

Understanding and Catalyzing Local Energy Efficiency and Renewable Energy

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Executive Summary

This guide focuses on describing and analyzing emerging programs designed to increase access and scale developments in energy efficiency and renewable energy in the Bemidji, MN region. While the emphasis concentrates on small businesses, this guide is meant for any entity that is underserved in terms of technical consulting and available capital. The recommendations are meant for local government officials, economic development associations, business owners, and community members interested in strengthening energy efficiency and renewable energy support programming. Key recommendations focus on educating new and business owners, creating local financing structures, and advocating and connecting with energy utilities.

Next Steps:

- Integrate educational resources on energy efficiency, renewable energy, energy financing, and energy service agreements (ESAs) into the existing business associations' platforms, such as Bemidji's Northwest Small Business Development Center.
- Create a local property-assessed clean energy (PACE) financing structure for the City of Bemidji, Beltrami County, or a regional district.
- Partner with utilities and integrate on-bill financing for residential, commercial, and industrial applications
- Use grant funding for continued energy audits and energy projects, particularly lighting improvements.

Methodology

In the fall of 2014, the Headwaters Regional Development Commission (HRDC) assessed and evaluated local energy support and financing programs for the Bemidji, MN region. The HRDC contracted Bemidji State University's Marketing Assistance & Research Solutions (MARS) team to survey local businesses about interest and involvement in energy efficiency and renewable energy. MARS built focus groups and formed a survey inquiring about local businesses' awareness, consulting, and financing practices related to energy improvement projects.

In the focus group conversations, six business owners discussed projects they had already completed such as lighting retrofits, HVAC systems, and upgrading windows. They discussed their interest and knowledge in energy audits as well as completed a list of potential improvements, such as improvements in buildings' compressors, insulation, furnaces, and door replacements. The MARS and HRDC team formed thirteen questions inquiring about energy improvements and contacted businesses via phone. This survey's target goal was 150 businesses, in which 84 businesses responded. Completed answers were entered and analyzed in SPSS statistical software. The HRDC developed recommendations based on potential improvements. The recommendations are meant for local government officials, business owners, or community members interested in Bemidji's clean energy financing future.

Updates on Energy Efficiency and Renewable Energy

Introduction

Although the United States has steadily improved its energy efficiency and renewable energy portfolio, it has continued to lag behind much of the world's developed countries in effectively scaling these projects (Annual Energy Outlook, 2014). A 2009 report estimated that potential for improving existing building technologies with more efficient ones could reduce current energy usage by 30 percent and save \$1 trillion in 10 years (Mims, Bell, and Doig, 2009). Streamlined processes, improved technologies, new incentives and rebates, and collaborative financing structures have allowed for huge potential in lowering energy costs, greenhouse gas emissions, and dependence on fossil fuels.

Federal, State, and Local Incentives

Federal and state laws continue to support multiple energy efficiency and renewable energy improvements through a variety of loan programs, tax credits, grants, rebates, and support programs. The 2009 American Recovery and Reinvestment Act (ARRA) budgeted \$20 billion in funding for energy efficiency and renewable energy, including \$50 million in solar PV grants and \$6 billion in loan guarantees (E.P.A., 2014). This has allowed for thousands of federal loans to businesses, states, cities, communities and regions pursuing various energy projects. Through 2016, the Made in Minnesota solar incentive program offers production based incentives (PBIs) to residential, non-profit, and commercial businesses installing solar photovoltaic or solar thermal systems manufactured and sold in Minnesota. For the latest information on state and federal incentives visit the Department of Energy's Database for State Incentives for Renewables and Efficiency (DSIRE) website.

Utility Incentives

As part of a national energy conservation strategy, the American Clean Energy and Security Act of 2009 (ACES) requires U.S. retail electricity providers to draw 20 percent of their electricity from renewable sources by 2020 (E.P.A., 2009). Minnesota's 2007 renewable portfolio standard (RPS) has already surpassed the ACES by requiring its main public electricity provider Xcel Energy to generate 30 percent of its electricity from renewable sources by 2030, while requiring its other electricity utilities to obtain 25 percent renewable by 2025. Additionally, the 2013 Minnesota Solar Energy Jobs Act requires private investor-owned utilities to generate 1.5 percent of its sales from solar energy, mainly small scale installations by 2020 (DSIRE). To meet these requirements utilities are offering rebates, incentives, grants, and loans for renewable energy and energy efficiency projects. It is recommended to contact the local utility provider or visit the utility webpage for more information on utility rebates, incentives, and financing services.

Barriers to Energy Efficiency and Renewable Energy

Education

Effective education is by far one of the biggest catalysts for changing behaviors and attitudes. Because most community members are unaware of energy reducing technologies, savings potential, project development, or energy financing, it is crucial that they receive information and become properly educated before making decisions. A public awareness campaign combining radio, newspaper, social media, committees, and word of mouth about the impacts of efficiency and renewable energy can do considerable good to influence community members' opinions and behaviors. Offering workshops, events, or meeting sessions can circulate information, build networks, create publicity, and personally engage community members in a common goal.

A building energy audit is an additional approach to organize and distribute information, build awareness, form relationships, instill confidence, and gather valuable building information. Best of all these can be done at the resident or business building without disrupting personal routines. Most utilities, including Ottertail Power and Beltrami Electric, offer free or subsidized energy audits, sometimes called energy evaluations or walkthroughs, with a more comprehensive "deep" energy audit costing money. The building owner will end their business day having a much better idea that the right project will save them time, energy, and money.

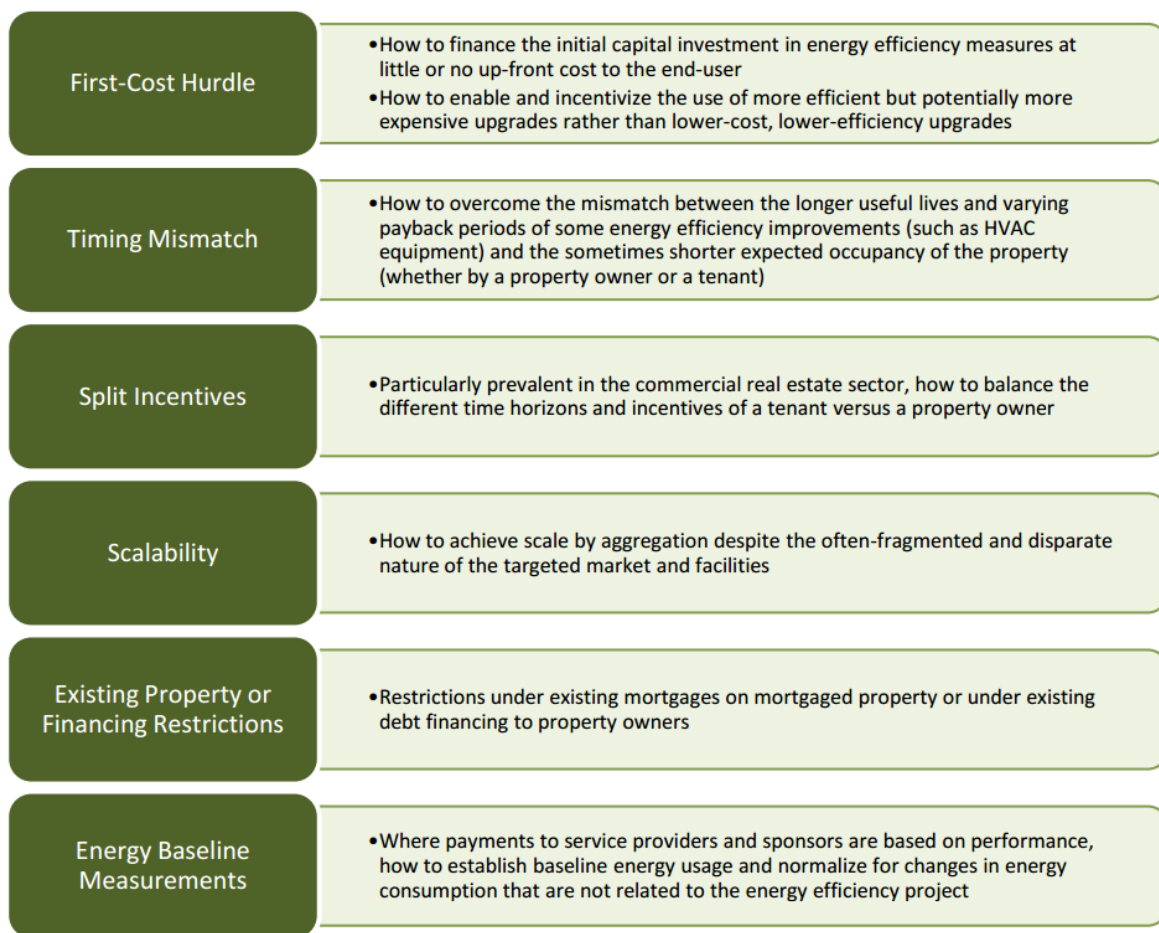


A pyramid guide for conserving and reducing energy consumption. Understanding behavioral tools is considered easiest, while installing solar panels takes much more time, investment, and consulting.

Financing

Often funding an energy project is one of the hardest barriers to overcome. High transaction and financing costs, and lack of up-front capital and long-term loan repayment length have made people less than confident that that energy projects will obtain benefits and allow reinvestment of capital. High associated risks and uncertainty of energy related projects make the bank or lender motivated to place interest rates at a less than attractive level.

Over the past few years new emerging financing structures have been implemented in an attempt to reduce the required up-front capital, increase risk security, and lengthen loan repayment terms. The list of instruments covered includes matching funds, equity or debt investor financing, asset-backed classes, guarantees, municipal funding, insurance as well as small-scale project financing (Financing Renewable Energy, 2012). Although not every mechanism is analyzed, these programs have pros and cons that offer significant potential to address barriers and to achieve appropriate scale across the country.



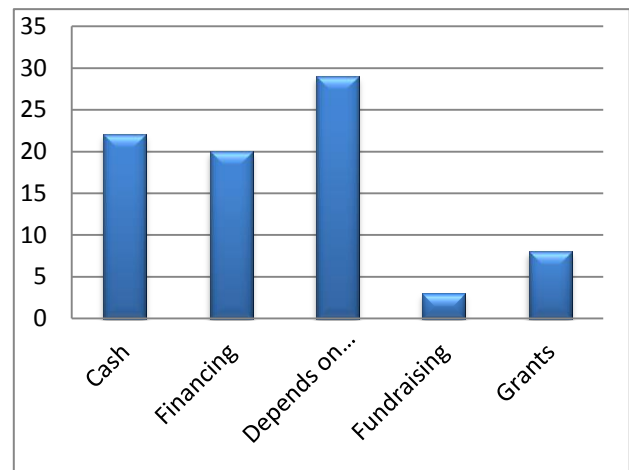
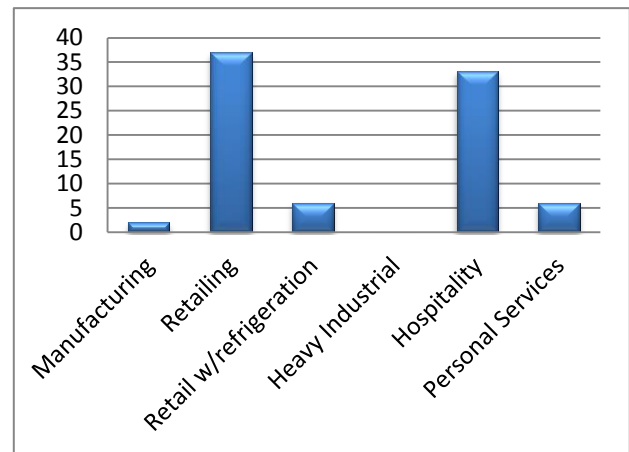
A few of the barriers to implementing energy related projects.

Survey Results

The MARS survey concluded that the majority of respondents in Bemidji, MN owned their building and were classified as a retail or hospitality small business. Most respondents were aware of and have considered energy efficiency, and preferred paybacks on energy projects in less than 4 years. Most participants had not received technical or financial consulting, but were interested in energy audits and would trust financing advice from an expert financial consultant.

MARS Survey Findings (84 Bemidji Businesses)

- 83.3% of businesses were in the retail or hospitality industry
- 48.8% had building spaces of less than 5000 square feet
- 32.1% had fewer than five employees
- 22.6% rented their building space
 - 55% of renters were interested in energy efficiency improvements
 - 66.7% were concerned with the owner/renter split incentive barrier
- 63.1% had thought of making energy efficiency improvements
- 61.9% knew where to find energy related information
- 23.8% had worked with an energy auditor to identify efficiency opportunities.
 - 45% choose Ottertail Power
 - 30% choose Beltrami Electric Co-op
 - 50% evaluated lighting upgrades
- 54.8% were interested in an energy audit
- 76.2% wanted paybacks in less than 4 years
- 63.1% were comfortable financing if the advice was from an expert energy financing consultant



Energy Efficiency and Renewable Energy Financing Tools

Energy Services Agreement (ESAs)/Third-Party Financing

In an ESA a third-party financier, whether a bank, business, or group of businesses, arranges for the development of efficiency or renewable energy equipment and provides the capital investment in the project. The ESA provider owns, operates, and maintains the infrastructure during the length of the ESA, while the customer hosts the location and buys the electricity generated at a lower market price. ESAs may be treated as services agreements, operating leases, or capital leases on long-term equipment ranging from HVAC systems to solar panels.

Sources of Financing

Both equity and debt investing may be involved in providing capital for the energy project through a limited liability corporation (LLC) or a special purpose entity (SPE). The ESA provider establishes the SPE, and the SPE owns the equipment and captures all rebates, tax incentives, savings, and benefits. A major benefit of ESAs is that third-party ownership enables entities to take advantage of incentives that another entity may not be able to capture, such as non-profits. Investors are repaid through the customer's payments for energy, utility incentives, rebates, and state and federal incentives. New innovations in energy finance have sought to use ESAs in connection with other financing strategies such as on-bill repayment.

Overall Assessment

ESAs developers and investors provide the up-front capital for energy efficiency improvements, which is repaid over time through customer net energy payments. ESAs are ideal in that they are growing into a mature business, meaning lower transaction costs, and require no public enabling legislation.

Strengths	Challenges
<ul style="list-style-type: none">- Customers may finance energy efficiency improvements off-balance sheet- Customers pay only for actual savings realized- Customers do not bear operation and maintenance responsibilities or performance risk during the ESA contract term- ESA providers are incentivized to maximize energy savings or other performance metrics- ESA provider may be able to monetize tax benefits that customer could not- ESA provider may be able to obtain financing for groups of similar energy efficiency projects that meet certain criteria from a single investor, thereby lowering transaction costs	<ul style="list-style-type: none">- Each ESA customer has to make its own determination of its accounting treatment of the ESA- ESA provider has to secure debt financing from providers that understand the ESA model and source equity; familiarity with the well-established PPA model, however, may help mitigate this risk

Property Assessed Clean Energy (PACE) Financing

Minnesota PACE financing was first developed in 2007 and enables local municipalities to finance energy efficiency improvements using land-secured special tax assessments and property tax repayments. Under such authority, local governments issue bonds to finance local improvements and levy assessments against properties that benefit from the improvements. PACE eliminates the up-front costs to businesses by offering a budget-neutral public/private partnership. In the event of a sale or transfer of the property the lien remains on the property, becoming an obligation of the next property owner. This security feature reduces risk to bond investors and lenders, thereby enabling local governments to offer this financing at attractive interest rates.

Since 2010, the city of Edina, Wright-Hennepin County, and the Southwest Regional Development Commission have all piloted MN PACE districts. Any city, county, or economic development commission having authority can establish and implement a PACE financing program. A cooperative statewide PACE of MN is additionally administered by the St. Paul Port Authority, which continues to decrease administrative costs.

Sources of Financing

PACE improvements are financed by the issuance of bonds by local governments under land-secured municipal improvement tax district authority. Banks or third-party entities typically work with the local government to arrange for lines of credit, capital facilities, project origination, and administrative processing.

Overall Assessment

PACE has potential to scale large local energy retrofits with budget neutrality and attractive financing rates. In the commercial, multi-family residential, and industrial sectors, PACE programs are advancing across the country, with over 150 projects funded and over \$30 million invested in commercial PACE to date (Innovations in Energy). PACE continues to be an exciting and emerging market in energy efficiency and renewable energy financing.

Strengths	Challenges
<ul style="list-style-type: none">- Assessment lien is attractive to investors; security feature enables competitive interest rates- Repayment obligation remains with property in the event of sale or transfer by owner- Term tied to payback period- Potential for securitization	<ul style="list-style-type: none">- FHFA position has restricted implementation in the residential sector- Local government approval process required to implement program- No consensus yet regarding accounting treatment as on-balance sheet or off-balance sheet

On-Bill Financing/Repayment

On-Bill Financing/On-Bill Repayment (OBF/OBR) uses utility (OBF) or third-party capital to pay for energy efficiency or renewable energy retrofits which is repaid by the customer on the customer’s utility bill. The key feature of OBF/OBR programs is that repayment for energy efficiency improvements is bundled into the existing customer’s monthly utility which greatly reduces administrative costs. OBF refers to programs that use utility capital, whereas OBR programs use third-party capital.

Sources of Financing

Existing OBF/OBR programs rely on a mix of public, private, and ratepayer funds. Many programs currently rely on public capital, such as revolving loan or public benefits funds, some of which have been used with ARRA funds and continue to draw from federal loans, bonds, or grants. These funds typically cover the up-front costs of retrofits and energy audits and may provide credit enhancements, such as loan-loss reserves or payment guarantees, to manage default risk and reduce borrowing costs.

Additionally, community development financial institutions (CDFIs) often lend at lower interest rates and expected returns due to their community development goals. Some larger banks have started expressing interest in investing in appropriately structured OBR programs. The involvement by larger investors and the capital markets is expected to grow once volume increases and OBR agreements become more efficient.

Overall Assessment

OBF/OBR programs have been successful in maintaining very low rates of default due to the threat of disconnection, achieving bill neutrality, and reaching underserved customers. A key to this financing model’s success is the ability to combine multiple funding sources within one program and to target multiple building sectors. The utility bill repayment method lowers administrative costs and uses existing infrastructure and resources of the utility.

Strengths	Challenges
<ul style="list-style-type: none"> - Addresses “first-cost” hurdle to customer adoption by requiring little capital up front - Shows strong record of repayment by customers to date - Can be structured to use third-party capital at no cost to taxpayers or ratepayers - Leverages existing utility resources and customer practices to collect payments - Bundled utility bill clearly shows impact of energy efficiency on overall energy expenditures - Expands access to retrofits and lowers cost of capital because threat of utility shut-off leads customers to prioritize utility payments - Payment obligation may follow the customer or the meter - Can accommodate a variety of financing structures, including ESAs and MESAs - Can be structured to address diverse customers and market segments - Can be structured to address split energy incentives of tenants and owners - Accounting treatment may be on-balance sheet or off-balance sheet 	<ul style="list-style-type: none"> - Threat of utility disconnection may be subject to legal restrictions in some jurisdictions - May require up-front investment by utility to reform billing structures and other systems - Ensuring that energy savings will exceed loan/tariff payments is difficult - Potential consumer lending regulations increase legal costs and uncertainty for loan structure - Obtaining landlord buy-in may be difficult if the tenant reaps all of the energy efficiency benefits - Existing programs rely heavily on government funding and support - Scalability may be constrained by unorthodox metrics for assessing risks of default - Legal uncertainty exists in many jurisdictions regarding transferability of OBF/OBR obligations in the event of transfer, foreclosure, or bankruptcy

Discussion and Recommendations

1. Integrate educational resources into existing business association platforms

Bemidji is a community that is not only one of the poorest counties in the nation but hosts the environmental title of “First City on the Mississippi River”. Although many community and business members are interested in environmental stewardship, the vast majority are concerned about bottom-line budgets. After accessing that businesses still view energy efficiency, such as LED lighting, as a “green” initiative, more priority should be placed on educating business owners that the savings that energy efficiency and renewable energy offer is a “smart” initiative.

Action Step – Integrate energy education resources in the Northwest Small Businesses Development Center’s platform. Topic suggestions include energy conservation best practices, renewable energy updates, energy consulting and auditing, energy financing 101, project start-to-implementation guides, building maintenance, and community advocacy and success stories.

Additional Opportunity - Partner business owners with an energy representative to educate and provide information about energy opportunities.

Additional Opportunity – Create a voluntary building energy rating system using a utility data disclosure agreement which tracks and compares commercial businesses’ energy consumption.

2. Create a local energy financing structure

Bemidji and the region have historically experienced high levels of economic disparity and poverty which limits businesses up-front capital and existing financing opportunities. An effective local energy financing tool would allow businesses to address their energy improvements, advertise and progress the city’s sustainability goals, and support local industry investments.

Action Step – Market and incentivize opportunities to develop streamlined third-party financed energy service agreements (ESAs) unique to the Bemidji, MN region. Pilot-test a project showcasing a local green initiative.

Action Step – Pilot-test a property accessed clean energy (PACE) financing district for the city of Bemidji, Beltrami County, or a larger regional district. Utilize templates and partnerships created by the state of Minnesota or other Minnesota PACE districts.

Opportunity – Get a comprehensive analysis of the number, age, condition, and solar feasibility of single and multi-family homes and commercial buildings.

Action Step – Partner with Ottertail Power or Beltrami Electric and financiers to implement a pilot scale on-bill energy financing program. Look for state and federal grants to help with implementation and administrative costs.

Summary

Energy efficiency and renewable energy will undoubtedly be an important part of national and global strategy for managing energy resources and mitigating climate change. Concerns about energy affordability, energy security, and greenhouse (GHG) emissions have heightened interest in the potential for these projects.

The Headwaters Regional Development Commission (HRDC) assessed business interest, involvement, and support and financing programs for energy efficiency and renewable energy in the Bemidji, MN area. Findings concluded that business owners were aware of energy efficiency but had not gotten technical consulting to progress any further and were concerned with financing issues. Additional resources need to focus on increasing participation in energy audits for businesses. Because of the high retail and hospitality demographics, lighting and HVAC is an ideal project to market to these businesses. Partnering with utilities, universities, business associations, and local governments is an additional way to leverage financing and support programs to catalyze energy improvement upgrades.

Bemidji, MN is a regional economic hub and leader in community and environmental stewardship. The businesses that are aware and involved in changes of energy practice and technology will continue to lead as utility prices and federal and state mandates evolve. Local governments and community leaders need to start and continue creating plans that offer pioneering and accessible programs that connect energy experts, businesses owners, government officials, professionals, utilities, and community members to the tools they need most.

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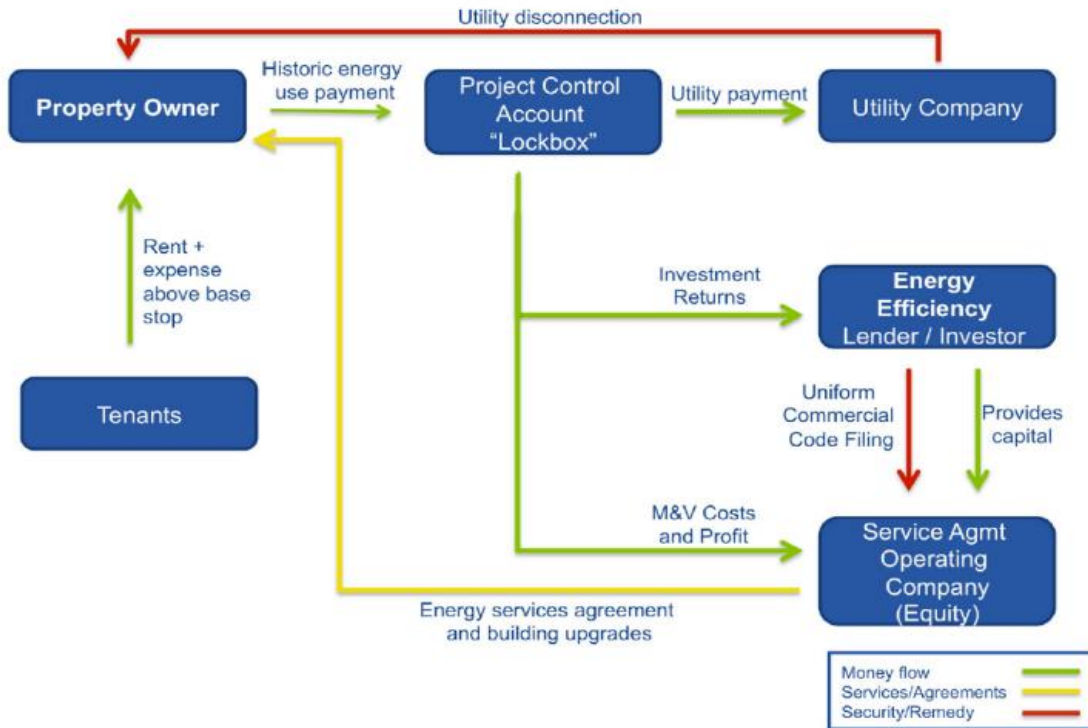
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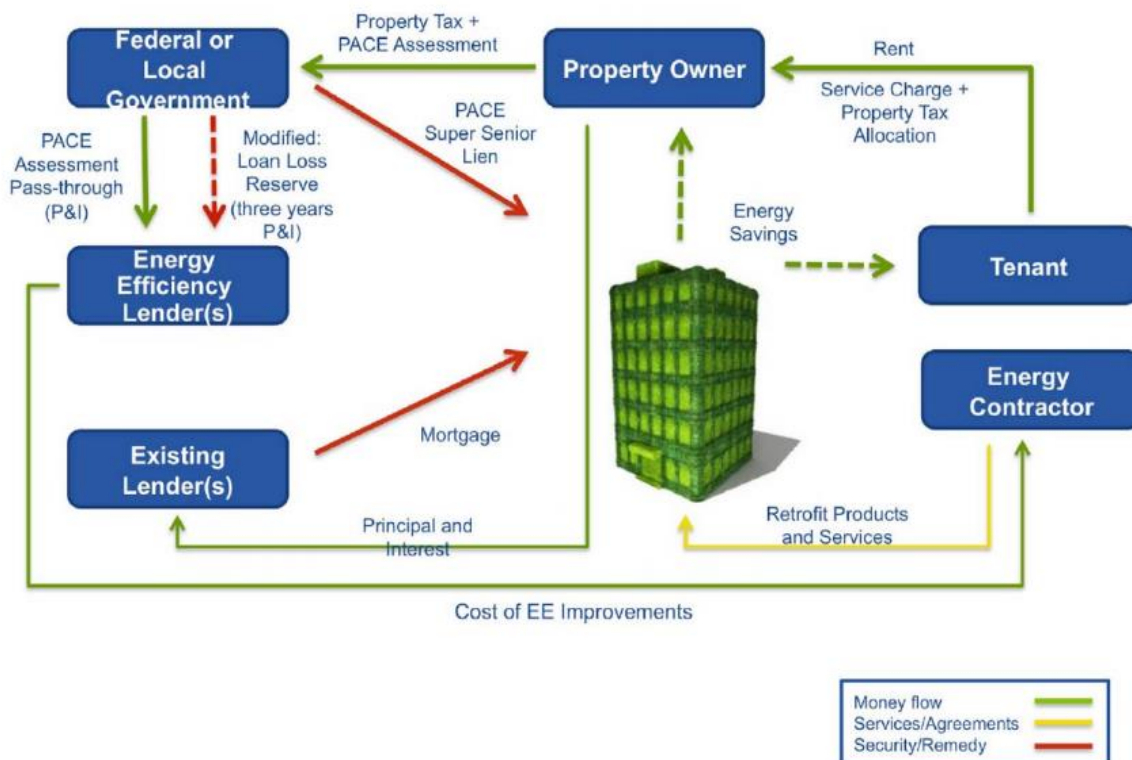
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Appendix A: Financing Model Details

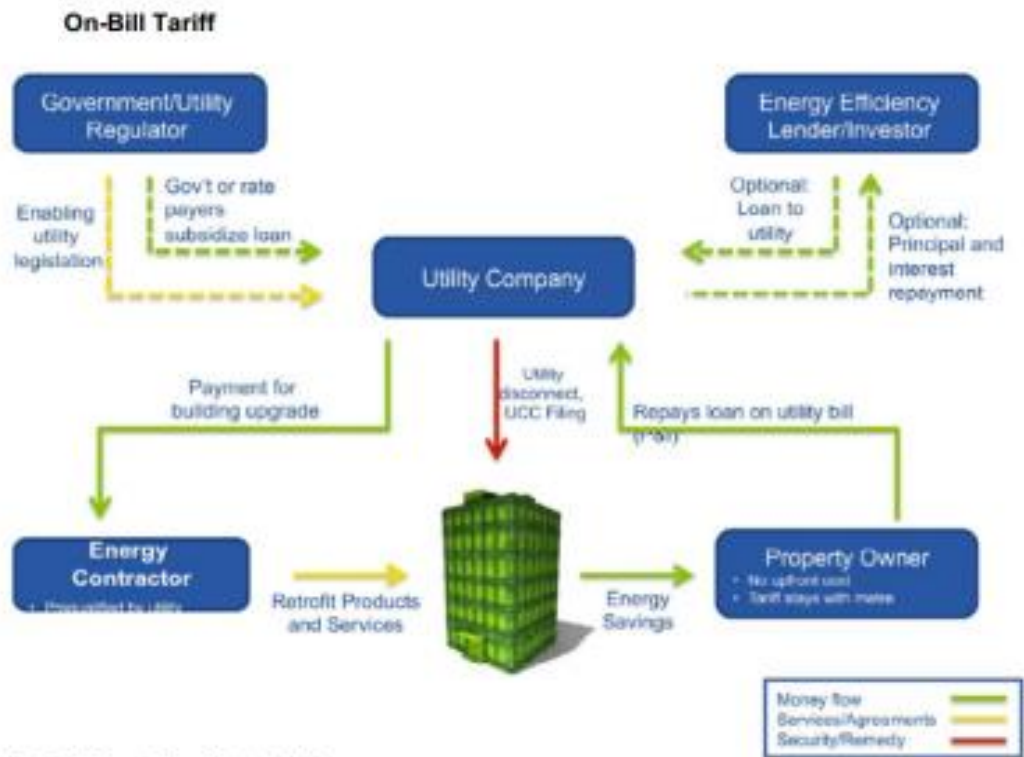
Energy Services Agreement



Property Assessed Clean Energy (PACE)



Appendix A: Financing Model Details

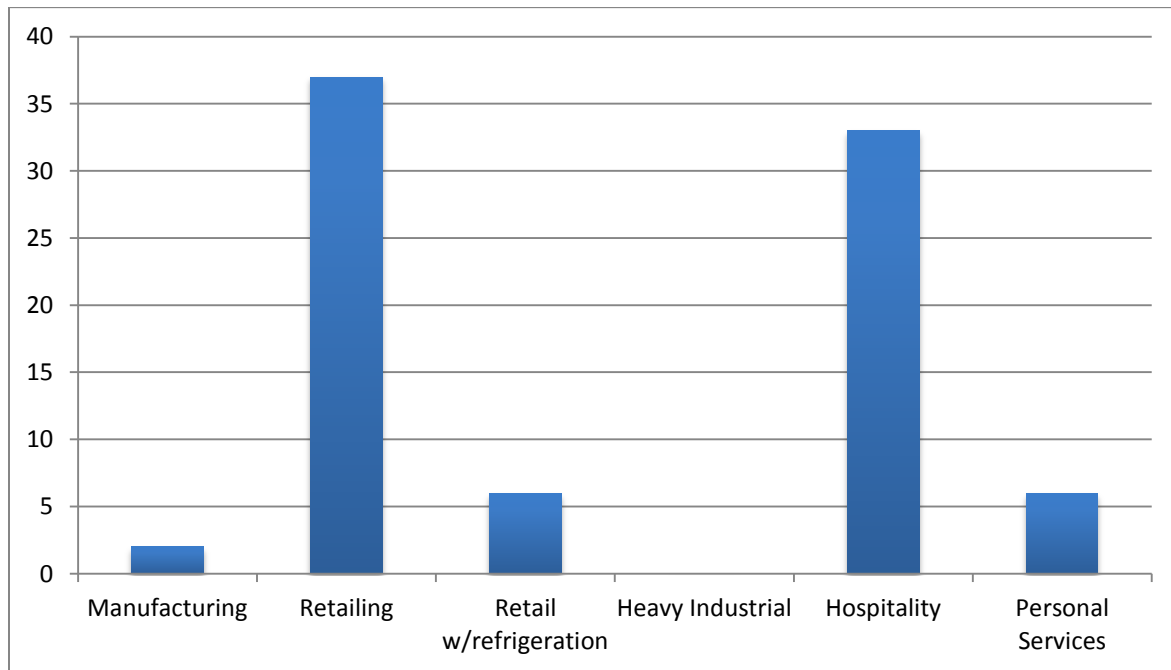


Source: WEF, GE Capital Real Estate, 2011.

Appendix B: MARS Survey

Question 1: What type of operation is your business?

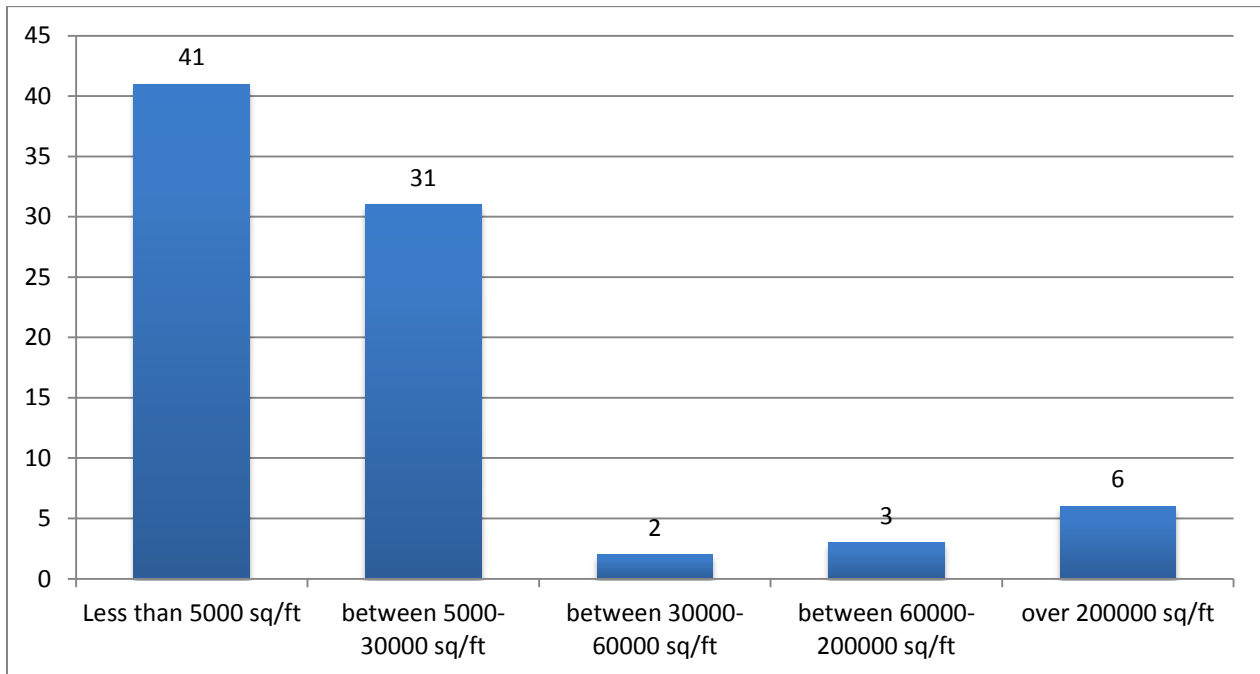
MARS had 84 business owners answer this question, which covered 6 different categories of establishments. The frequency of each type of operation is represented in the chart and table below. Retailing and hospitality were the two largest groups of respondents.



Manufacturing	2	2.4%
Retailing	37	44%
Retail w/refrigeration	6	7.1%
Hospitality	33	39.3%
Personal Services	6	7.1%
Total	84	100%

Question 2: What is the size of your business location?

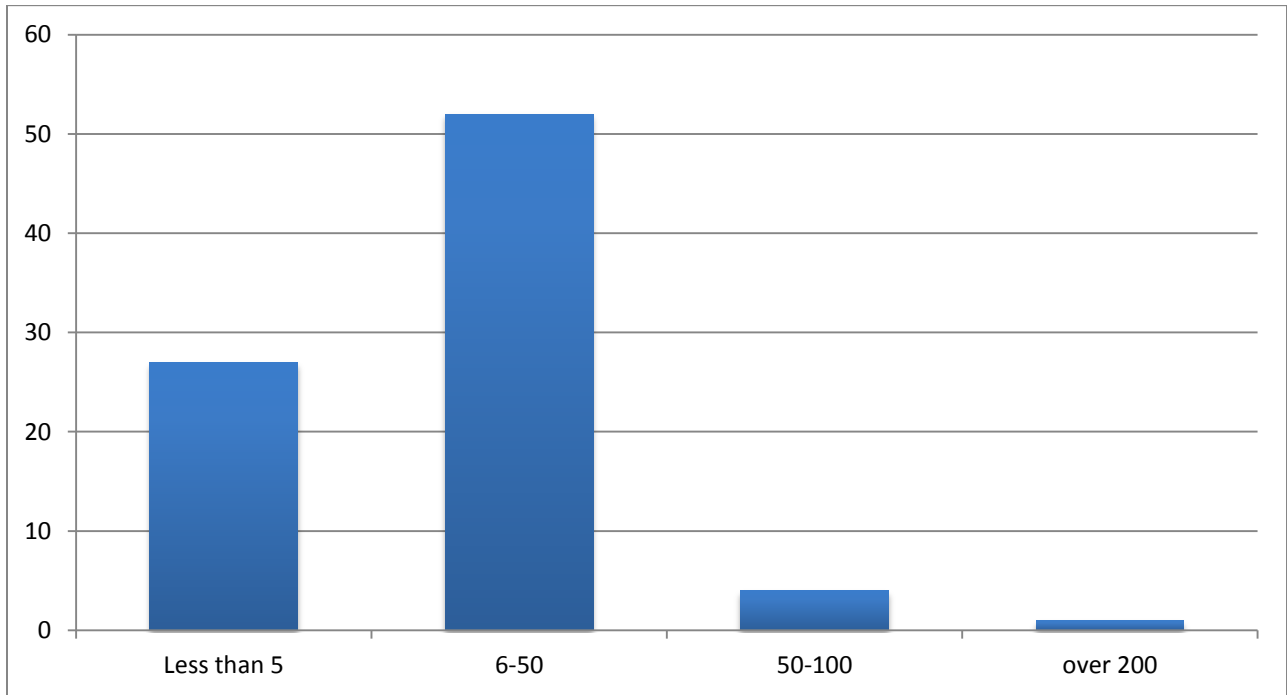
Of the 84 proprietors surveyed 41 had business locations of less than 5000 sq/ft, 31 had locations between 5000 -30,000 sq/ft, 2 had locations between 30,000 – 60,000 sq/ft, 3 had locations between 60,000 and 200,000 sq/ft with 6 having locations over 200,000 sq/ft with 1 not knowing the size of their location. The frequency of each size category is represented in the chart and table below.



Less than 5000 sq/ft	41	48.8%
between 5000-30000 sq/ft	31	36.9%
between 30000-60000 sq/ft	2	2.4%
between 60000-200000 sq/ft	3	3.6%
over 200000 sq/ft	6	7.1%
Did not answer	1	1.2%
Total	84	100%

Question 3: How many employees do you have?

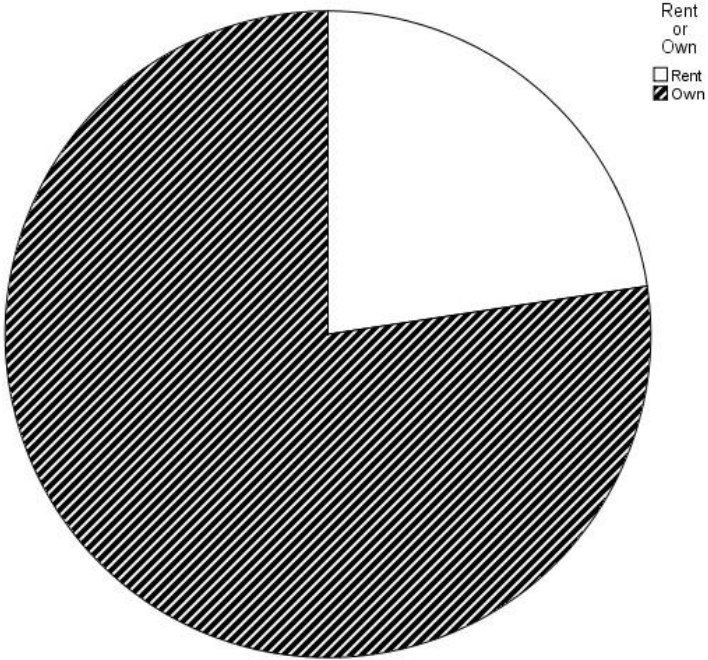
When asking how many employees the organization employed, 27 had 5 or fewer employees, 52 had between 6 and 50 employees, 4 had 51 to 100 employees, 0 had 101-200 employees and 1 had over 200 employees. The frequency of each category is represented in the chart and table below.



Less than 5	27	32.1%
6-50	52	61.9%
50-100	4	4.8%
over 200	1	1.2%
Total	84	100%

Question 4: Do you rent or own your workspace?

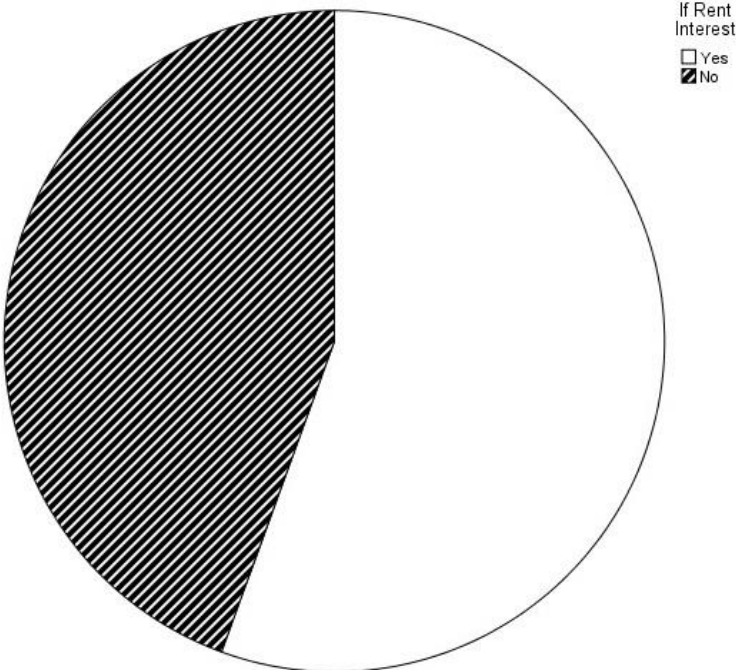
Out of the 84 business owners survey 65 stated they were owners and 19 stated they were renters. The frequency of each response is represented in the chart below. The frequency of each category is represented in the chart and table below.



Rent	19	22.6%
Own	65	77.4%
Total	84	100%

Question 4a (was asked if the respondent responded “Yes” to question 4): Do you have an interest in investing into energy related improvements for your building if you benefit from them?

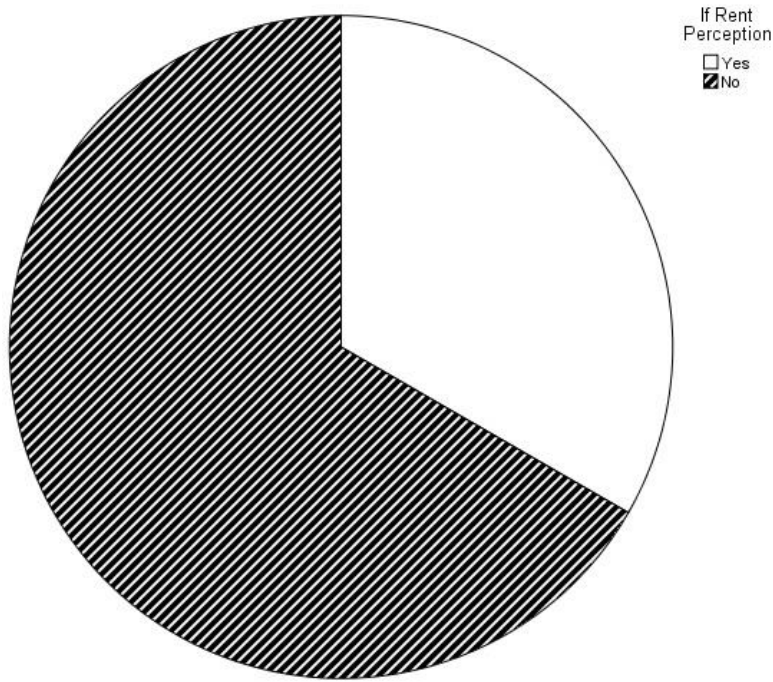
Out of the 18 renters asked this question 10 stated yes, with 8 no’s. The frequency of each response is represented in the chart below. The frequency of each category is represented in the chart and table below.



Yes	10	55.6%
No	8	44.4%
Total	18	100%

Question 4b (was asked if the respondent responded “Yes” to question 4): Do you perceive that the property owner might work with you if there was a way for both of you to benefit financially from the project?

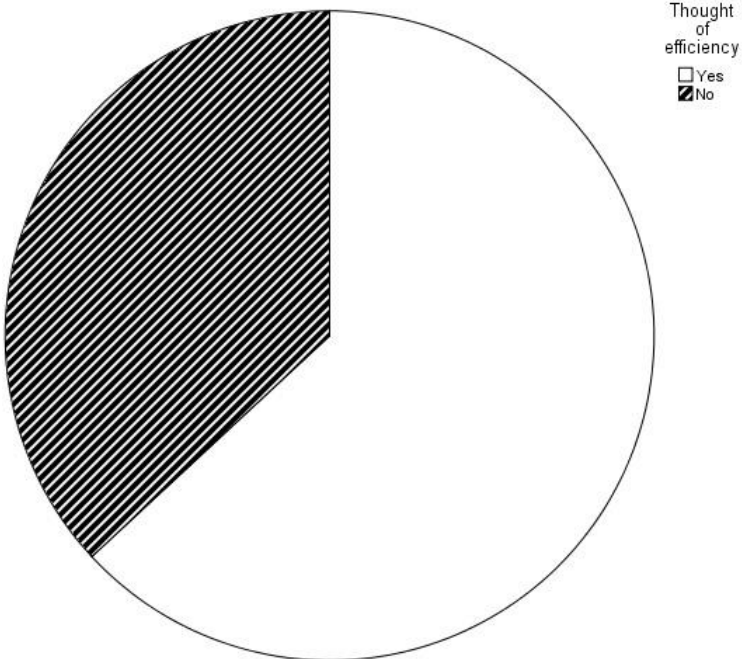
18 renters were asked this question with 12 responding no and 6 responding yes. The frequency of each response is represented in the chart below. The frequency of each category is represented in the chart and table below.



Yes	6	33.3%
No	12	66.7%
Total	18	100%

Question 5: Have you ever thought of making energy efficient improvements to your business and if so what did you have in mind?

84 business owners were surveyed with 53 answering yes with 31 answering no when asked if they had ever thought of making energy efficient improvements to their businesses. The frequency of each response is represented in the chart below. The frequency of each is represented in the chart and table below.



Yes	53	63.1%
No	31	36.9%
Total	84	100%

List of improvements mentioned:

Upgraded lights, would like to put new doors in

Working on upgrading lights now

Put in all new lighting and a new furnace last year. It cost around \$4000

After the fire upgraded kitchen appliances and replaced the furnace

Interested in solar

Has looked into putting solar panels on the roof

Has replaced equipment and replaces light as needed

Not at all interested in learning more, doesn't pay utilities and isn't concerned about efficiency

Interested in compressors, freezers, lights

Interested in adding another entry door so they don't lose so much heat in the winter

Just switched all the lights to LED's

Replaced lights

Interested in learning more about solar

The building and equipment are already very energy efficient

Interested in refrigeration and cooling efficiency as well as HVAC

Interested in wind and solar power, more efficient equipment, has upgraded, lights, and has switched from propane to wood heat

Has upgraded lights

In the past 10 years has upgraded insulation, windows, doors and the furnace

Has thought about zoned HVAC, better windows, and solar panels, only interested in energy audit if free

Has looked into solar and HVAC

Have energy efficient furnaces

Has looked into solar (too expensive) and windmills (can't have them on the lake because of visual concerns) too many rules to follow

Have upgraded lights, they recycle and they heat pool with wood furnace

Have changed all hot water heaters, low use water toilets and light

Have upgraded lights, HVAC water heater, water softener, and pool and spa heaters

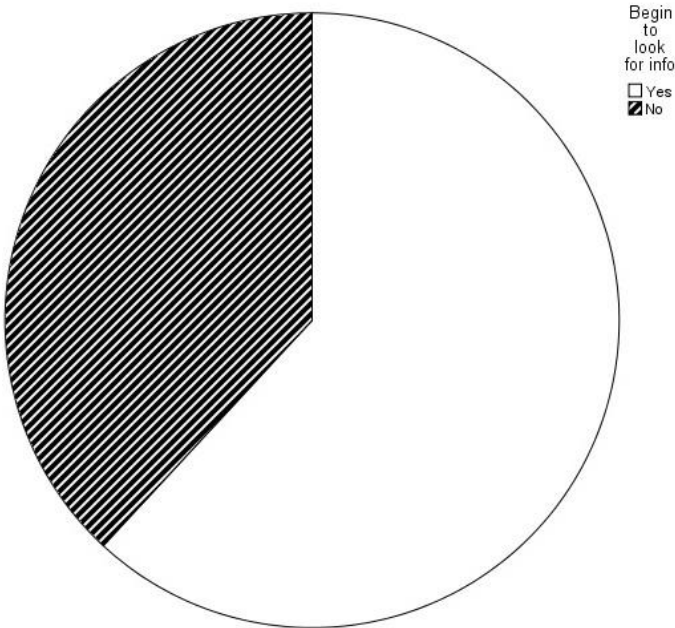
Makes upgrades on a regular basis in all areas of the business

Looks to upgrade equipment when doing projects

Have upgraded light, are interested in updating the weather stripping on the doors

Question 6: Do you know where you would begin to look for information regarding energy efficiency or renewable energy options?

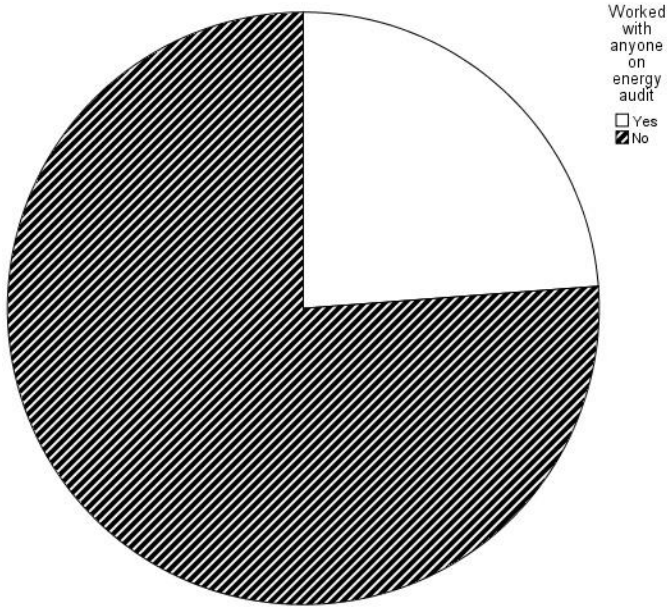
84 business proprietors were asked if they would know where to begin looking for information regarding energy efficiency or renewable energy options. 52 responded yes with 32 respondents stating no they did not. The frequency of each category is represented in the chart and table below.



Yes	52	61.9%
No	32	38.1%
Total	84	100%

Question 7: Have you ever worked with anyone to identify energy efficiency projects such as an energy audit?

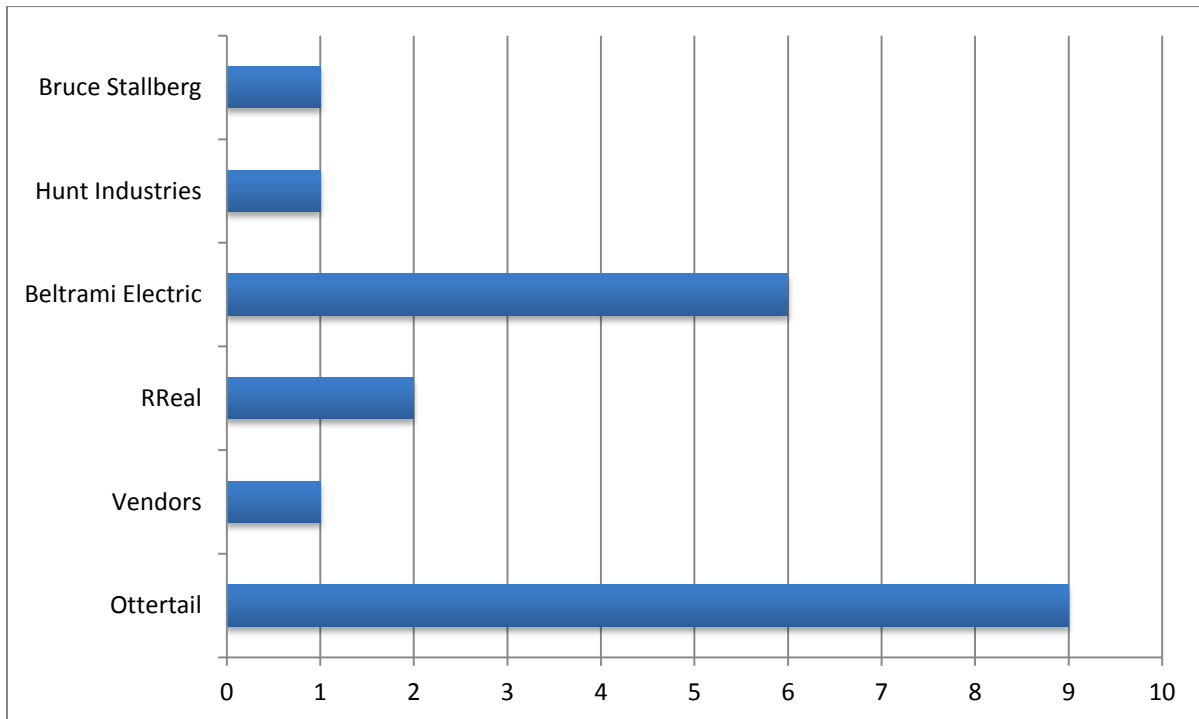
64 of the business owners responded they had not worked with anyone to identify energy efficiency improvements with 20 proprietors stating they had worked with someone. The frequency of each category is represented in the chart and table below.



Yes	20	23.8%
No	64	76.2%
Total	84	100%

Question 7a (was asked if the respondent responded “Yes” to question 7): If yes who have you worked with?

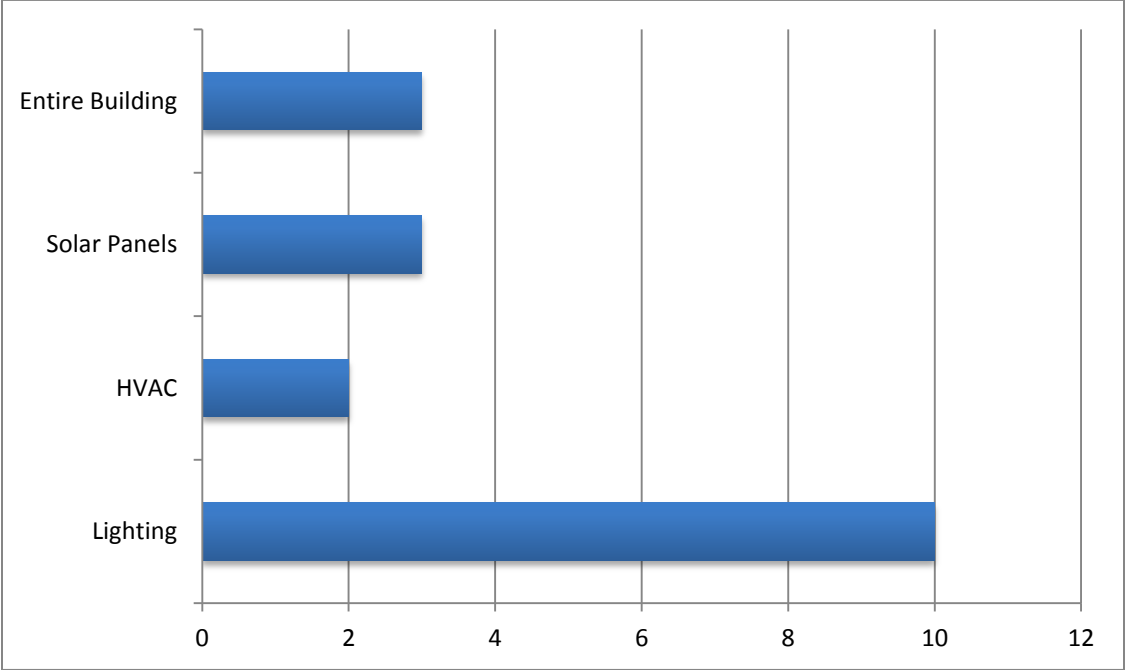
Of the twenty business owners who stated they had worked with someone, 9 stated they had worked with Ottertail Power, 6 with Beltrami Electric, 2 with RREAL, and 1 each with Hunt Industries, Bruce Stallberg, and a vendor. The frequency of each response is represented in the chart below. The frequency of each category is represented in the chart and table below.



Ottertail	9	45%
Vendors	1	5%
RReal	2	10%
Beltrami Electric	6	30%
Hunt Industries	1	5%
Bruce Stallberg	1	5%
Total	20	100%

Question 7b (was asked if the respondent responded “Yes” to question 7): If yes what project have you worked on?

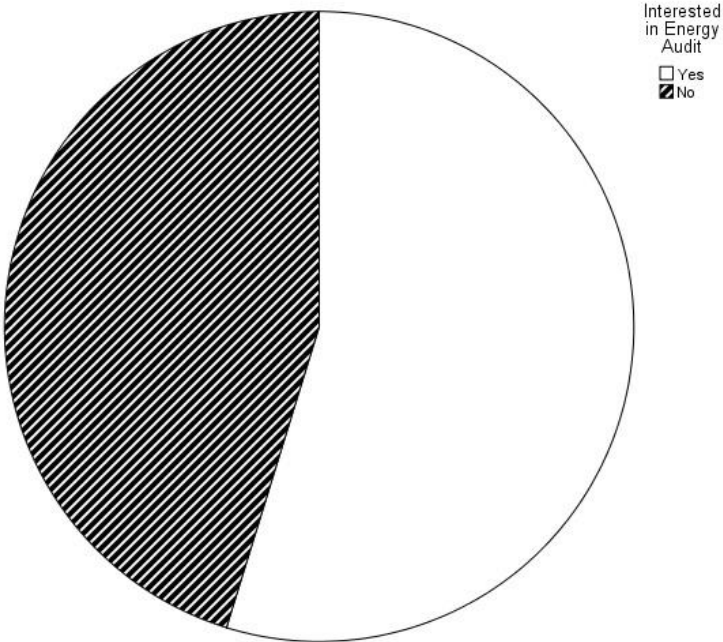
Of the twenty business owners who stated they had worked with someone on an energy efficiency project, 10 identified lighting, 3 solar panels, 3 their entire building, 2 HVAC with 2 respondents choosing not to answer this question. The frequency of each category is represented in the chart and table below.



Lighting	10	50%
HVAC	2	10%
Solar Panels	3	15%
Entire Building	3	15%
Did not answer	2	10
Total	20	100%

Question 8: If given the opportunity, would you be interested in an energy audit?

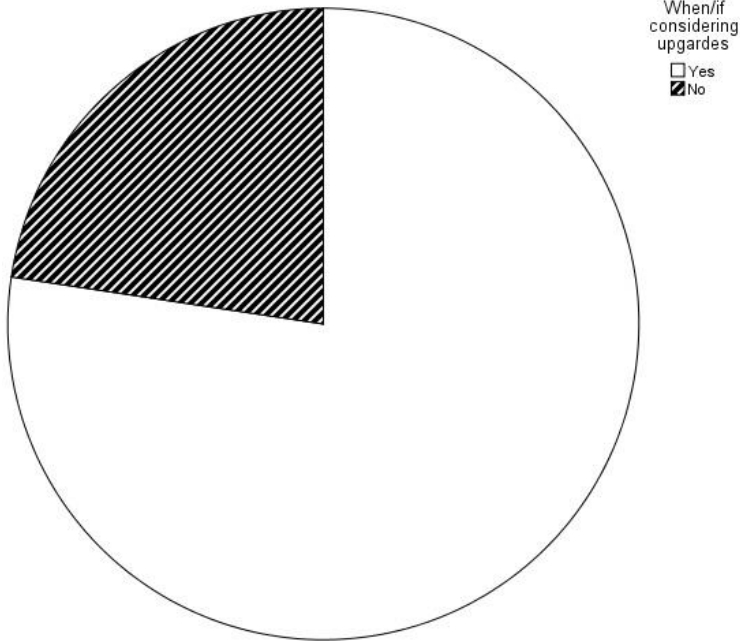
84 business owners were surveyed with 46 answering yes and 38 answering no when asked if would be interested in an energy audit. The frequency of each category is represented in the chart and table below.



Yes	46	54.8%
No	38	45.2%
Total	84	100%

Question 9: When/if you are considering renovations, expansions, or relocations do you also consider efficiency or renewable energy upgrades?

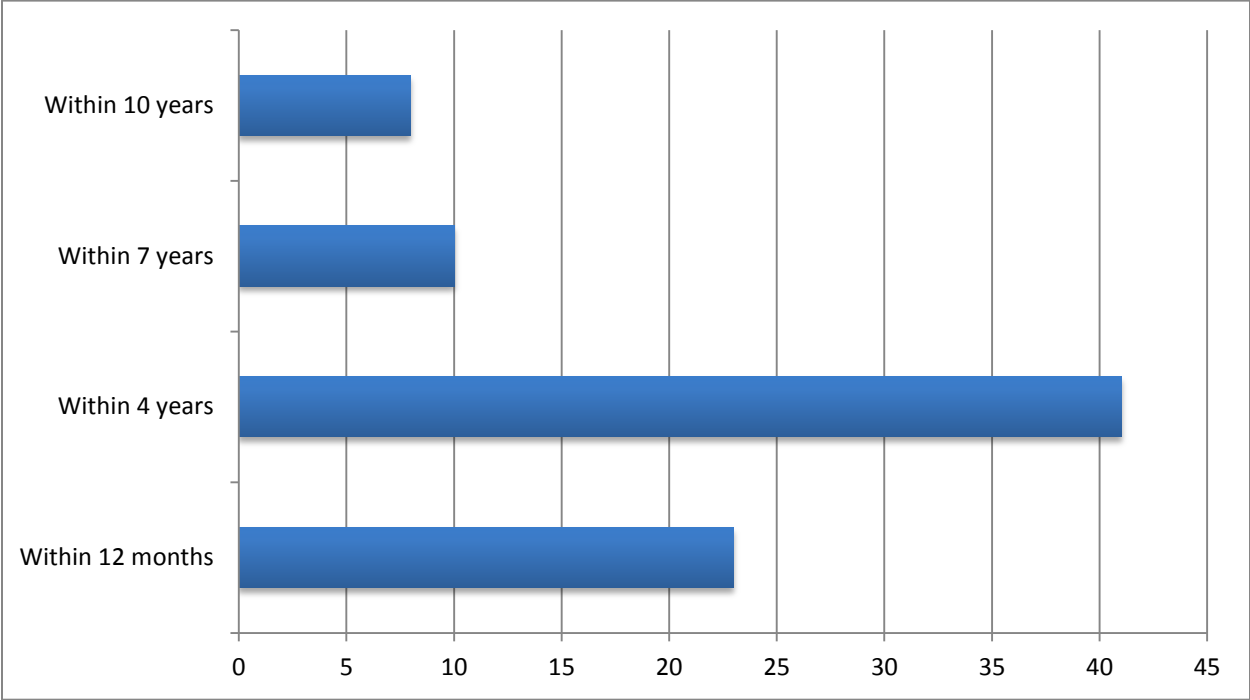
Of the 84 business owners surveyed 65 answered yes when asked if they consider efficiency or renewable energy upgrades when considering renovations, expansion, or relocations with 19 answering no. The frequency of each category is represented in the chart and table below.



Yes	65	77.4%
No	19	22.6%
Total	84	100%

Question 10: If you were to make an improvement how soon would it have to pay off (pay for itself)?

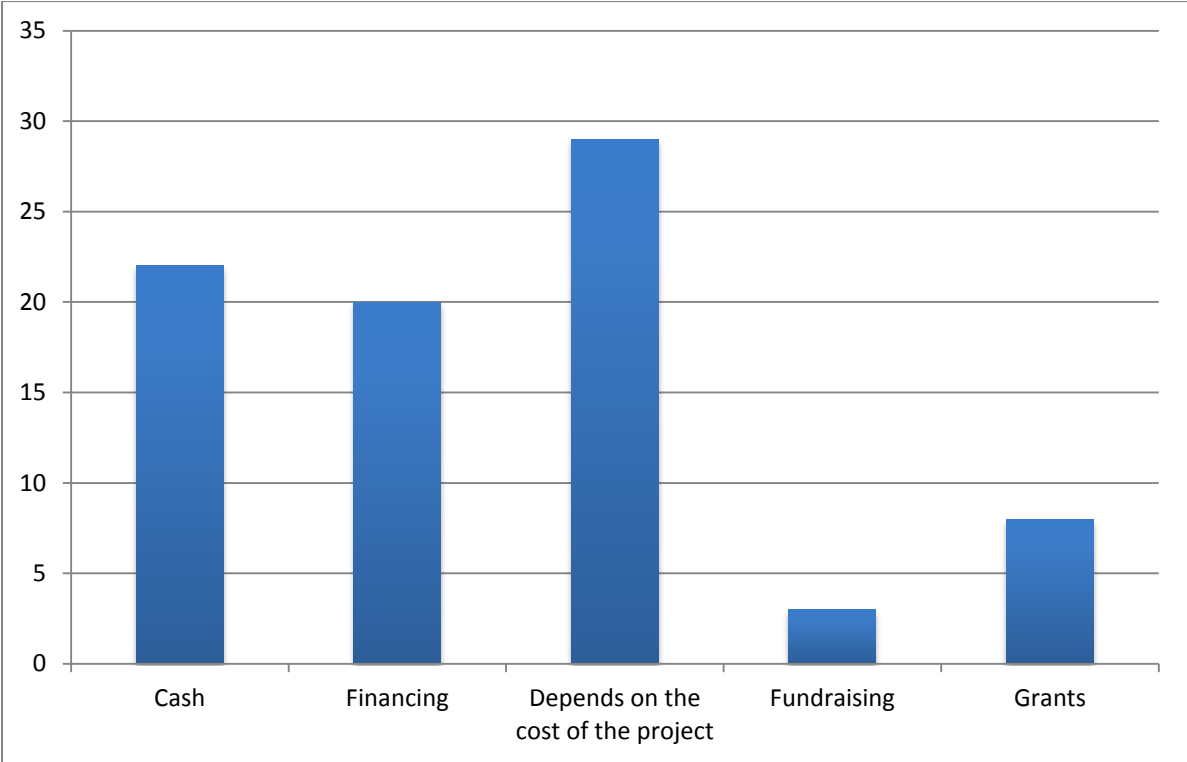
Of the 84 proprietors surveyed 23 responded the improvement would have to pay off within 12 months, 41 within 4 years, 10 within 7 years, 8 within 10 years and 2 who chose not to answer this question. The frequency of each category is represented in the chart and table below.



Within 12 months	23	27.4%
Within 4 years	41	48.8%
Within 7 years	10	11.9%
Within 10 years	8	9.5%
Did not answer	2	2.4%
Total	84	100%

Question 11: What is your preferred method to fund such an improvement?

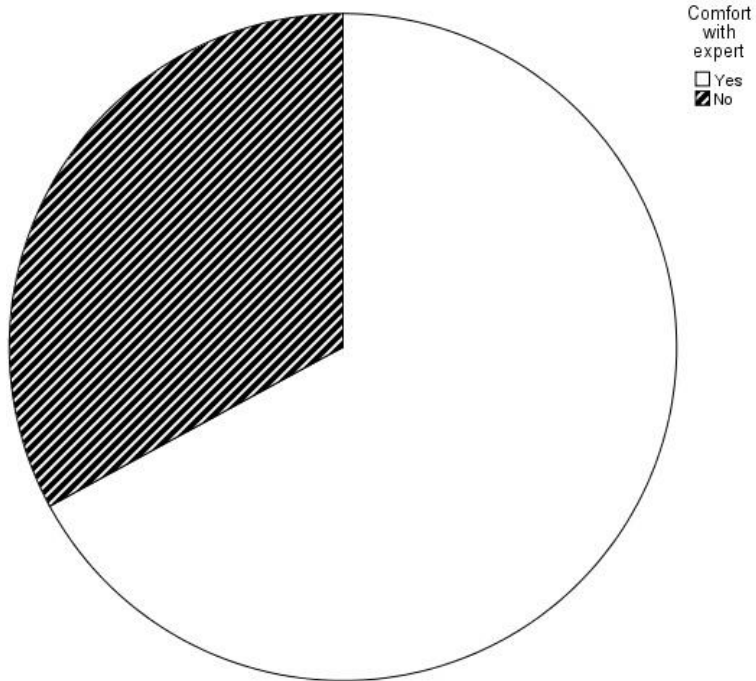
Of the 84 proprietors surveyed 22 stated cash would be their preferred method, 20 preferred financing, with 29 responding if would depend on the cost of the project, with 3 selecting fundraising and 8 choosing grants. The frequency of each category is represented in the chart and table below.



Cash	22	26.2%
Financing	20	23.8%
Depends on the cost of the project	29	34.5%
Fundraising	3	3.6%
Grants	8	9.5%
Did not answer	2	2.4%
Total	84	100%

Question 12: Would you be comfortable financing if an expert was able to tell you that your monthly debt service would be less than your savings?

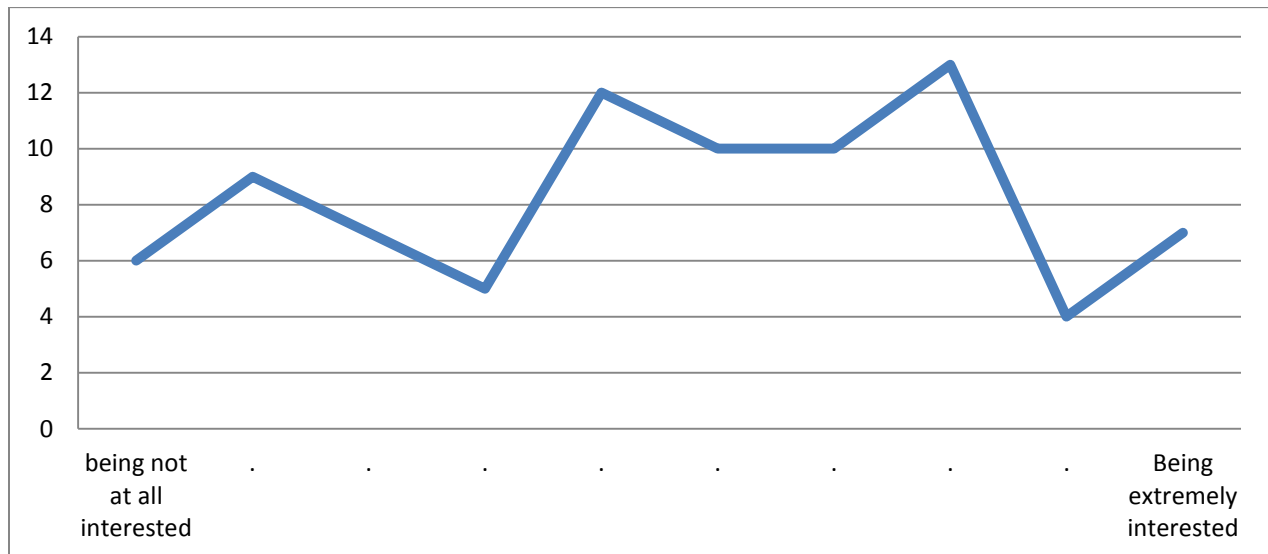
Of the 84 business owners surveyed 53 answered yes with 26 answering no with 5 choosing not to answer this question. The frequency of each size category is represented in the chart below. The frequency of each category is represented in the chart and table below.



Yes	53	63.1%
No	26	31%
Did not answer	5	6%
Total	84	100%

Question 13: Given other priorities of your work, how would you rate your interest in energy efficiency improvements or renewable energy projects on a scale from 1 to 10 with 1-being not at all interested and 10 being extremely interested?

84 business owners were asked to their interest in energy efficiency improvements or renewable energy from 1 to 10. With 1 being not at all interested and 10 being extremely interested, the mean was 5.6. The frequency of responses is represented in the chart and tables below.



being not at all	6	7.1%
.	9	10.7%
.	7	8.3%
.	5	6%
.	12	14.3%
.	10	11.9%
.	10	11.9%
.	13	15.5%
.	4	4.8%
Being extremely	7	8.3%
Did not answer	1	1.2%
Total	84	100%

Interest in	
N	83
Minimum	1
Maximum	10
Mean	5.6
Std. Deviation	2.673