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Existing off-bill financing programs for the small commercial sector

Below is a summary of existing off-bill financing options for the small commercial sector and the advantages and disadvantages of each program. As the summary details, many of the existing programs are either under-funded or do not sufficiently address the market barriers preventing small commercial customers from investing in energy efficiency. Such barriers include:

- Lack of time to research the benefits of energy efficiency, evaluate options and procure efficiency services.
- Limited access to capital to make investments in energy efficiency due to tight margins and relatively small revenues. Even if the investment saves money over time, cash flow is a major barrier to taking action.
- “Split incentives” where the landlord is responsible for paying to upgrade the energy efficiency of a building and its systems, while the tenant is responsible for paying the energy bill. In this scenario the landlord has little incentive to invest in energy efficient upgrades when the tenant receives all the benefits of reduced utility bills.

Based on our review of the available off-bill financing, it is clear that there is a need for an on-bill repayment program to help address these market barriers and enable small commercial customers to invest in energy efficiency measures.

I. Existing Funding Opportunities in Pennsylvania

1. Advantage Grant Program¹

a. Overview

The Department of Environmental Protection's (DEP) *Advantage Grant Program* began in 2004. The Advantage Grant Program offers grant awards of up to \$9,500 for projects or 50 percent of eligible costs, whichever is less. The focus on pollution prevention and energy efficiency means that in order to qualify for funding projects must save 25 percent in energy costs, plus \$750 annually as a direct result of project implementation.

Eligible projects include HVAC and boiler upgrades, high-efficiency lighting, solvent recovery systems, geothermal heat pumps, insulation and air sealing, energy efficient refrigeration, and waste recycling systems. Projects that might be categorized as energy efficiency but are not eligible include weather envelope-related projects

¹ *Small Business Ombudsman Office*. (2013). Retrieved from Pennsylvania Department of Environmental Protection.

(roofing, siding, windows, and doors) as well as solar photovoltaic and hot water. For those interested in solar, Pennsylvania continues to offer some funding through the PA Sunshine Solar Rebate Program.² Projects upgrading equipment must use Energy Star-rated equipment.

b. Advantages/Disadvantages

This very popular program is a great example of what works for the small commercial sector. The application process is relatively streamlined and financially feasible for businesses looking to fund small, but impactful projects to improve their operations and budgets.

That said, the program is continually oversubscribed and leaves many businesses without other funding options. The grant cycle for 2012 received 10 percent more in grant requests than the current funding available. So while the Advantage Program underscores the demand for this kind of capital, the degree to which the program has been oversubscribed suggests that additional funding opportunities are desperately needed.

In addition to limited total funding available, other disadvantages include the short grant cycle for accepting applications as well as the restriction on not being allowed to apply for funding for a project that has already completed. Moreover, businesses must decide between utility rebates (outlined in more detail in the Act 129 section below) or the Advantage Grant program funding. So while this source of funding from the Advantage Program might provide for upfront capital, the business will not benefit from the available utility rebates on the approved energy efficiency measures. The small commercial sector needs more ways to leverage the existing financing programs as opposed to having to choose between them.

2. Pollution Prevention Assistance Account (PPAA) Loan Program³

a. Overview

DEP, in conjunction with the Department of Community and Economic Development (DCED) provides loans through the Pollution Prevention Assistance Account (PPAA) Loan Program. The low interest loans provided by this program are available for up to 75 percent of the total eligible project cost (with a maximum ceiling of \$100,000). With a fixed interest rate of 2 percent, the applicant can pay back the loan over the course of ten years.

² The DEP recently announced that the PA Sunshine Program is now out of the waiting list phase and actively processing rebates. The program has been reinvigorated with \$7.25 million in funding from the Commonwealth Financing Authority. The application process for rebates has been streamlined and funds are available on a first come first serve basis.

³ *Pollution Prevention Assistance Account (PPAA) Loan Program*. (2013). Retrieved from Pennsylvania Department of Environmental Protection.

Eligible projects include the purchase of energy efficient equipment and closed-loop systems for cooling or process water systems. With \$2 million available annually, the PPAA loan program offers small commercial entities available capital to make improvements and save money on through their improvements.

b. Advantages/Disadvantages

The PPAA application process requires the submission of a technical application to DEP and a financial application to DCED through an Area Loan Organization or Industrial Resource Center. The lengthy process can be onerous and many small commercial entities have limited time available to dedicate to lengthy loan applications or time to wait for approval to before they can install the new equipment. For these reasons this is not a particularly popular program with the small commercial sector.

3. Act 129

a. Overview

Act 129 was passed into law on October 15, 2008, requiring Pennsylvania electric distribution companies (EDCs) to reduce their overall electricity load by 1 percent by May 31, 2011 and 3 percent by May 31, 2013, and to reduce peak demand by 4.5 percent, by offering electric customers a portfolio of cost-effective energy efficiency and conservation programs. On August 2, 2012, the PUC voted 5-0 to adopt a Final Order extending the Act 129 energy efficiency and conservation programs for a second phase that will run from June 1, 2013 to May 31, 2016, with each EDC having a unique energy savings goal ranging from 1.6 percent in savings requirements for West Penn Power to 2.9 percent for PECO.

Under Act 129 EDCs are permitted to spend up to 2 percent of their annual 2006 revenue on these programs, about \$245 million per year on meeting their savings goals. Based on a review of each EDC's Phase I Energy Efficiency and Conservation (EE&C) plan, approximately \$57.25 million is available per year for the small commercial and industrial (C&I) sector for rebates towards energy audits, equipment rebates, HVAC tune-ups and Compact Fluorescent Lighting (CFLs). This represents approximately a quarter of total annual funding.

b. Advantages/Disadvantages

PennFuture reviewed Phase I Act 129 EE&C Plans and Annual Reports to the PUC to examine participation rates in the small commercial sector. We found that while every EDC has a budget category for small commercial customers for cost allocation, several do not have programs specific to that customer class nor do they break out electricity savings by this class so participation rates are difficult to decipher. For

those EDCs that break out small C&I sector savings in their Act 129 Plans and Annual Reports, savings are less than what was achieved from residential program and from large C&I programs.

EDCs that break-out small commercial savings provide evidence that this customer segment can be difficult to reach. For example, in 2012 PPL Electric petitioned the PUC to revise its Phase I EE&C plan due to lower than expected participation in its C&I Custom Incentive Program. PPL found that small C&I customers have more interest in their Efficient Equipment Incentive Program that contains measures like lighting, which are typically simpler, quicker, and less costly for small C&I customers to implement. Specifically PPL states “Despite aggressive marketing, hiring a C&I CSP, adding a direct discount mechanism, and recruiting trade allies, savings from the Small C&I sector is projected to be approximately half of the Company’s original estimate.”⁴ In addition, Duquesne Light’s Program Year 3 Annual Report details it is experiencing lower than projected participation rates in its small office buildings program, achieving 20% of the projected kilowatt-hour savings goal.

It appears that while Act 129 provides funding for small commercial customers, there is a barrier to participation, particularly when it comes to more costly, deeper savings. The Pennsylvania Small Business Development Center at the University of Pennsylvania has confirmed this by indicating they have found that the Act 129 rebates are not high enough to incent the small commercial sector to participate in the programs and that these businesses require more technical assistance.

4. Utility Sustainable Energy Funds

a. Overview

As part of the restructuring of five electric companies in Pennsylvania in 1998, four sustainable energy funds were created: the Sustainable Energy Fund, the West Penn Power Sustainable Energy Fund, the Berks County Community Foundation, and The Reinvestment Fund. Each of these funds offer, or have offered, some degree of financing for the small commercial sector whether in the form of grants or loans. Some programs, like the Pennsylvania Green Energy Loan Fund, have been fully subscribed and no longer accept applications.

i. *The Reinvestment Fund*

The Reinvestment Fund, which provides funding for projects in the Southeastern part of the state, has two financing programs available for eligible businesses; the Pennsylvania Green Energy Loan Fund and the Energy Works Loan Fund. As previously mentioned, the GELF program is no longer accepting applications but the Energy Works program continues to welcome interested businesses. The Energy

⁴ Petition of PPL Electric Utilities Corporation for Approval of Changes to its Act 129 Energy Efficiency and Conservation Plan, February 2, 2012.

Works program⁵ provides financing opportunities across a spectrum of customers including residential, commercial and industrial.

The loans available for commercial entities are large, between \$100,000 and \$2.5 million at a fixed interest rate and a payback period of up to 15 years. Like the DEP financing options, TRF requires projects result in a 25 percent reduction in energy use. While a detailed list of eligible upgrades can be found online, a broad overview includes energy equipments upgrades, whole building retrofits, and gut rehabs.

ii. The Sustainable Energy Fund

The Sustainable Energy Fund (SEF) is based in the PPL territory, although funding is not limited to the businesses only in that geographical boundary. SEF offers loans between \$35,000 and \$1 million. There is also the option of a \$10,000 loan through ESPs. SEF, having substantial experience working with the small commercial sector, is able to tailor loan payments to fit the project, allowing payments to be sized to energy savings. In order to apply businesses are charged a \$150 application fee, must submit tax returns, schedule of business debt, and company documents.

iii. The Metropolitan Edison Company/Pennsylvania Electric Company Sustainable Energy Fund

The Metropolitan Edison Company/Pennsylvania Electric Company Sustainable Energy Fund offers some funding in the form of grants for small commercial entities to make energy efficiency improvements. Loans of up to \$500,000 are available for a broad range of improvements that include not only energy efficiency improvements, but renewable energy and conservation components. The terms are flexible, as the business can submit the terms and rate they think best suits their project proposal and the committee will review for approval.

iv. West Penn Power Sustainable Energy Fund

The West Penn Power Sustainable Energy Fund also has some financing available through their request for proposals process.

b. Advantages/Disadvantages

While the small commercial sector has the possibility of accessing funds from these groups, the average project cost is not necessarily an appropriate fit for what these funds are looking finance. Furthermore, the revolving nature of demand for energy efficiency funding in the small commercial sector requires an administrator that is able to work with numerous small commercial firms and process numerous applications in a timely manner. The sustainable energy funds have traditionally

⁵ *Energy Works*. (2013). Retrieved from <http://energyworksnw.com/commercial/getting-started/>

funded larger projects, and may not have the staffing capacity to service the small commercial market as fully as needed. For almost all small commercial entities, the \$100,000 minimum required by funds like TRF is almost certainly a disqualifier. While it is encouraging to see the sustainable energy funds continue to support energy efficiency work across the customer classes, the small commercial sector would benefit from a program targeted to their needs and financial limits.

5. Qualified Energy Conservation Bonds

a. Overview

Qualified Energy Conservation Bonds (QECBs) were authorized by Congress in 2008, with increased funding provided in 2009 through the Recovery Act. QECBs allocations are federal subsidies intended to encourage state and local government bond funding for energy efficiency and renewable energy projects. QECB allocations were provided to states, who then sub-allocated the funds to eligible large local governments and municipalities. States and municipalities can then issue QECB bonds to support “qualified projects”.⁶ The QECB bonds are an extremely attractive financing option because of their low cost, due to the federal subsidy. The net financing cost to issuers has ranged from 0.4% to 1.5%,⁷ with issuers having the option to either issue a taxable bond with tax credits distributed to bond holders, or the direct pay option where issuers receive a direct cash payment from treasury to offset some of the interest and tax liability. Up to 30% of a state’s QECB allocation can be used to support private sector projects, via issuance of private activity bonds, with proceeds being used to support qualified project activity. Issuers of QECBs may also include finance agencies, municipal utilities, school districts and universities.

Pennsylvania was originally allocated over \$129 million in QECB funding, which was distributed to counties, a few large cities, and a portion retained by the state. To date, there have only been five QECB issuances in Pennsylvania that were all used for facility efficiency retrofits, including projects in Allegheny, York and Fayette Counties, Philadelphia and the Commonwealth of Pennsylvania prison facilities.⁸ There is currently a little over \$94 million in QECB allocations available to Pennsylvania and there is no sunset or expiration date for use of these funds. However, sequestration activities at the federal level could impact the subsidy for existing and future bonds.

b. Advantages/Disadvantages

⁶ Qualified projects include the following “qualified conservation purposes”: to reduce energy consumption in publicly owned buildings by at least 20%, to implement green community programs and related funding mechanisms; for rural development, for certain renewable energy facilities, for certain mass commuting projects. Public education, research and demonstration projects can also be supported.

⁷ Energy Programs Consortium, “Qualified Energy Conservation Bonds: QECBs”, September 2012, p.3

⁸ EPC: QECB, p.19

Small commercial entities do not have direct access to QECB allocations. However, a government entity could issue a private activity bond to support qualified conservation purposes on privately owned property. Nationally to date, at least five QECB issuances have been for private activity bonds, for which most of the proceeds were used to fund renewable energy projects. For a small commercial entity to use QECB funds for energy efficiency improvements, a government unit would have to issue a QECB to support a funding mechanism (i.e. loan program) whereby small commercial entities could apply to access funding. This assumes that a small commercial energy efficiency funding program is consistent with the IRS' loosely described "green community programs" definition. Due to the under utilization of the QECB program, the premium associated with the complexity of issuing QECBs, and the lack of interest by small commercial in efficiency loan programs, it does not seem that QECBs are an ideal mechanism to support small commercial energy efficiency.

6. Energy Savings Performance Contracting

a. Overview

Energy savings performance contracting (ESPC) is a financing mechanism that supports energy efficiency upgrades through avoided energy costs. The ESPC model typically includes a building(s) owner that desires capital improvements, an energy services company (ESCO) that has the expertise to design and install the equipment and guarantee the equipment will yield energy savings, and a source of capital (typically a bank, though could be municipal bond, etc). The building owner contracts with the ESCO to install and maintain a system designed to deliver energy savings sufficient to pay the debt, plus yield financial savings for the owner in the long term. The ESCO's energy savings guarantee reduces investment risk for the lender and for the owner by ensuring that the system will perform as designed.

b. Advantages/Disadvantages

ESPCs have been successfully used for decades to reduce energy usage and support capital investments in facilities. However, ESPC contracts are best suited for facilities that are owner occupied, since large ESPC contracts can have terms of 10-20 years. A contract term of this length would be inappropriate for someone who has a 5 year lease.

Even if a commercial entity was engaged in a 10 or 15 year lease, there is little incentive to invest in activities yielding long term benefits beyond the lease term, since the building owner will capture many of these benefits as a free-rider. However, there are numerous energy conservation measures with very short payback periods, such as lighting retrofits.

Small commercial entities with short-term leases may be able to financially benefit from engaging in smaller scale energy conservation measures. However, smaller scale ESPC projects typically do not attract large and experienced ESCO companies or lenders. Establishing a mechanism to bundle several small scale projects into a larger offering could attract the larger ESCO companies and facilitate financing. In addition, market development to promote smaller ESCO companies and niche lenders could be developed to service the small commercial market. In absence of these activities, ESPC financing may not be a good fit for the small commercial market.

7. Demand Response

a. Overview

Demand response programs allow the end users of electricity, such as small commercial entities, to get paid to reduce their electricity usage. For example, small commercial entities could get paid for turning up the temperature setting on their air commercial on hot days, shutting down high energy use production equipment, or turning off lights. Demand response activities have to be taken above and beyond normal business operations, for example, turning off the lights at the end of the day would not qualify. End users can enroll in programs that provide compensation for reducing electricity demand when the electricity grid is vulnerable (e.g. emergency demand response) or when market signals identify opportunities (e.g. peak shaving). Pennsylvania's Act 129 has established demand response programs as part of its peak reduction requirement; however, the future of this program is unknown until the PUC makes its extension determination. Small commercial can participate in PJM Interconnection's demand response programs by hiring a curtailment service provider (CSP) that will train, enroll and enable customer participation in the market.

b. Advantages/Disadvantages

Demand response is a conservation program, not an energy efficiency program. Therefore, small commercial could adjust their behaviors in order to earn payments through participation in demand response programs and these payments could be used to finance energy efficiency upgrades. According to PJM there are more than 6,000 commercial and industrial facilities (with demand greater than 100 kW) and more than 45,000 small commercial and residential sites participating in PJM demand response programs.⁹ As part of its capacity market programs, PJM also offers compensation for participation in an energy efficiency program through which planned energy efficiency projects can commit to delivering energy efficiency-based capacity for a fixed term in the future. However, the PJM energy efficiency program requires customers to invest in energy efficiency first and then receive compensation

⁹ PJM Interconnection, "PJM Real Time Economic Demand Response Program" factsheet <http://www.pjm.com/~media/markets-ops/dsr/dsr-brochure.ashx>

several years in the future, after performance has been verified. While potentially financially lucrative, this model does not help address the cash flow and upfront capital barriers identified to energy efficiency investment for the small commercial class.