor, that they have achieved all cost-effective efficiency, they may receive a 50% credit of all energy efficiency fees paid for two years. Tellingly, not a single customer has taken this credit since its offering.

Puget Sound Energy

Puget Sound Energy's (PSE) self-direct program is unique in the country in that it is a long-term program (spanning five years) that combines a dedicated incentive funding structure based on customer contributions with a competitive bidding process for unclaimed funds. Companies that take service from

PSE under several rate schedules are eligible for the self-direct program, but most become eligible due to their taking 3-phase service at greater than 50,000 volts.

Self-direct customers continue to pay their energy efficiency fee, but PSE tracks individual customer contributions for their specific use. Customers have access to 82.5% of their fees. PSE retains 7.5% for administration of the program, and 10% to fund market transformation activities of the Northwest Energy Efficiency Alliance. While participants in other PSE commercial and industrial programs are limited to maximum incentives of 70% of measure cost, self-direct customers may fund up to 100% of measure cost.

After an initial non-competitive phase (e.g., 24 months) of a program cycle, all unused funds are pooled together into a public pool of funds, and PSE issues a competitive RFP for program-eligible customers to compete for remaining funds. The projects funded as a result of this competitive bid process are generally more cost-effective than those funded during the first two years, as customers compete against each other to make a case for their projects.

All projects must meet PSE's avoided cost requirements. Though the customers submit their own proposal and M&V plan, PSE reviews the proposal and plan. Upon approval, PSE enters into a funding allocation agreement with the company and conducts a post-installation inspection after the measure is implemented.

Conclusion

Increasingly industrial and large commercial customers are stating that they should be exempt from paying for and utilizing energy efficiency programs. Rather than offering a full exemption to these programs, which serves no public purpose and provides no guarantee of cost-effective energy savings, states and utilities can offer a well-structured self-direct program to effectively capture energy efficiency savings in the industrial sector. These programs can address the stated concerns of the industrial sector with regard to traditional energy efficiency programming while offering important tools to help encourage greater levels of energy efficiency investment than might otherwise have been made.

Several good examples of self-direct programs exist in the United States today. These programs show that creative program structures can work hand-in-hand with strict adherence to cost-effectiveness requirements and public benefit goals to meet the needs of all users of a public energy system. With increasing energy efficiency goals, it is imperative that regulators, utilities, and policymakers get these programs right before less desirable program structures are codified, reducing the important resource that is industrial energy efficiency.

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