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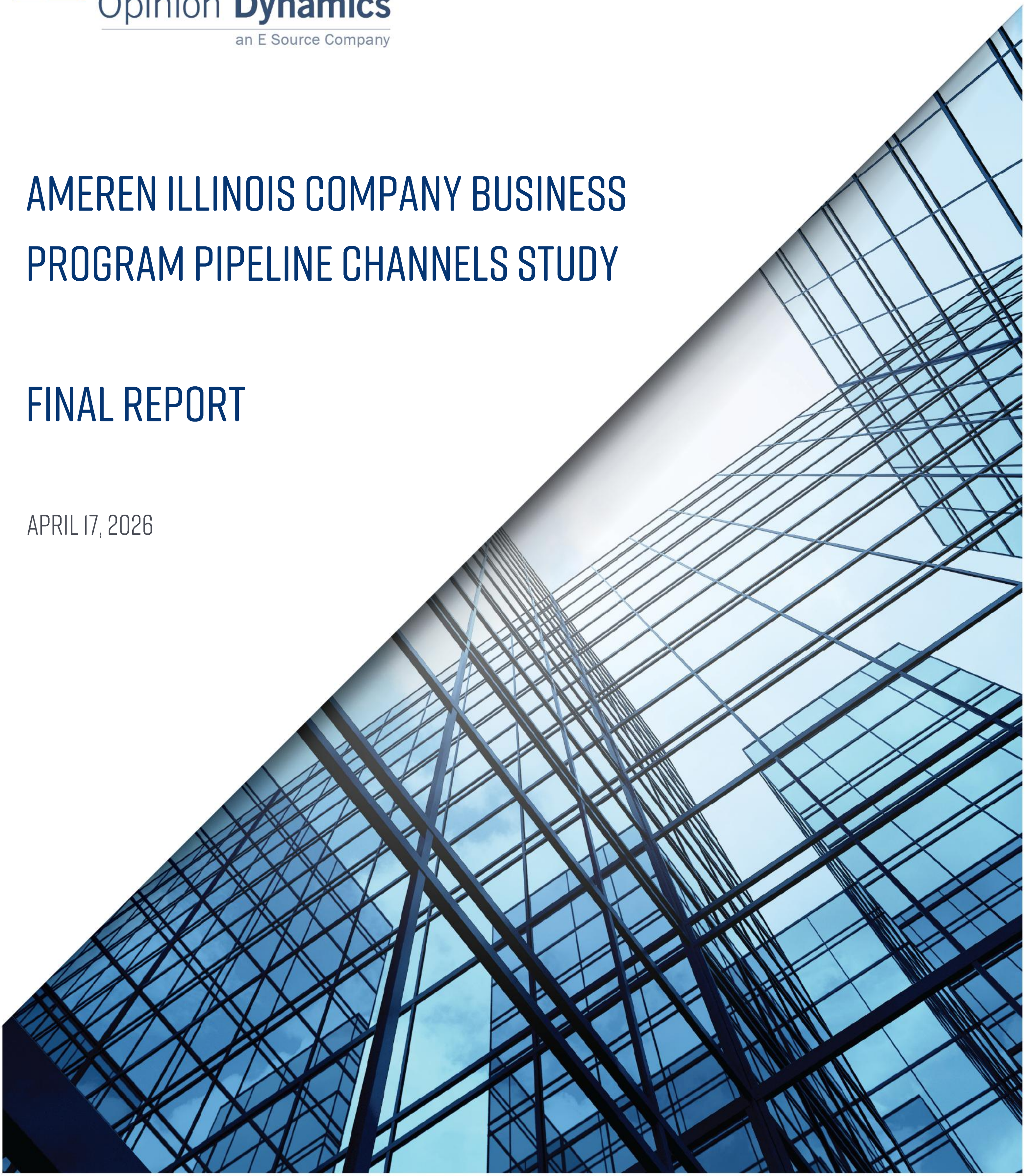
AMEREN ILLINOIS COMPANY BUSINESS PROGRAM PIPELINE CHANNELS STUDY

FINAL REPORT

APRIL 17, 2026



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CONTENTS

TABLES & FIGURES

I. EXECUTIVE SUMMARY

Along with its portfolio of energy-saving initiatives, channels, and measures, Ameren Illinois Company's (AIC) Business Program also offers its business customers additional services that do not immediately focus on energy savings. Instead, these services provide customers with information, data, equipment, and other resources designed to support them in identifying, scoping, and securing internal approval for energy efficiency projects. Throughout this report, we refer to these service offerings as *feeder channels*, as participation in any of them is expected to serve as a starting point for longer-term customer engagement with energy-saving initiatives in the future. The intent is that the information and support provided through the feeder channels will generate a continuous organic pipeline of projects that customers will bring through AIC's initiatives each year, rather than relying solely on the implementation team's recruiting efforts to reach savings and participation goals. These channels have become increasingly important to the strategic direction of the Business Program over the current program cycle.

The feeder channels covered by this study include the following:

- Building Energy Assessment (BEA)
- Metering & Monitoring (MM)
- Process Energy Assessment (PEA)
- Strategic Energy Management (SEM)
- Staffing Grant (SG)
- Feasibility Study (FS)
- Compressed Air Retro-Commissioning (CARx)
- Industrial Refrigeration Retro-Commissioning (IRRCx)
- Large Facility Retro-Commissioning (LFRCx)
- Retro-Commissioning (Lite) (RCx-L)
- Virtual Commissioning (VCx)

These feeder channels are primarily utilized with AIC's largest business customers. Due to the focus on large businesses, these feeder channels are mainly managed and delivered by AIC's team of Energy Advisors (EAs). These are not new offerings. AIC has provided some of these services for over ten years; however, little recent research has explored the role and effectiveness of feeder channels in promoting future participation in energy-saving programs, especially in the holistic quantitative and qualitative manner of this study.

This study is an exploratory analysis aimed at gaining a deeper understanding of how these feeder channels have operated and their effectiveness in converting customers and delivering energy savings over the seven years from 2018 to 2024. For this study, we examined several aspects of the feeder channels by conducting three primary research activities:

- A historical conversion and cost efficiency analysis of AIC Business Program data to estimate the rate at which the feeder projects have translated into energy savings, and the costs associated with these projects over the 2018 through 2024 period.
- A secondary materials review to better understand how the suite of offerings in AIC's Business Program compares to peer utilities, and to learn more about their strategies related to energy efficiency program recruitment, engagement, and generating participation amongst large business customers.

- In-depth interviews with AIC EAs to explore their perceptions and use of the feeder channels, practices for recruiting large business customers, and ongoing interactions with major customers.

1.1 KEY FINDINGS

The content of this report provides details and insights into how AIC's feeder channels have performed over the 2018–2024 timeframe, as well as how EAs utilize them to recruit and engage large business customers. Our historical conversion and cost-efficiency analysis shows variability across the feeder channels in terms of conversion rates, costs, and associated ex ante savings. The secondary materials review and in-depth EA interviews explain why this variability should be expected, likely reflecting the unique nature of each of the feeder channels.

Overall, it appears that AIC has a well-structured system in place for addressing the recruitment and engagement of large business customers. While this study focused on assessing the design of the EA role and understanding general practices, and did not aim to evaluate EA performance, the process appears well designed to help usher large businesses through consistent energy efficiency participation. The EAs serve as an extension to customer staff and provide customized recommendations for participation in various offerings to support their needs. In addition, the feeder channels, at least in their design, seem to be a fairly robust set of solutions or tools targeted at most of the barriers that consistently arose in the literature review. The EAs utilize the feeder channels strategically and selectively to address mainly informational barriers that arise during the recruitment and engagement process.

Nevertheless, improvements to the process are possible. The following sections summarize the key findings and themes from each research activity, and this Executive Summary concludes with a summary of the evaluation team's specific recommendations for potentially improving the process.

1.1.1 HISTORICAL CONVERSION AND COST-EFFICIENCY ANALYSIS

We developed a systematic process for tying feeder channel projects to energy-saving program conversion projects. This allowed the evaluation team to assess the quantitative performance of the feeder channels by examining key metrics, including historical conversion rates, incentive and non-incentive costs, and ex ante savings associated with conversion projects (and any direct savings for RCx and VCx). Table 1 (excerpted from Table 17) summarizes the analysis results. There is notable variability across all channels in all metrics. Although current data limitations prevent a robust and conclusive assessment of performance, the variability will likely persist even after data improvements are made. This variable performance is supported by the general theme found throughout this study. That is, each of the feeder channels addresses a unique customer need or specific set of circumstances, and conclusions regarding quantitative performance should not be made without equal consideration of qualitative factors.

Table 1. Conversion Rates, Costs, and Ex Ante Energy (kWh) Savings by Feeder Channel 2018–2024

Feeder Channel	Conversion Rate	Total Feeder Costs	% of Total Feeder Costs	Total Ex Ante kWh Savings	$ per kWh
A	B	C	D = C/Sum(C)	E	F = D/F
SEM	85%	$1,370,720	8%	34,413,050	$0.04
SG	66%	$3,861,724	23%	72,562,546	$0.05
RCx	65%	$3,857,105	23%	23,626,901	$0.16
FS	63%	$1,041,514	6%	35,272,073	$0.03
MM	59%	$453,602	3%	10,252,672	$0.04
BEA	48%	$857,309	5%	4,150,386	$0.21
PEA	34%	$375,264	2%	6,625,357	$0.06
VCx	30%	$4,988,129	30%	15,120,528	$0.33

Total	**54%**	**$16,805,366**	**100%**	**202,023,513**	**$0.08**

Note: The $ per kWh values presented in this table reflect the incremental portfolio cost per unit of savings associated with the feeder channels. These values exclude any incentives paid through the conversion channels (e.g., Standard, Custom).

The evaluation team also noted the following findings:

- When looking at conversion rates, or the proportion of feeder projects that resulted in at least one conversion project, SEM (85%), SG (66%), and RCx (65%), and FS (63%) came out on top, while BEA (48%), PEA (34%), and VCx (30%) had the lowest conversion rates.
- Costs for implementing the feeder channels include expenditures associated with any customer incentives paid, as well as the administrative costs associated with offering and implementing the feeder channel. Total expenditures over the seven years ranged widely from $375,264 for PEAs to $4,988,129 for VCx.
- When considering the savings resulting from conversion projects, SG produced the most electric energy savings among the feeder channels, delivering an estimated 72,562,546 kWh of annual savings over the seven-year period. FS produced the second most savings, with 35,272,073 kWh, and SEM came in third with 34,413,050 kWh. At the bottom, although still representing fairly substantial energy savings, were BEAs, which generated 4,150,386 kWh, and PEAs, which generated 6,625,357 kWh.
- Finally, we explored how each feeder channel performed in terms of cost per unit of energy savings ($ per kWh). FSs led the feeder channels at $0.03/kWh, followed closely by MM and SEM, both at $0.04/kWh, and SGs at $0.05/kWh. The least cost-efficient were BEAs at $0.21/kWh and VCx at $0.33/kWh. Most feeder channels compare quite favorably to the average rate of $0.29/kWh reported for the overall Business Program in AIC's 2026–2029 Electric and Gas Energy Efficiency and Demand Response Plan.[1]
- In terms of the nature of the conversion projects conducted after completing a feeder project, the data show that lighting projects are quite common, indicating that many of the easily accomplished projects have likely been addressed. Otherwise, large customer projects are commonly converted into Custom Initiative projects due to their size and complexity.

1.1.2 PEER UTILITY REVIEW

The evaluation team reviewed the business offerings of 10 peer utilities to benchmark AIC's services and engagement strategies against other portfolios. We discovered that, overall, the business offerings are quite similar across the utilities. All of the portfolios include prescriptive and custom programs, and nearly all have a small business-focused offering, as well as midstream offerings. The main areas of distinction across the portfolios seem to be whether they offer a business-specific online store and, notably, the feeder channels they offer. All 10 of the utilities offer what could be considered some form of a feeder channel(s). SEM, assessments, commissioning, and retro-commissioning are all common services. Table 2 summarizes these findings (excerpted from Table 18). AIC's Business Program appears to be unique in its offering of staffing grants. Additionally, only two peers offer something similar to a feasibility study.

[1] Ameren Illinois Company. (2025) *Ameren Illinois Company Electric and Gas Energy Efficiency and Demand Response Plan 2026–2029: Appendix H – Business Program*. Prepared for Illinois Commerce Commission, Docket No. 25-0211: https://icc.illinois.gov/docket/P2025-0211/documents/366528/files/642182.pdf.

Table 2. Feeder Channels by Utility

Utility	State	Feeder Channels
Ameren Illinois (AIC)	IL	▪ Assessments ▪ Feasibility Studies ▪ Metering & Monitoring ▪ Retro-Commissioning ▪ SEM ▪ Staffing Grants ▪ Treasure Hunts (PEA) ▪ Virtual Commissioning
Ameren Missouri	MO	▪ SEM ▪ Virtual Commissioning
Commonwealth Edison (ComEd)	IL	▪ Metering & Monitoring
Consolidated Edison (ConEd)	NY	▪ Assessments ▪ Real-Time Energy Management ▪ Retro Commissioning ▪ Treasure Hunts ▪ Virtual Commissioning
Consumers Energy	MI	▪ Assessments ▪ Retro Commissioning ▪ SEM (Industrial Energy Management Program) ▪ Virtual Commissioning
Detroit Edison (DTE)	MI	▪ Assessments ▪ Retro Commissioning ▪ SEM
Interstate Power and Light (IPL)	IA	▪ Assessments ▪ Feasibility Studies ▪ Retro Commissioning ▪ SEM ▪ Virtual Commissioning
MidAmerican Energy	IA, IL, SD	▪ Assessments ▪ Retro Commissioning ▪ SEM ▪ Treasure Hunts
National Grid	NY	▪ Assessments ▪ Real-Time Energy Management ▪ Retro Commissioning
Northern Indiana Public Service Company (NIPSCO)	IN	▪ Assessments ▪ Retro Commissioning
Xcel Energy	MN, CO	▪ Assessments ▪ Virtual Commissioning

1.1.3 LITERATURE REVIEW

We conducted a literature review to explore industry best practices for engagement with large business customers and recruiting them to participate in energy efficiency programs. The literature primarily focuses on the notion that recruiting large business customers, like all customers, involves addressing barriers that prevent or hinder them from upgrading to energy-efficient equipment. Some of the primary barriers identified in the literature that inhibit large business customers from making energy-efficient upgrades at their facilities include the following:

1. Limited awareness of programs and technologies
2. Lack of executive buy-in and strategic integration
3. Capital constraints and investment criteria
4. Risk perception and uncertainty
5. Complexity and administrative burden
6. Limited internal capacity and expertise
7. Data limitations and measurement challenges
8. Generic program design
9. Misaligned utility incentives
10. High baseline efficiency

The evaluation team posits that the first six of these barriers can be viewed as a function of the seventh barrier listed: data limitations and measurement challenges. That is, large business energy efficiency projects require a range of accurate and reliable information and data to proceed. Understanding current usage is fundamental, and from this arises the opportunity for energy savings. Robust data and information are essential for evaluating opportunities and developing business cases, including estimates of energy savings, available incentives, return on investment (ROI), and payback periods.

In summary, the literature suggests that AIC's feeder channels comprise a range of services that can be tailored to a customer's situation to help overcome informational and staffing barriers to participation. They help facilitate recruitment and engagement with large customers by overcoming largely informational obstacles that would likely prevent these customers from participating in energy efficiency programs in their absence.

1.1.4 Energy Advisor Interviews

The EAs shared a lot of rich and detailed information during the in-depth interviews. While the main findings chapter provides more detail, this section highlights the most salient findings by topic area.

Familiarity, Understanding, and Use of the Feeder Offerings

- Each of the EAs was familiar with all offerings and feeder channels.
- EAs agreed that the assortment of feeder channels is a robust "toolbox" they can leverage to address the challenges they encounter when engaging with large business customers and attempting to recruit them to complete energy efficiency projects.

Defining Large Business Customers

- EAs work with and define large businesses based on rate codes. They work with all rate class DS-4 customers and some DS-3B and DS-3A customers in their territories.[2]
- Opportunities to achieve energy savings from "low-hanging fruit" are diminishing. Most large customers have already participated in energy-saving programs, and in many instances, have done so several times.
- EAs indicate that the remaining opportunities within large businesses lie mainly in addressing older, inefficient equipment, process improvements, and HVAC systems.

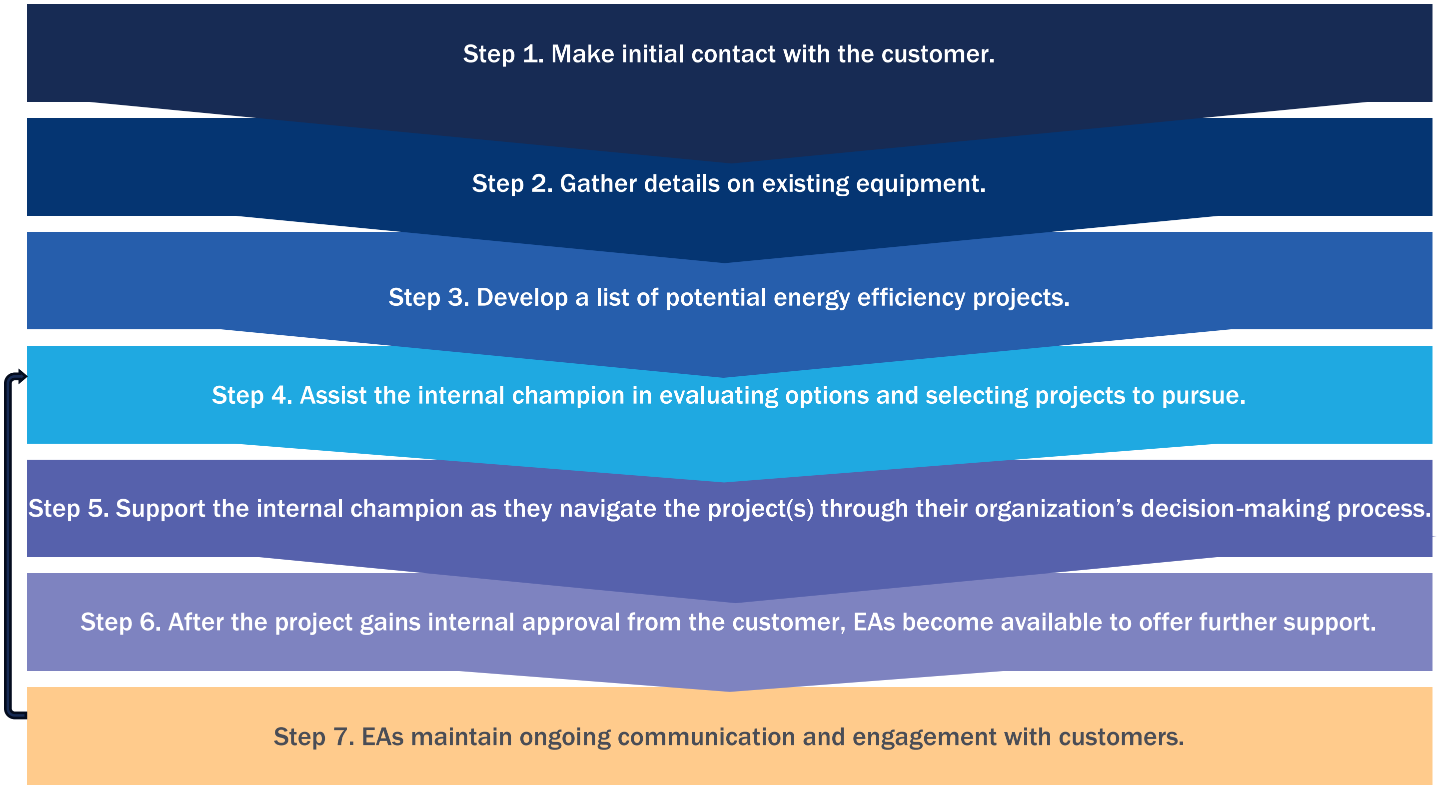
Targeting and Recruiting Large Business Customers

- AIC does not have a formal process in place for targeting and recruiting large business customers.

[2] DS-4 customers are non-residential customers whose maximum monthly demand is in excess of 1,000 kW; DS-3B customers use between 400 and 1,000 kW; DS-3A customers have a maximum monthly demand greater than 150 kW but less than 400 kW.

- Figure 1 presents an idealized depiction of how the EAs recruit and engage large business customers. This is not a formal process; instead, it was pieced together by the evaluation team based on discussions with the EAs.

Figure 1. Large Business Customer Engagement Process



- All EAs emphasized the importance of securing an internal ally or champion from the outset. They need to get in the door, which only happens after they identify the right person to engage with. Large business projects won’t progress without an internal champion.
- A successful strategy involves focusing on customer needs. It’s about listening to their feedback, identifying their pain points and goals, and finding ways to use energy efficiency to help the champion succeed in their role, with the resources available to the EA.
- The culmination of all initial conversations, regardless of strategy or content, is to identify existing equipment, assess energy usage, and propose energy efficiency opportunities.
- EAs need to provide a compelling reason for pursuing an energy efficiency project. In some cases, the benefits to the customer are obvious when incentives are included (e.g., LED lighting), making the project an easy sell. However, most other projects are more complex, requiring additional calculations, data, and information for the customer to make informed decisions.
- EAs noted that a significant administrative challenge is that large business projects rarely occur in the year they are conceived or approved internally by the customer. Managing recruitment and engagement efforts with large business customers on a program-year-based schedule is a challenge.

THE LARGE CUSTOMER DECISION-MAKING PROCESS

- EAs reported that large customer decision-making processes are complex. They can involve many people, and the number varies from customer to customer.

- The EAs do not always have visibility into all aspects of customer decision-making.
- EAs emphasized that they need to communicate the situation clearly and concisely to gain traction with the customer. Their points of contact are often extremely busy, so it is crucial that the EA makes the process as simple and straightforward as possible.
- Customers typically view energy efficiency projects as other capital expenses that must compete with alternative uses of capital. Reliable and high-quality information on estimated energy savings, ROI, paybacks, and incentive payments is essential for all large business projects. These factors are crucial in ensuring the internal champion is well-equipped to present a strong business case for the investment.

ONGOING INTERACTIONS WITH LARGE BUSINESS CUSTOMERS

- The better EAs understand their customers, the more likely they are to successfully lead energy efficiency projects at their facility.
- Interactions with a client vary depending on the customer's stage in their journey and the project's requirements. They are often triggered by specific events. For instance, when a customer is filling out an application, interactions may be frequent; during the waiting period for approval, interactions tend to slow down.
- EAs manage their time and approach to tasks differently. This influences how they interact with clients. Administrative processes differ among EAs. Each advisor has their own style.
- One of the main engagement challenges they face is staff turnover. Building trust and relationships with internal champions requires a substantial amount of time, effort, and commitment.

UNMET LARGE CUSTOMER NEEDS

- The EA staff we spoke with did not reveal any obvious, systematic, or easily addressed unmet customer needs.

RECOMMENDATIONS FOR IMPROVING LARGE BUSINESS RECRUITMENT AND ENGAGEMENT

- Three EAs suggested that a smaller version of a PEA could be useful. Currently, the PEA is only used with the largest customers who have the greatest potential for energy savings. The current PEA involves a four-day onsite engagement and costs around $8,000 to perform. However, the insights and information it provides are invaluable. EAs believed that a smaller, shorter, and less costly alternative would be beneficial. These activities should focus on developing facility equipment inventories and lists of energy efficiency opportunities to support future communication and outreach.
- One EA believed that the Business Program's current new construction offerings do not match how large businesses make their construction decisions. Large business new construction projects are unique, often enormous, and can last many years. This creates difficulties in aligning customer projects with AIC planning cycles, a challenge noted in previous studies. Preapproval requirements are complicated because energy efficiency upgrades are often added at the end and can be modified or removed after initial planning has begun. New strategies for handling large customer new construction might be needed.

1.2 RECOMMENDATIONS

Consider designing and implementing a data tracking process, with KPIs, to assess the ongoing performance of the feeder channels. Our analysis of historical conversion and cost efficiency shows that evaluating the performance and costs of feeder channels can be quite straightforward and practical. Nonetheless, two key caveats apply. First, data quality must be improved to increase the accuracy, validity, and efficiency of the analysis before final performance decisions are made. We highlighted the limitations of our current method; a process is needed to reliably link conversion projects with feeder projects in tracking data to support more rigorous analysis. Second, evaluating the performance or cost efficiency of feeder channels should not be done in isolation. Even channels with lower cost efficiency may serve to address specific customer barriers that would be unresolved without them. Therefore, both quantitative and qualitative assessments are essential to comprehensively understand the value these channels provide.

For feeder channels that require measure-level analysis (e.g., FS, MM), include a field in the application-level data that indicates what measure(s) were targeted. This information is usually available in supporting documents and records, but it is laborious and tedious to review in that form. The database tracks all measures installed through energy-saving programs; it seems this would be analogous to tracking measures addressed through feeder channels, so usable fields should already exist in the database. Notably, the tracking data include project descriptions for the FS channel; however, these descriptions often lack sufficient detail to determine the project scope or the systems and end uses targeted.

Consider standardizing the collection and storage of customer equipment inventories and opportunities lists. Effective ongoing engagement with large customers relies on understanding their equipment base, energy usage, and potential upgrades. Customer staff are busy, so outreach must include tailored, relevant information that resonates with their specific circumstances. Currently, this information isn't consistently tracked or organized in the system. Implementing a tracking system would ensure that vital data is always accessible to the right team members and would help new EAs get up to speed. Additionally, it would prevent the loss of crucial information if an EA departs unexpectedly.

Consistently log the needs, desires, constraints, limitations, goals, and other factors that are important to a customer. Knowing that a customer has significant resistance to anything involving production shutdowns or delays could be important. Being aware that an organization has energy or environmental goals might be helpful. Recognizing that staff are facing ongoing problems and frustrations with their current HVAC system is valuable. These details often guide the assessment of alternatives and are essential in building a comprehensive business case. Logging this information would be especially beneficial for new EA staff who need to familiarize themselves with the customers in their service territory.

Develop an assessment offering that works for less-than-the-largest customers. AIC must ensure that mid-to-large-sized customers do not get overlooked. Currently, most EA resources focus on recruiting DS-4 clients. Some effort is also directed towards DS-3B and occasionally DS-3A, but all other customers are handled by small business EAs. Although many feeder services are available to smaller clients, some, like SEM and PEAs, are not. Creating SEM and PEA offerings, or similar solutions, for the next customer tier could broaden these services' reach. Several EAs proposed developing an assessment service tailored for smaller yet still sizable customers, such as DS-3B and DS-3A.

Consider offering increased incentive levels to promote ongoing participation to capture deeper savings. Many large businesses are repeat participants in AIC’s energy-saving programs, and most of the easy gains have already been achieved. Consequently, the costs to improve facility energy efficiency continue to increase over time. However, EAs noted that there is still significant potential among the largest customers. An incentive plan that rewards ongoing participation might provide an extra level of incentives for repeat customers, helping to keep projects cost-effective for both the customer and AIC.

2. INTRODUCTION

To support its portfolio of energy-saving initiatives and channels offered through its Business Program, AIC also provides various complementary services that are not intended to deliver energy savings directly. These non-energy-saving service offerings include:

- Building Energy Assessment (BEA)[3]
- Feasibility Study (FS)
- Metering & Monitoring (MM)
- Process Energy Assessment (PEA)
- Staffing Grants (SG)
- Strategic Energy Management (SEM)

Instead of directly delivering energy savings, these services provide customers with data, information, equipment, and/or staffing resources, with the expectation that these projects will lead to future participation in energy-saving programs.

An additional group of services yields direct energy savings, but also has the long-term goal of stimulating future customer participation in energy-saving programs. These include the following:

- Virtual Commissioning (VCx)
- Compressed Air Retro-Commissioning (CARx)[4]
- Industrial Refrigeration Retro-Commissioning (IRRCx)
- Large Facility Retro-Commissioning (LFRCx)
- Retro-Commissioning Lite (RCxL)

This study examines the operation and performance of these nine service offerings over the period from 2018 to 2024. Collectively, we refer to these services as *feeder channels* due to their shared long-term goal of influencing future participation in energy-saving programs (i.e., "feeding" the project pipelines of these energy-saving programs). The feeder channels covered in this report are summarized in Table 3.

Table 3. AIC Business Feeder Channel Savings and Costs

Feeder Channel	Abbreviation	Description	Savings?	Costs?
Building Energy Assessment	BEA	An assessment conducted by the Smart Energy Design Assistance Center (SEDAC) for defined public sector customers. Program funds pay for the assessment. SEDAC advertises, identifies, and works directly with AIC customers to submit program applications and perform this work.	No	Incentives, administrative costs

[3] The data analyses that are part of this study are historical analyses looking at the 2018 to 2024 timeframe. BEA is no longer offered (last projects in 2023) but are included in the analyses for completeness.

[4] CARx is not currently offered. The last CARx projects were conducted in 2020.

Feeder Channel	Abbreviation	Description	Savings?	Costs?
Feasibility Study	FS	When a customer is unsure whether a project is financially or logistically feasible, they can apply for funds to cover a study to determine the feasibility of implementing a specific energy efficiency project.	No	Incentives, administrative costs
Metering & Monitoring	MM	Provides financial incentives to install equipment and software that support advanced sub-metering and energy monitoring, enabling customers to track usage and pinpoint specific areas for upgrades.	No	Incentives, administrative costs
Process Energy Assessment	PEA	Comprehensive industrial energy "treasure hunt" focused on identifying energy conservation measures in manufacturing plants, including improvements to lighting, HVAC, motor variable frequency drives (VFDs), steam, compressed air, refrigeration systems, and manufacturing processes.	No	Administrative costs
Staffing Grant	SG	Funding to help businesses cover the costs of hiring an Energy Project Manager or Energy Specialist. The position may be filled by a new or existing full-time or part-time employee, or a consultant.	No	Incentives, administrative costs
Strategic Energy Management	SEM	A continuous process of planning, implementation, and monitoring energy consumption and operational practices to provide a path for achieving energy-savings goals. By incorporating an energy management program into daily operations, businesses can ensure their savings goals are not only realized but also sustainable.	No	Incentives, administrative costs
Compressed Air Retro-Commissioning	CARx	The process of fine-tuning existing building systems to optimize performance. Customers also receive information on capital expenditure (CAPEX) projects they can pursue to further reduce their energy usage.	kWh, kW	Incentives, administrative costs
Industrial Refrigeration Retro-Commissioning	IRRCx		kWh, kW	Incentives, administrative costs
Large Facility Retro-Commissioning	LFRCx		kWh, kW, therms	Incentives, administrative costs
Retro-Commissioning (Lite)	RCxL		kWh, kW, therms	Incentives, administrative costs
Virtual Commissioning	VCx	A free service that relies on facility electricity usage data to make energy-saving recommendations. No site visit is required.	kWh	Administrative costs

Notably, all channels have associated costs regardless of whether they deliver energy savings. Most feeder channels include incentive payments to customers (except for PEA and VCx), and all include administrative expenses associated with offering and implementing the offerings. To date, little research has examined the performance or efficacy of these feeder channels in affecting conversion projects. To understand the performance of the feeder channels, it is necessary to consider both the costs and the benefits.

When assessing the efficacy of the feeder channels, the costs include the incentive and administrative costs. The benefits would include the associated energy savings resulting from subsequent program participation (or direct participation in the feeder channel, in some cases). AIC's tracking database documents the activity associated with all channels that deliver energy savings or pay an incentive at the project level. Thus, records of all feeder projects (except PEAs)[5] are included in the initiative tracking data.

However, analyzing their ability to stimulate additional program participation is greatly hindered by the lack of consistent and reliable means of tying feeder projects to their associated conversion projects in the database.[6] Both are present in the data, but which feeder projects lead to conversions, and which energy-saving projects were the conversions, is not documented. As such, it has been difficult to systematically determine which feeder channels are producing energy savings. This study aims to address this issue by utilizing common facility addresses, project documentation, and patterns of project participation to link feeder channel participation to potential conversion projects. It is essential to note that, given the nature of the data and the evaluation team's analysis approach, the conversion results discussed throughout the report reflect the maximum possible impacts of the feeder channels (see Section 3.1.7, Study Limitations, for further details). However, the results are useful in facilitating a review of the output from these channels and the associated costs of operating them.

Importantly, regardless of the conversion analysis results, cost efficiency might not be the only factor to consider. This study also addresses the following questions by incorporating a peer utilities comparison, a literature review, and implementation team interviews:

- Why does AIC offer these no-savings services?
- What purpose(s) do the feeder channels serve?
- Do other utilities offer similar services?
- Are all of these services needed?
- Are there any services that might be missing?
- Can the delivery of the channels be improved?

Historically, the feeder channels have been primarily targeted at AIC's largest commercial and industrial customers through proactive promotion, recruitment, and engagement by AIC's EAs. Generally, EAs are experienced technical staff who have worked, to some extent, in the industry and territory for years. They are predominantly engineers and possess a wealth of insights into the customers and Program Allies operating in their territory, which are invaluable for effectively implementing energy efficiency programs throughout AIC's service territory.

The overall AIC service territory comprises seven EA territories. Each territory has a Small Business EA and a Large Business EA. The Small Business EAs work with the bulk of the business customer base in terms of quantity, as they

[5] PEA projects are not tracked in the tracking database because they are not associated with energy savings or an incentive. They are, however, tracked separately and were incorporated into the database by the evaluation team to facilitate the analyses conducted in this study.
[6] One could leverage notes, entries, and documentation stored in ALEET to try and track the history of individual projects, but this information is not tracked consistently, and the analysis would be onerous.

work with all DS-2 and DS-3A customers (see Table 4).[7] The Large Business EAs work with all DS-4 customers, some DS-3B customers, and occasionally DS-3A customers (e.g., if the customer is a frequent participant in programs). There is also an Industrial EA who provides additional specialized support to AIC's largest business customers, working almost exclusively with DS-4 customers, but across all territories.

Table 4. AIC Large Business Rate Classifications

Rate Code	Delivery Service	Maximum Monthly Demand	Estimated Number of Customers [A]
DS-3A	General	>= 150 kW and < 400 kW	1,240
DS-3B	General	>= 400 kW and < 1,000	756
DS-4	Large General	>= 1,000 kW	427

[A] The number of customers by rate class was provided by an EA during an interview. The evaluation team was unable to find available data to corroborate these numbers.

EAs work extensively with large business customers, conducting outreach and recruitment, determining and proposing energy efficiency opportunities, helping assess project feasibility, assisting with applications and program processes, and providing general administration and support as customers proceed with energy efficiency projects. EAs are involved with all feeder projects and are the individuals tasked with working with and supporting customers to transition these non-energy-saving feeder projects into energy-saving conversion projects. Given their role in facilitating the operation of the feeder offerings, the EA role is central to this study. Understanding how they utilize these feeder channels in their interactions with customers and how they recruit and engage large customers is crucial to understanding the role that the feeder channels play.

In summary, this study consists of exploratory research designed to further understand the operation and performance of the feeder channels over the 2018–2024 timeframe. The research is three-fold and includes the following:

- Data-driven historical conversion and cost efficiency assessment
- Secondary literature and peer reviews
- In-depth interviews with EAs responsible for facilitating participation in the feeder channels

Table 5 lists the general research questions drafted to guide this study and the methods we used to address each question.

Table 5. Research Questions by Methods

Research Question	Method
How successful are the feeder channels, collectively, in producing project conversions? Which channels are most and least effective at generating projects?	Conversion & Cost Efficiency Analysis
What types of follow-up projects are feeder channel participants completing?	Conversion & Cost Efficiency Analysis
What is the incremental cost per unit of savings associated with the feeder channels?	Conversion & Cost Efficiency Analysis
What does the landscape of C&I offerings look like across peer utilities?	Secondary Materials Review
What strategies/tactics are other utilities using to reach customers and generate participation in their C&I portfolios?	Secondary Materials Review
How do feeder projects originate?	EA Interviews
How do EAs interact with and utilize the feeder channels to convert customers into energy-saving projects?	EA Interviews

[7] Since the focus of this study is on large business recruitment and engagement, Small Business Energy Advisors are not discussed further. The Energy Advisor research herein consists of discussions with territory Large Business Energy Advisors, the Industrial Energy Advisor, and the Energy Advisor Manager.

Research Question	Method
Are practices consistent within and between EAs?	EA Interviews

The following chapter outlines the methods used by the evaluation team to complete the study. The final chapters present the study's findings, synthesize the results, provide recommendations, and propose future research.

3. METHODS

3.1 HISTORICAL CONVERSION & COST EFFICIENCY ANALYSIS

3.1.1 OVERVIEW

The primary aim of the historical conversion and cost efficiency analysis was to leverage existing information to examine and better understand the operation and performance of the feeder channels during the 2018–2024 period. Three main research questions guided this study (also see Table 5):

1. How successful are the feeder channels, collectively, in producing project conversions, and which channels are most and least effective at generating projects?
2. What types of follow-up projects are feeder channel participants completing?
3. What is the incremental cost per unit of savings associated with the feeder channels?

To address the overall research questions, we established a specific set of metrics we needed to calculate:

- The number of feeder projects conducted through each channel
- The number of feeder projects that resulted in conversions for each channel
- The conversion rate by feeder channel
- Costs (incentive and non-incentive) associated with each feeder channel
- Savings (kWh, kW, therms) associated with each feeder channel
- The types of projects represented by conversions
- The incremental costs per unit of savings associated with each feeder channel

The main source of information was AIC's energy efficiency implementation database, Ameren's by LEIDOS, Energy Efficiency Tracker (ALEET). The ALEET database contains records of all applications (i.e., projects) submitted through any of AIC's Business Program service offerings, which include all typical energy-saving program activities as well as feeder channel activities that involve incentive payments.[8] The database tracks project-level information, including the channel name, customer details (name, facility service addresses, and contact information), incentive costs paid, and, for energy-saving program projects, measures implemented and associated savings (in kWh, kW, and therms).

To date, the feeder channels in the database have received little recent research focus. One reason is that they are generally not directly associated with savings and, therefore, are outside the scope of required impact evaluations. Another factor likely limiting their assessment is that, although the feeder projects are included in the database, they are not consistently linked to conversion projects. The database indicates which service a project represents, making it clear whether projects are feeder or energy-saving activities. However, it does not always specify which feeder projects led to conversions or which energy-saving activities were involved in conversions, two crucial pieces of information needed to calculate the metrics.

[8] PEA projects were the only exception and were not initially included in the database because these projects were not associated with savings or incentives. The research team obtained a list of all PEA projects conducted over the study timeframe from the implementer and incorporated these cases into our files for conversion processing and analysis purposes.

For this project, the research team processed historical participation data by tying energy-saving program participation to preceding feeder channel activity to determine conversions. This involved significant data processing and, in some cases, manual review of electronically stored documentation. The remainder of this section details this process.

3.1.2 DETERMINING CONVERSIONS

Our method for determining conversions varied across the different feeder channels based on the level at which the project is expected to deliver impacts. Each feeder channel was evaluated at one of three levels of analysis: (1) measure, (2) facility, or (3) organization,[9] based on logical considerations related to how each feeder channel functions (Table 6).

Table 6. Business Feeder Channels and Levels of Analysis

Feeder Channel	Level of Analysis	Conversion Rule
SG	Organization	Later completion of a project by the same organization (any facility, any measure) after an SG project.
SEM	Organization	Later completion of a project by the same organization (any facility, any measure) after an SEM project.
BEA	Facility	Later completion of a project by the same organization, at the same facility (any measure) after a BEA project.
LFRCx	Facility	Later completion of a project by the same organization, at the same facility (any measure) after an LFRCx project.
PEA	Facility	Later completion of a project by the same organization, at the same facility (any measure) after a PEA project.
RCxL	Facility	Later completion of a project by the same organization, at the same facility (any measure) after an RCxL project.
VCx	Facility	Later completion of a project by the same organization, at the same facility (any measure) after a VCx project.
MM	Measure or Facility	If the project targeted a particular measure: Later completion of a project by the same organization, at the same facility, and with measures addressing the same end use/scope as was specified in the scope of the MM project. or If the project targeted a facility: Later completion of a project by the same organization, at the same facility (any measure) after an MM project.
CARx	Measure	Later completion of a project by the same organization, at the same facility, and with measure(s) addressing compressed air systems, after a CARx project.
FS	Measure	Later completion of a project by the same organization, at the same facility, and with measures addressing the same scope as was specified in the scope of the FS project.
IRRCx	Measure	Later completion of a project by the same organization, at the same facility, and with measure(s) addressing refrigeration systems, after an IRRCx project.

Organization-level assessments were used for SEM and SG projects, which are expected to have impacts at the organizational level. The analysis rule the evaluation team used to identify conversions was that any energy-saving activity conducted by the organization after participation in the feeder channel was considered a conversion, regardless of location or measure.

[9] Throughout this report, we use the terms “organization” and “company” analogously. The database naming conventions tend to favor the use of the term “company” to describe business customers, but many of AIC’s business customers are not companies, so we opted to use the more general term “organization.”

We used *facility-level assessments* to evaluate BEA, LFRCx, PEA, RCxL, VCx, and some MM projects (i.e., where MM project impacts were expected to be facility-wide). The criterion used for these channels was that an energy-saving project was counted as a conversion if it was preceded by a feeder project at the same facility.

Measure-level reviews were necessary for CARx, FS, IRRCx, and some MM (i.e., where the feeder projects targeted specific measures). For these measure-level assessments, we considered an energy-saving project a conversion only if the same organization at the same facility had previously conducted a feeder project targeting the same measure. Importantly, the measure-level reviews had to be conducted manually because the program data did not include the necessary details to determine whether a project was a conversion or not.[10] The research team manually accessed and reviewed digital documentation stored in the ALEET, such as applications, receipts, proposals, and project communications, for each measure-level feeder project to identify which measure(s) each project targeted.

It's worth acknowledging that the order in which we processed the data was consequential due to the nested nature of the decision rules. Consider the common scenario where a company first undertakes a facility- or organization-level project and subsequently completes a measure-level feeder project. If we opted to process the organization-level feeders first, we would apply the rule that any energy-saving projects conducted by the same organization, regardless of measure or location, are conversions for the organization-level feeder. In doing so, we would erroneously attribute all activity to the organization-level feeder project and ignore the potential impact of the measure-level feeder project, which may have been more influential given its targeted scope. To ensure the impact of the measure-level feeder projects was captured, we conducted the measure-level conversion analysis before conducting the facility- and organization-level reviews. To avoid counting an energy-saving project as a conversion for multiple feeder channels, the conversions associated with measure-level feeder projects were removed from the facility- and organization-level analyses.

3.1.3 POPULATION FILE DEVELOPMENT

To complete the conversion analysis, we began by creating a project-level population file, which involved aggregating the seven individual years of program data from 2018 to 2024. This file includes all projects completed through the Business Program over that time, including all energy-saving program activities and feeder projects. Table 7 shows the raw, uncleaned number of cases by year, as well as the number of cases after cleaning and processing.[11] The resulting population file contained 41,468 total projects conducted with business customers between 2018 and 2024.

[10] This lack of information was generally related to feeder projects because the database only contains data on measures installed through energy-saving program activities, not measures that might have been evaluated or targeted by a feeder project (the relevant feeder projects are mostly *assessments* of measures, not measure *installations*).

[11] We cleaned and formatted company names and facility addresses. We also removed 6 duplicate cases, 308 cases associated with irrelevant programs (market transformation, training events, program ally bonuses), 548 cases associated with program activity but showing no savings or incentive amounts, 2,812 cases not denoted as "complete" in the program database, and 19 cases that were trade ally stipends.

Table 7. Raw Data – Cases by Year Pre and Post Cleaning

Year	Raw *N*	Cleaned *N*
2018	9,049	6,373
2019	8,527	7,886
2020	7,088	7,113
2021	5,413	5,406
2022	5,377	5,308
2023	4,840	4,708
2024	4,864	4,751
Total	**45,158**	**41,549**

A variable named "amprojectnumber" served as a unique identifier we retained throughout processing to facilitate later merging of files. Each case in the database had the initiative or channel assigned, so we knew which feeder or energy-saving channel each project belonged to. Other data we retained included the application date, the customer's identifying information (company name and facility address), incentives paid, and, where applicable, installed measure information and associated savings (kWh, kW, therms).

3.1.4 MEASURE-LEVEL REVIEW

We proceeded to split the project-level population file into two parts. One file included all measure-level feeder projects along with any energy-saving projects performed by the same organizations at the same addresses as the measure-level feeders, following the completion date of the feeder; this was the *measure-level review file*. The second file contained all the feeder projects that were not measure-level, the energy-saving projects that did not take place at the same location as any measure-level feeder activity, and energy-saving projects completed at an address where a measure-level feeder project occurred, but where the energy-saving program activity occurred before the measure-level feeder project; we refer to this as the *set-aside file*. Overall, we needed to review the *measure-level review file* first to determine which energy-savings projects were conversions from measure-level feeder projects. Then, we added all the unmatched energy-savings projects back into the *set-aside file* to create the pool of facility- and organization-level feeder projects and potential energy-savings conversion projects for review.

Table 8 presents a simplified illustration of the measure-level processing. In this example, two companies (Company A and Company B) each completed three projects: both performed an MM assessment (i.e., feeder projects) and two subsequent non-feeder, energy-saving program projects. All the unshaded fields were populated from the program data; the research team needed to look up the shaded Measure fields and assign the Code fields, as appropriate. Once we determined which measures were targeted by the feeder projects, we then examined whether any subsequent program activity targeted the same measure and assigned the corresponding values to the Code field accordingly. For example, Company A's MM project focused on compressed air. The project dated May 31 involved lighting, which is not compressed air, so the project was *not* deemed a "conversion" and was left blank. The project dated June 12, however, was a compressed air project, so we deemed it a "conversion," with the associated feeder coded as "matched." Company B conducted an MM assessment (dated June 1), which our manual review revealed targeted HVAC measures. However, neither of the subsequent projects conducted at the same address included any HVAC measures, so neither of the non-feeders was coded as a "conversion," and the associated feeder project was coded as "unmatched."

Table 8. Measure-Level Review Example

Company	Service Offering	Application Date	Service Address	Measure	Code
A	MM	5/24/2018	123 Main St.	**(Compressed air)**	**Matched**
A	Non-Feeder	5/31/2018	123 Main St.	Lighting	
A	Non-Feeder	6/12/2018	123 Main St.	Compressed air	**Conversion**
B	MM	6/1/2018	456 Main St.	**(HVAC)**	**Unmatched**
B	Non-Feeder	6/15/2018	456 Main St.	Lighting	
B	Non-Feeder	6/28/2018	456 Main St.	Compressed air	

After we processed and coded the entire *measure-level review file*, we divided the coded file into two parts: one contained all matched and unmatched feeder projects along with any related energy-saving conversion projects (to be merged later with the results of the facility- and organization-level review and the project-level population file), and the other file included all unmatched energy-saving projects. Notably, these latter energy-saving projects were cases that did not qualify as measure-level conversions but could still be considered facility- or organization-level conversions if the companies performed such projects; therefore, they needed to be included in the file used for the facility- and organization-level conversion analysis. As such, these unmatched energy-saving projects were appended back into the *set-aside file*.

3.1.5 FACILITY- AND ORGANIZATION-LEVEL REVIEW

To develop the facility- and organization-level review file, we started with the appended *set-aside file* discussed above. We separated all facility- and organization-level feeder projects from all non-feeder, energy-saving projects carried out by the same companies, regardless of address.[12] This became the *facility- and organization-level review file*. Note that we did not need to determine the measures for facility- or organization-level processing—our only task with this file was to apply the conversion rules specified in Table 6.

Table 9 shows a simplified example of the facility- and organization-level review, using the same two fictional companies from Table 8. For example, we now see that Company A conducted an SEM project (organization-level) and Company B conducted an LFRCx project (facility-level). The second case for Company A is the same energy-saving project that was unmatched from Table 8. Likewise, the second and third cases for Company B are the energy-saving projects that were unmatched from Table 8. In both cases, each company also undertook an additional energy-saving project at a second facility. For Company A, both energy-saving projects (dated 5/31 and 6/8) were considered “conversions” because the facility does not matter when assessing organization-level feeder projects. For Company B, however, since their feeder project was a facility-level feeder, only the energy-saving project conducted at the same facility (6/28) was deemed a conversion; the last project (6/30) was not a conversion because it was conducted at a different facility.

[12] Note that we extracted all energy-saving projects *regardless of address* because we conducted the facility- and organization-level reviews from the same file. The addresses only mattered for facility-level matching; they were not applicable to organization-level matching.

Table 9. Facility- and Organization-Level Review Example

Company	Service Offering	Application Date	Service Address	Measure	Code
A	SEM	5/16/2018	123 Main St.	**N/A**	**Matched**
A	Non-Feeder	5/31/2018	123 Main St.	Lighting	**Conversion**
A	Non-Feeder	6/8/2018	789 Main St.	Lighting	**Conversion**
B	LFRCx	6/25/2018	456 Main St.	**N/A**	**Matched**
B	Non-Feeder	6/15/2008	456 Main St.	Lighting	**Conversion**
B	Non-Feeder	6/28/2018	456 Main St.	Compressed air	**Conversion**
B	Non-Feeder	6/30/2018	10 Main St.	Compressed Air	

3.1.6 FINAL STEPS

After processing all the facility- and organization-level data, we split the coded review file, retaining only the feeder and conversion cases (i.e., we removed all energy-saving program activities that could not be tied to feeder activity). We then appended these cases to the file of measure-level feeders and conversions from the previous step. The result was a file containing all the feeder projects, coded as either "matched" or "unmatched" (regardless of the level of analysis), along with all the appropriate energy-saving projects, coded as "conversion." We then merged the appended file back into the population file by "amprojectnumber" and, through the process of elimination, identified all unmerged cases as either unconverted program activity or program activity unrelated to any feeder projects. Every project in the analysis file was now designated as (1) an energy-saving conversion project, (2) a non-conversion energy-saving project, (3) a matched feeder project, or (4) an unmatched feeder project. The conversion and feeder designations were retained and used for subsequent analyses, which consisted of reporting project counts, conversion rates, costs, and ex ante savings by feeder channel. The final cost-efficiency analysis was simply the total costs divided by the total ex ante savings (kWh, kW, and therms).

3.1.7 STUDY LIMITATIONS

Several issues constrain the interpretation of the conversion analysis results. Each of these issues is discussed below.

INFERRED CAUSAL RELATIONSHIPS RESULT IN MAXIMUM ESTIMATES OF IMPACTS

We cannot be certain that the causal relationships we infer between feeder and conversion projects are indeed real. We assume energy-saving program activities (i.e., conversions) are attributable to certain feeder activities based on their presence in the data. However, ultimately, we cannot be certain that a particular feeder project directly led to a specific conversion.

Rigorous verification that a feeder project led to a conversion project would require surveying individuals involved in the decisions to implement the projects. Evaluating true causation would likely require formal attribution research akin to that used in net-to-gross studies—an effort well beyond the scope of this study. Also, finding the right individuals who can effectively explain why any particular project moved forward would be challenging. These decisions are complex and involve multiple factors, often requiring input from many people within an organization. This difficulty increases dramatically as the organizations we consider grow larger. Additionally, the further we go back in time, the more tenuous this type of research becomes, as memories and recall become less precise, and staffing turnover makes it virtually impossible to survey the right people.

Additionally, rigorous verification exceeds the goals, resources, and scope of this initial exploratory study. Here, we attempt a strictly data-driven approach. We systematically apply a set of logical decision rules to a historical dataset to uncover a latent structure of potential causal relationships between cases. However, in doing so, the reality is that some cases that we denote as matched feeders and conversions may not be related, meaning our estimates of feeder influence could be overstated. Because we apply the decision rules systematically and due to the nature of the underlying data, along with logical considerations, it's essential to emphasize that the results we present should be viewed as the *maximum potential impacts of feeder project activity*.

The *minimum* impact would occur, of course, if none of the feeder projects resulted in any conversions, which would leave only the associated costs to analyze. In this study, we adopt the opposite view and assume the maximum possible impacts. That is, we assume that every potential conversion occurred, based on the structure of the underlying data. We systematically searched for specific cases in the data (i.e., each of the feeder projects). Then we reviewed subsequent energy-saving program activity to determine if it followed the pattern necessary for a causal relationship between the two, given the available information.

The total number of feeder projects is based on applications submitted and their presence in the database, which should be accurate and reliable. Whether or not the feeder project is matched to a conversion could be coded in error. However, our comprehensive and systematic approach to reviewing all potential conversions means that while there is a chance we coded a feeder project as a matched feeder that *should not* have been, the likelihood that we missed coding a feeder project that *should* have been a match is low. This reinforces the notion that our findings should be viewed as the maximum possible impacts, acknowledging they are likely to overestimate actual impacts to some degree.

LARGER SAVINGS ERRORS ASSOCIATED WITH HIGHER LEVELS OF ANALYSIS

It is worth noting that the scale of potential errors is likely correlated with the level of analysis. More specifically, the likelihood that the key metrics of kWh, kW, and therms savings, which we computed as part of this study, are inaccurate increases as we move from the measure to the facility to the organizational level of analysis. This is because the savings metrics are computed as the sum of individual project savings across all attributable conversion projects. The likelihood that a conversion is incorrectly attributed increases as the number of potential conversions under consideration increases and as the criteria for categorizing energy-saving projects as conversions widen.

With measure-level feeder projects, attributable savings tended to be a function of just one or two conversion projects (mean = 2.1 conversion projects per feeder). The measure-to-measure matching constraint significantly limited the number of applicable conversion projects, thereby reducing potential misattribution errors. As such, the savings point estimates for measure-level projects are likely to be rather accurate and reliable.

With facility- and organization-level feeder projects, however, the number of associated conversion projects per feeder tended to be larger (4.2 conversions per feeder for organization-level, 2.6 conversions per feeder for facility-level). Since facility- and organization-level feeders tend to be associated with a larger number of potential conversions, and the available information to establish a logical connection diminishes, the chance that any individual feeder project is associated with a misattributed conversion increases as we move to the levels of analysis that involve more potential conversion cases.

CONVERSION RATES AND COSTS ARE MORE ROBUST AND RELIABLE THAN SAVINGS ESTIMATES

With our approach, estimated conversion rates and costs are more robust than estimated savings because of the way each is computed. Each feeder project is coded as "matched" or not, and conversion rates are computed as the number of feeder projects that could be linked to conversions (i.e., "matched" feeders) divided by the total number of completed feeder projects. In contrast, attributable savings estimates are computed as the sum of the relevant values across all associated conversion cases.

For example, if a customer completed one feeder project and we determined that there were three associated conversion projects, each with 10,000 kWh in savings, the point estimate of savings related to the associated feeder project would be 30,000 kWh. If one of the projects was misattributed and only two of the subsequent projects should have been coded as conversions, then the point estimate of savings attributable to the feeder should be 20,000 kWh, not 30,000 kWh. Note, however, that our coding of the feeder project as a match is still correct. In fact, *all* the conversion cases would need to be misattributed for our coding of the feeder to be wrong.

POTENTIAL INTERACTION BETWEEN FEEDER PROJECTS

With our approach, each conversion project can only be assigned to a single feeder project, specifically, the most recent feeder project associated with the conversion project within the appropriate level of analysis. This conservative approach does not account for situations where multiple feeder projects, or projects across channels, could have contributed to a conversion.

For example, consider a customer who completed an energy-saving project after participating in several feeder projects. Their journey through the Business Program originated as an SEM project (i.e., an organization-level feeder channel) that identified potential opportunities for boiler replacement. Then, an MM project (i.e., measure-level) was conducted to more thoroughly assess the current boiler system's energy usage before deciding on any replacements. Because we process the measure-level projects first, the conversion would be linked to the more recent MM project, even though the SEM project may have provided the initial impetus.

Tracing potential interactions between multiple feeder projects is problematic. Just like we do not know if a feeder truly led to a conversion, we have no way of knowing which of a chain of feeder activities ultimately contributed to a decision. We took a conservative, defensible, and expeditious approach, assuming that the most recent feeder activity drove the decision; however, this may not always have been the case and may not illustrate the full picture.

The implications are that the results for some individual feeder channels may be somewhat understated (i.e., if the feeder channel tended to result in other feeder projects that ultimately led to conversions) or somewhat overstated (i.e., if the projects in a feeder channel tended to result from other feeders). However, the results as a whole are still accurate. Overall, the same costs and total savings are at play; it's the relative allocation of the savings across the feeder channels that would be affected. While it may initially seem the facility- and organization-level channels would be at the greatest risk of being understated, measure-level feeder channels could also be understated if multiple measure-level feeder projects were conducted before a conversion. Overall, instances of multiple feeder projects preceding a conversion, while present, were not common.

3.2 SECONDARY MATERIALS REVIEW

The evaluation team conducted a review of existing secondary materials to complete two main tasks:

1. **Generate an inventory of peer utility business offerings.** To understand the broader industry landscape, we outlined and described some peer utility business offerings and tactics, specifically related to feeder channels and other customer engagement strategies.
2. **Review and synthesize existing industry literature.** The goal was to find studies or evaluations that have explored business customer engagement and/or participation. Our search criteria targeted keywords such as "outreach," "awareness," "participation," and "engagement," all of which are specific to large business customers.

Given the early, exploratory nature of this study, we relied exclusively on existing information, leveraging readily available utility websites, formal program plans, or industry/academic literature. In concluding this report, we offer recommendations for future primary research that would support and enrich this initial study. In the following sections, we provide additional details on each review task.

3.2.1 PEER REVIEW

The goal of the peer review was to compare AIC's suite of business offerings to those of some of its peers. In total, we mapped the service offerings of 10 utilities in addition to AIC. Most of the utilities we included serve customers throughout the Midwest, though we also included some peer utilities outside the region. Table 10 lists the utilities included in the peer review:

Table 10. Utilities Included in Peer Review

Peer Utility	State(s)
Ameren Missouri	MO
Commonwealth Edison (ComEd)	IL
Consolidated Edison (ConEd)	NY
Consumers Energy	MI
Detroit Edison (DTE)	MI
Interstate Power & Light (IPL)	IA
MidAmerican Energy	IA, IL, SD
National Grid	NY [A]
Northern Indiana Public Service Company (NIPSCO)	IN
Xcel Energy	MN, CO [A]

[A] The utility operates in other states, but only the state(s) denoted were included in the peer review.

For the peer reviews, we systematically tallied the presence or absence of a series of characteristics across each of the utilities, including whether they offered/included the following:

- Standard and custom programs
- Business online store
- Midstream programs
- Small business focused programs
- Feeder channels
- EA role

We primarily relied on websites and program plans to locate this information. However, we also conducted brief calls to each utility's publicly available business customer service number to probe about the existence of feeder channels and the EA role, as this information was often difficult to gather from the existing materials.

3.2.2 LITERATURE REVIEW

The logic behind offering the feeder channels is reasonable. They could be responsible for, or at least contribute to, notable energy savings. However, the evaluation team endeavored to identify available industry research to verify this logic. We sought to address the following questions by locating relevant literature using search parameters that included various combinations of terms such as: "energy efficiency," "large business customers," "commercial and industrial customers," "program recruitment," "program engagement," and "program participation":

- What does the available literature say about large customer recruitment, engagement, and participation in energy efficiency programs?
- Is there theoretical support suggesting that the feeder channels should generate subsequent participation?
- What particular customer needs do the feeder channels address?
- Are there any customer needs that remain unaddressed with the current portfolio of feeder channels?

We systematically reviewed each piece of literature to assess its content, themes, and findings.

3.3 IN-DEPTH INTERVIEWS WITH ENERGY ADVISORS

The research team conducted a series of in-depth interviews with AIC's large business EA staff. At the time of this study (summer/fall 2025), there were a total of 12 EA staff members responsible for serving AIC's large business customers: seven territory Large Business EAs, two generalists, one Industrial/Manufacturing/Warehousing specialist, one Program Ally Manager, and one EA Manager.[13] We conducted a total of five interviews with the EA Manager, the industrial specialist, one generalist, and two territory Advisors.

Three research questions provided the framework for the interviews:

1. How do feeder projects originate?
2. How do EAs interact with and utilize the feeder channels to convert customers into energy-saving projects?
3. Are practices consistent within and between EAs?

Notably, although the fundamental research questions were developed prior to the study, the interviews were fully developed and conducted after all other parts of the study were completed. This helped ensure that the interviews were maximally effective, covering the right topics, filling gaps left in the research, and allowing us to ask specific questions about unclear or interesting findings that arose elsewhere in the study. As such, in addressing the primary research questions, the final interviews covered a range of topics, including but not limited to:

- Job roles and responsibilities
- Familiarity, understanding, and use of the feeder channels
- Defining large business customers
- The large customer decision-making process
- Targeting and recruiting large business customers
- Ongoing interactions with large business customers
- Unmet customer needs
- Recommendations for improving large business recruitment and engagement

The interviews were semi-structured, flexible, and interactive, ensuring we captured emerging themes. All interviews were conducted via Microsoft Teams, recorded, and transcribed. The complete list of questions used to guide the interviews is included in Appendix A.

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[13] There are also Small Business Energy Advisors, but they were not included in this study.

4. FINDINGS

The evaluation team outlines the findings from the four research activities in the following sub-sections.

4.1 HISTORICAL CONVERSION AND COST EFFICIENCY ANALYSIS

The primary objective of the historical conversion and cost efficiency analysis was to utilize historical data to assess the performance of AIC's various feeder channels from 2018 to 2024. The analyses centered on assembling and assessing five key metrics by feeder channel: (1) the number of feeder projects, (2) the number of conversion projects (and conversion rates), (3) costs, (4) energy (kWh), demand (kW), and gas (therms) savings, and (5) cost per unit of savings (e.g., cost per kWh).

4.1.1 PROJECTS OVER TIME

Overall, a total of 844 feeder projects were completed over the 2018–2024 period, accounting for 2% (844/41,549) of all energy efficiency projects. Table 11 shows the number of feeder and non-feeder projects completed by year. The "non-feeders" include all the energy-saving program projects

Table 11. Total Feeder and Non-Feeder Projects by Year

Feeder Channel	Level of Analysis	2018	2019	2020	2021	2022	2023	2024	Total	% of Total
SG	Organization	28	32	12	6		60	91	229	26%
VCx	Facility			12	50	49	31	20	162	19%
BEA	Facility	3	4	84	5	2	31		129	15%
PEA	Facility			27	8	13	22	12	82	9%
FS	Measure	3	3	8	16	14	14	18	76	9%
SEM	Organization	6	17	8	10	6	12	6	65	8%
MM	Facility/Measure	16	4	7	2	10	2	8	49	6%
CARx	Measure	9	16	6					31	4%
LFRCx	Facility	2	3	3	2	2		4	16	4%
IRRCx	Measure	1				3			4	1%
RCxL	Facility		1						1	0.20%
Total Feeders		**68**	**80**	**167**	**99**	**99**	**172**	**159**	**844**	**100%**
Non-Feeders		6,305	7,806	6,946	5,307	5,209	4,536	4,596	40,705	
Total Projects		**6,373**	**7,886**	**7,113**	**5,406**	**5,308**	**4,708**	**4,755**	**41,549**	

The evaluation team also found that SG projects dominate participation in the feeder channels, representing over one-quarter (26%) of all feeder projects over the seven-year period. VCx projects are the next most common, representing 19% of the population of feeder projects, followed by BEA projects (15%). None of the remaining feeder channels accounted for more than 9% of participation over the seven-year period. The IRRCx and RCxL projects accounted for the least, and were notably sparser than all other feeder channels.

The SG projects not only account for the most participation overall. The greatest recent activity has been associated with SG projects (2023 n=60, 2024 n=91), VCx (2023 n=31, 2024 n=20), and PEA projects (2023 n=22, 2024 n=12). In contrast, IRRCx projects appeared only in 2018 (n=1) and 2022 (n=3); RCxL appeared only in 2019 (n=1).

Over the seven years, we see rather consistent year-to-year activity across most feeder channels, with three notable exceptions: BEA, SG, and VCx. BEA projects experienced a spike in 2020, with similar spikes in SG projects in 2023 and 2024. A relatively large number of VCx projects ramped up in 2021 and 2022, potentially an impact from the COVID-19 pandemic, but participation has decreased since then.

Note that, due to the complexity of the presentation and the relatively small cell counts, all subsequent analyses are conducted with data pooled at the feeder level. That is, we work with the total feeder and conversion counts over the seven-year period.[14]

4.1.2 FEEDER PROJECTS AND ESTIMATED CONVERSIONS

Table 12 shows the total number of feeder projects from the database (C), the number of feeder projects we determined were matched to at least one conversion project through our reviews (D), and the total estimated conversion projects (E) by feeder channel for the 2018–2024 period. We also computed conversion rates for each channel (F = D/C).[15] The overall conversion rate for the feeder channels is 54%, with an estimated total of 1,409 conversion projects.

Table 12. Number of Feeder and Conversion Projects by Feeder Channel 2018–2024

Feeder Channel	Level of Analysis	Total Feeder Projects	Matched Feeder Projects	Estimated Conversions	Conversion Rate (% Matched)
A	B	C	D	E	F = D/C
SEM	Organization	65	55	249	85%
SG	Organization	229	150	591	66%
RCx	Facility	52	34	72	65%
FS	Measure	76	48	86	63%
MM	Measure	49	29	73	59%
BEA	Facility	129	62	136	48%
PEA	Facility	82	28	102	34%
VCx	Facility	162	49	100	30%
Total		**844**	**455**	**1,409**	**54%**

The evaluation team found that the SEM (85%) and SG (66%) feeder channels had the highest conversion rates, followed by RCx (65%), FS (63%), MM (59%), and BEA (48%). In contrast, PEA and VCx had the lowest conversion rates, with about one-third of PEA (34%) and VCx (30%) projects resulting in conversions.

While conversion rates may indicate the relative likelihood of converting customers through each feeder channel, they should not be used in isolation to make management decisions. As discussed throughout this report, factors beyond conversions, costs, and savings should inform the decision to offer these various feeder channels, including the barriers each feeder channel addresses, the types of customers it is designed to target, and the nature of the energy-efficiency

[14] The research team conducted some analyses over time (not shown) to see, for example, if later years had lower conversion rates than earlier years because not enough time had passed for the feeders to result in conversions. In general, this hypothesis appears to have some support; however, the number of missing and small cell counts prevents a reliable and robust temporal analysis, and definitive conclusions cannot be drawn.

[15] Note that here and in the remainder of this findings section, we collapsed all the retro-commissioning channels into the single RCx channel. This approach was necessary to align with the level of granularity at which the non-incentive cost data were provided, which only included a single category for all the retro-commissioning channels. This also aligns with how AIC presents its retro-commissioning services to its customers. The cost data are incorporated into the analysis in Table 13.

improvements it investigates. All of these factors can influence channel conversion rates, so the results should be interpreted within the context of each channel's intended role.

4.1.3 FEEDER COSTS

Table 13 presents the 2018–2024 costs associated with implementing the feeder channels. Column C shows the total incentive costs paid by the feeder channel, and Column D presents non-incentive costs. The incentive costs include all incentives paid for feeder projects that led to conversions, as well as incentives paid for feeder projects that did not result in conversions. Non-incentive costs refer to the management and administrative expenses incurred when offering the channels. Column F displays the proportion of total costs attributed to each channel. The total operating costs of the feeder channels from 2018 to 2024 were approximately $17 million, averaging $2.4 million per year.

Table 13. Costs by Feeder Channel 2018–2024

Feeder Channel	Level of Analysis	Incentive Costs	Non-Incentive Costs	Total Feeder Costs	% of Total
A	B	C	D	E = C+D	F = E/Sum(E)
VCx	Facility	$ 0	$ 4,988,129	$ 4,988,129	30%
SG	Organization	$ 2,483,551	$ 1,378,173	$ 3,861,724	23%
RCx	Facility	$ 1,469,666	$ 2,387,439	$ 3,857,105	23%
SEM	Organization	$ 858,462	$ 512,258	$ 1,370,720	8%
FS	Measure	$ 660,646	$ 380,868	$ 1,041,514	6%
BEA	Facility	$ 537,400	$ 319,909	$ 857,309	5%
MM	Measure	$ 308,337	$ 145,265	$ 453,602	3%
PEA	Facility	$ 0	$ 375,264	$ 375,264	2%
Total		**$ 6,318,062**	**$ 10,487,304**	**$ 16,805,366**	**100%**

The evaluation team found a wide range of channel-level costs over the seven-year period, from $375,264 for PEAs to $4,988,129 for VCx, which ranked highest in terms of total costs (30% of total feeder spending). The VCx channel does not provide incentives to customers, given its focus on no- and low-cost opportunities. However, the channel operates under a pay-for-performance model, where the implementation team is compensated based on the amount of savings generated through the channel each year. This also explains why this channel has the highest non-incentive costs by a considerable margin.

The SG (23%) and RCx (23%) channels also represented relatively high proportions of total costs. The RCx channel directly incentivizes immediate energy savings, in addition to its objective of generating additional conversion projects. Therefore, it is not surprising that the associated costs are relatively high compared to the other feeder channels. SG costs appear relatively high, likely due, at least in part, to the volume of completed projects (n=229) compared to the other feeder channels (next most frequent BEA with n=129, see Table 12).

The lowest expenditures over the seven years were on PEA (2%) and MM (3%). The expenditures for SEM (8%), FS (6%), and BEA (5%) were quite similar, also representing relatively low proportions of total expenditures.

4.1.4 FEEDER SAVINGS

Table 14, Table 15, and Table 16 present the ex ante electric energy savings (kWh), electric demand savings (kW), and gas savings (therms) associated with each of the feeder channels over the 2018–2024 period, respectively. The total savings for each feeder (D) are the savings associated with the feeder projects (B) and conversion projects (C). Column E displays the proportion of total savings associated with each feeder channel.

It is worth noting that AIC's performance incentives for the success of their energy efficiency programs are largely driven by attainment of electric energy savings goals. Electric demand and gas savings are also important, but they do not drive strategic efforts, such as the operation of the feeder channels, in the same way as electric energy savings. Most initiative goals are expressed in terms of electric energy savings, although some also include gas savings goals. There are no formal demand savings goals.[16] Generally, any demand or gas savings should be viewed as secondary to the primary goal of electric energy savings.

Table 14. Ex Ante Energy Savings (kWh) by Feeder Channel 2018–2024

Feeder Channel	Feeders	Conversions	Total	% of Total
A	B	C	D = B + C	E = D/Sum(D)
SG	0	72,562,546	72,562,546	36%
FS	0	35,272,073	35,272,073	17%
SEM	0	34,413,050	34,413,050	17%
RCx	12,459,140	11,167,761	23,626,901	12%
VCx	8,174,201	6,946,327	15,120,528	7%
MM	0	10,252,672	10,252,672	5%
PEA	0	6,625,357	6,625,357	3%
BEA	0	4,150,386	4,150,386	2%
Total	**20,633,341**	**181,390,172**	**202,023,513**	**100%**

The evaluation team found that just over one-third (36% or 72,562,546 kWh) of all ex ante electric energy savings were associated with SG projects. Three feeder channels, FS (17%), SEM (17%), and RCx (12%), were all associated with similar levels of ex ante savings at around 30,000,000 kWh each. The least ex ante energy savings were associated with the VCx (15,120,528 kWh, or 7%), MM (10,252,672 kWh, or 5%), PEA (6,625,537 kWh, or 3%), and BEA (4,150,386 kWh, or 2%) projects.

Table 15. Ex Ante Demand Savings (kW) by Feeder Channel 2018–2024

Feeder Channel	Feeders	Conversions	Total	% of Total
A	B	C	D = B+C	E = D/Sum(D)
SG	0	8,128	8,128	34%
SEM	0	5,689	5,689	24%
FS	0	4,073	4,073	17%
RCx	1,198	1,883	3,081	13%
VCx	0	849	849	4%
BEA	0	793	793	3%
PEA	0	647	647	3%
MM	0	542	542	2%
Total	**1,198**	**22,605**	**23,802**	**100%**

The evaluation team found that approximately one-third (34%) of ex ante demand savings were associated with MM (8,128 kW) projects. The SEM feeder channel was associated with almost one-quarter of the ex ante demand savings (5,689 kW or 24%). Moderate ex ante demand savings were associated with the FS (4,073 kW or 17%) and RCx (3,081

[16] The Clean and Reliable Grid Affordability Act, passed by the Illinois General Assembly on October 30, 2025, will add annual peak coincident demand reductions to Ameren Illinois' performance incentive mechanism beginning in 2027.

kW or 13%) feeder channels. The remaining feeder channels, VCx (849 kW or 4%), BEA (793 kW or 3%), PEA (647 kW or 3%), and MM (542 kWh or 2%) each accounted for relatively little ex ante demand savings.

Table 16. Ex Ante Gas Savings (Therms) by Feeder Channel 2018–2024

Feeder Channel	Feeders	Conversions	Total	% of Total
A	B	C	F = C+D+E	G = F/Sum(F)
SG	0	10,200,078	10,200,078	73%
SEM	0	1,096,831	1,096,831	8%
PEA	0	906,124	906,124	6%
FS	0	866,536	866,536	6%
RCx	260,322	116,759	377,081	3%
MM	0	356,093	356,093	3%
BEA	0	149,822	149,822	1%
VCx	0	48,816	48,816	0%
Total	**260,322**	**13,741,059**	**14,001,381**	**100%**

The evaluation team found that almost three-quarters of all ex ante gas savings (73%) were attributed to SG projects. The SEM (8%), PEA (6%), FS (6%), RCX (3%), and MM (3%) feeder channels are each associated with some ex ante gas savings. While the BEA (1%) and VCx (0.3%) feeder channels contributed very little to total ex ante gas savings.

4.1.5 COST-EFFICIENCY ANALYSIS

Table 17 compiles the conversion rates from Table 12, the costs from Table 13, and the savings from Table 14, Table 15, and Table 16, respectively. In Columns F, H, and J, we computed the cost-efficiency metric as the cost per unit of savings of kWh, kW, and therms, respectively. The average cost per unit of savings associated with the feeder channels is $0.08/kWh, $393.20/kW, and $1.20/therm.

Table 17. Conversion Rates, Costs, and Energy (kWh), Demand (kW), and Gas (therm) Savings by Feeder Channel 2018–2024

Feeder Channel	Conversion Rate	Total Feeder Costs	% of Total Feeder Costs	Total kWh Savings	$ per kWh	Total kW Savings	$ per kW	Total Therm Savings	$ per Therm
A	B	C	D = C/Sum(C)	E	F = E/C	G	H = F/C	I	J = I/C
SEM	85%	$1,370,720	8%	34,413,050	$0.04	5,689	$240.93	1,096,831	$1.25
SG	66%	$3,861,724	23%	2,562,546	$0.05	8,128	$475.11	10,200,078	$0.38
RCx	65%	$3,857,105	23%	23,626,901	$0.16	3,081	$1,251.96	377,081	$10.23
FS	63%	$1,041,514	6%	35,272,073	$0.03	4,073	$255.69	866,536	$1.20
MM	59%	$453,602	3%	10,252,672	$0.04	542	$836.98	356,093	$1.27
BEA	48%	$857,309	5%	4,150,386	$0.21	793	$1,080.66	149,822	$5.72
PEA	34%	$375,264	2%	6,625,357	$0.06	647	$580.02	906,124	$0.41
VCx	30%	$4,988,129	30%	15,120,528	$0.33	849	$5,877.58	48,816	$102.18
Total	**54%**	**$16,805,366**	**100%**	**202,023,513**	**$0.08**	**23,802**	**$706.04**	**14,001,381**	**$1.20**

When reviewing the calculated cost-efficiency metric across all feeder channels, the evaluation team found the highest costs per kWh were associated with VCx ($0.33/kWh), BEA ($0.21/kWh), and RCx ($0.16/kWh) feeder channels. Except for VCx, all feeder channels compare favorably to the Business Program's average rate of $0.29/kWh, as reported in AIC's 2026–2029 Electric and Gas Energy Efficiency and Demand Response Plan.[17,18]

The most efficient feeder channel, in terms of kW savings, was SEM ($240.93/kW); the FS feeder channel came in a close second at $255.69/kW. All other channels performed substantially worse. In terms of therm savings, the SG ($0.38/therm) and PEA ($0.41/therm) feeder channels were most efficient. Altogether, SG, PEA, MM ($1.20/therm), and SEM ($1.25/therm) compare favorably to the $3.19/therm Business Program average rate from the 2026–2029 Electric and Gas Energy Efficiency and Demand Response Plan.[17]

Regardless of the metric, there is significant variability across feeder channels. While data issues present limitations in drawing robust quantitative conclusions, the variability will likely persist even after these issues are addressed. The remainder of this report emphasizes why a lack of patterns might be expected, given the individualized and variable roles played by the feeder channels.

[17] Ameren Illinois Company. (2025) *Ameren Illinois Company Electric and Gas Energy Efficiency and Demand Response Plan 2026-2029: Appendix H – Business Program*. Prepared for Illinois Commerce Commission, Docket No. 25-0211: https://icc.illinois.gov/docket/P2025-0211/documents/366528/files/642182.pdf.

[18] Our analysis focused on examining financial expenditures solely across the feeder channels. It does not include costs associated with the energy-saving program projects, which would need to be incorporated to make the numbers more comparable.

4.2 PEER REVIEW OF BUSINESS OFFERINGS

The research team conducted a review of peer utilities, focusing on outlining their overall suite of business energy efficiency offerings and determining if they offered feeder channels comparable to AIC. Our guiding research objective was to understand the landscape of C&I offerings across peer utilities.

For this review, we relied on utility websites and available planning and evaluation reports. We also contacted the publicly available business customer service phone numbers listed on the websites to explore the question of feeder channels, but did not pursue any further primary research due to scope and budget limitations. Table 18 compares AIC's offerings (top row) to those of 10 peer utilities.

Table 18. Utility Peer Review of Business Offerings

Utility	State	Standard	Custom	Small Business	Midstream	Business Online Store	Feeder Offerings	EA
Ameren Illinois	IL	Yes	Yes	Yes	Yes	Yes	▪ Assessments ▪ Feasibility Studies ▪ Metering & Monitoring ▪ Retro-Commissioning ▪ SEM ▪ Staffing Grants ▪ Treasure Hunts (PEA) ▪ Virtual Commissioning	Yes
Ameren Missouri	MO	Yes	Yes	Yes	Yes	Could not determine	▪ SEM ▪ Virtual Commissioning	Yes
Commonwealth Edison (ComEd)	IL	Yes	Yes	Yes	Yes	No	▪ Assessments (also for small businesses) ▪ SEM ▪ Targeted Systems (like FS)	Yes
Consolidated Edison (ConEd)	NY	Yes	Yes	Yes	Yes	No	▪ Assessments (maybe only small businesses) ▪ Real-Time Energy Management ▪ Retro Commissioning ▪ Treasure Hunts ▪ Virtual Commissioning	Yes
Consumers Energy	MI	Yes	Yes	Yes	Yes	Yes	▪ Assessments ▪ Retro Commissioning ▪ SEM (Industrial Energy ▪ Management Program) ▪ Virtual Commissioning	Yes (Energy Reduction Specialist)
Detroit Edison (DTE)	MI	Yes	Yes	Yes	Yes	No	▪ Assessments (also for small and medium businesses) ▪ Retro Commissioning ▪ SEM	Yes

Utility	State	Standard	Custom	Small Business	Midstream	Business Online Store	Feeder Offerings	EA
Interstate Power and Light (IPL)	IA	Yes	Yes	Yes	Yes	Yes	▪ Assessments (SMB and large facility [>20,000 sq ft.]) ▪ Feasibility Studies ▪ Retro Commissioning ▪ SEM ▪ Virtual Commissioning	Yes (Energy Team)
MidAmerican Energy	IA, IL, SD	Yes	Yes	Yes	Could not determine	No	▪ Assessments ▪ Retro Commissioning ▪ SEM ▪ Treasure Hunts	Could not determine
National Grid	NY [A]	Yes	Yes	Yes	Yes	No	▪ Assessments ▪ Real-Time Energy Management ▪ Retro Commissioning	Yes
Northern Indiana Public Service Company (NIPSCO)	IN	Yes	Yes	Yes	Yes	Yes	▪ Assessments (available to all customers) ▪ Retro Commissioning	No
Xcel Energy	MN, CO [A]	Yes	Yes	No	Yes	No	▪ Assessments (Industrial, Commercial Streamlined, Building, Targeted Building) ▪ Virtual Commissioning	Could not determine

[A] The utility operates in other states; only the state(s) mentioned were included in the peer review.

Overall, the evaluation team found that AIC and the peer utilities we selected for study have rather similar suites of business offerings. All the utilities distinguish between prescriptive and custom incentive offerings, and nearly all offer midstream programs and programs focused specifically on reaching small businesses. One area of distinction is the offering of a dedicated online store for businesses. Unlike AIC, most utilities do not offer an online store specifically tailored to business customers; however, our discussions with general support staff suggested that many utilities likely direct business customers to a general online store.

All the utilities offer what could be considered some form of feeder channels. Assessments and retro-commissioning projects are quite common. We did not identify any other utilities that offered staffing grants, and only ComEd and IPL offer a service similar to a feasibility study. Also, most utilities appear to have some form of EA role, although their responsibilities were the most difficult aspect to determine from the secondary materials we reviewed.

There were indications that some of these utilities previously offered feeder channels but had phased them out. Alternatively, they may have tried the channels as pilots but not gained enough traction to continue offering them. In the secondary literature we reviewed, details about these past efforts were limited, and the reasons behind decisions to discontinue the offerings were unclear. Conducting further research with peer utility staff to understand their experiences with feeder channels and their overall approaches to large business recruitment could provide valuable insights.

4.3 LARGE BUSINESS CUSTOMER ENGAGEMENT LITERATURE REVIEW

This literature review synthesizes findings from peer-reviewed studies, government reports, and industry websites and publications on the topic of "large business customer recruitment, engagement, and participation in energy efficiency programs." Our guiding research objective was to understand the strategies and tactics other utilities are using to reach customers and generate participation in their business portfolios.

The literature search quickly converged on the fundamental theme that recruiting and engaging large business customers is a matter of addressing and overcoming the barriers that exist to participation. These barriers can be economic, social, structural, technical, or any other factor that hinders or prevents a customer from implementing energy-efficient upgrades.

The literature highlights numerous similar barriers across all customer types, including financial concerns and a lack of familiarity with potential upgrade options. However, it also emphasizes that barriers for large businesses can be more numerous, more complex, and vary significantly from customer to customer.

4.3.1 WHY LARGE BUSINESSES?

Large businesses, particularly in the industrial and commercial sectors, present a significant opportunity to enhance energy efficiency. In the United States, the industrial sector (35%) is the second-largest end-user of energy after transportation (37%). The commercial sector accounts for 13% of US energy consumption, with the remaining 15% used by residences.[19] Together, the industrial and commercial sectors account for roughly half of the country's total energy use, underscoring the importance of targeting large businesses with energy efficiency programs.

AIC's largest business customers represent tremendous energy-saving potential. The DS-4 rate class consists of hundreds of customers who used over 1,000 kW in at least two of the prior 12 months, a significant amount of electricity demand. It is common for some of AIC's largest business customers to use in excess of 100,000,000 kWh per year, with some customers consuming over 500,000,000 kWh.[20] AIC has seven customers who have each *saved* over 10,000,000 kWh through programs over the seven years from 2018 to 2024; one customer alone has *saved* nearly 25,000,000 kWh since 2018.[21] These customers often have older, large equipment running complex processes, where significant efficiency gains are possible. Despite this potential, large business participation in energy efficiency initiatives remains inconsistent across the industry.

4.3.2 BARRIERS TO PARTICIPATION

There is extensive secondary research on the barriers large organizations encounter when implementing energy efficiency projects at their facilities. Different authors employ slightly different categorization schemes tailored to their specific needs and findings. Our review and synthesis of the literature provides a collection of 10 barriers that commonly arise in the literature. The list is not meant to be comprehensive but instead highlights the 10 barriers the research team found most salient to the current study. The order of presentation does not reflect the relative importance of the barriers.

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[19] U.S. Energy Information Administration. (2024). *U.S. Energy Consumption by Source and Sector*. https://www.eia.gov/energyexplained/us-energy-facts/images/consumption-by-source-and-sector.pdf

[20] Notably, some of these customers may have opted out of AIC's Energy Efficiency Program. The Climate and Equitable Jobs Act includes a provision that allows nonresidential electric customers with electric demand of over 10 MW to opt out of utility energy efficiency programs.

[21] Savings numbers reflect ex ante savings estimates.

LIMITED AWARENESS OF PROGRAMS AND TECHNOLOGIES

Many large businesses are unaware of available utility or government programs, especially those tailored to industrial needs. This is particularly true for mid-sized firms within large corporate structures, where energy decisions may be decentralized and disconnected from external outreach efforts.[22]

LACK OF EXECUTIVE BUY-IN AND STRATEGIC INTEGRATION

Energy efficiency initiatives often lack visibility and support at the executive level. ACEEE and Energy Efficiency Movement & Accenture emphasize that without top-down commitment, energy management remains a low priority.[23,24] In many cases, energy efficiency is viewed as a facilities issue rather than a strategic business opportunity. This disconnect limits the allocation of resources and authority needed to implement meaningful changes.

One issue is that energy efficiency is frequently perceived as non-core, especially in sectors where production efficiency, throughput, or compliance dominate strategic priorities. For example, in manufacturing, decisions are often driven by output and quality metrics, with energy performance considered secondary. This prioritization leads to underinvestment in energy-saving measures unless they directly support productivity or regulatory compliance.[25]

Multinational corporations often centralize decision-making at their headquarters, which may be located outside the jurisdiction of local programs. Local facility managers may lack the authority to commit to projects, even when incentives are available.[26]

Strategic Energy Management (SEM) programs, one of the most common peer utility feeder channels, aim to address this by embedding energy goals into corporate strategy, fostering cross-departmental collaboration, and establishing continuous improvement processes. However, SEM adoption requires cultural change and long-term commitment, which can be difficult to achieve without strong leadership.[27] Frequent staff turnover also complicates matters.

CAPITAL CONSTRAINTS AND INVESTMENT CRITERIA

Despite favorable returns, energy efficiency projects often struggle to compete for capital. A federal report notes that large firms typically apply strict payback thresholds (e.g., less than two years),[28] which excludes many efficiency measures with longer-term benefits. Internal competition for capital among departments further complicates investment decisions, especially when energy projects are not seen as mission-critical.

In leased facilities or multi-tenant buildings, the entity responsible for energy costs may not control capital investments. Authors highlight this split-incentive issue as a major barrier in commercial real estate, where landlords and tenants

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[22] SEE Action Network. (2017). *Saving Energy in Industrial Companies: Case Studies of Energy Efficiency Programs in Large U.S. Industrial Corporations*. https://www.energy.gov/sites/default/files/2021-07/saving_energy_industrials_0.pdf

[23] American Council for an Energy-Efficient Economy. (2021). *Strategic Energy Management: Progress and Opportunities*. https://www.aceee.org/research-report/ie2101

[24] Energy Efficiency Movement & Accenture. (2025). *Efficiency Now: Overcoming Internal Barriers to Industrial Energy Efficiency*. https://www.energyefficiencymovement.com/efficiency-now/pdf/EEM_Barriers_Report_2025-05-15.pdf

[25] Cattaneo, C. (2019). Internal and external barriers to energy efficiency: Which role for policy interventions? *Energy Efficiency, 12*(5), 1293–1311. https://doi.org/10.1007/s12053-019-09775-1

[26] Energy Efficiency Movement & Accenture. (2025). *Efficiency Now: Overcoming Internal Barriers to Industrial Energy Efficiency*. https://www.energyefficiencymovement.com/efficiency-now/pdf/EEM_Barriers_Report_2025-05-15.pdf

[27] Weiss, Jennifer, Perry Stephens, and Michael Stowe (2017), "Realigning Utility Incentives for Industrial Customers: Using Strategic Energy Management to Increase Customer Participation in Energy Efficiency Programs," A Paper presented at the 2017 ACEEE Summer Study. https://www.aceee.org/files/proceedings/2017/data/polopoly_fs/1.3687911.1501159090!/fileserver/file/790281/filename/0036_0053_000003.pdf

[28] Ibid.

have misaligned incentives.[29] For example, a tenant may benefit from lower energy bills, but the landlord must bear the cost of upgrades.

RISK PERCEPTION AND UNCERTAINTY

Reports point out that firms often perceive energy efficiency investments as risky due to uncertainty in savings estimates, technology performance, and operational disruptions.[30,31] Concerns about hidden costs, implementation delays, and unintended consequences can deter decision-makers, especially in industries with tight margins or complex operations.

In sectors like chemicals, metals, and food processing, energy efficiency measures must be integrated into complex production systems. A federal report notes that any disruption to these systems carries significant risk, making firms cautious about, or even resistant to, implementation.[32]

COMPLEXITY AND ADMINISTRATIVE BURDEN

Some authors argue that program complexity, including application procedures, reporting requirements, and verification protocols, can deter participation.[33] Firms may perceive these programs as bureaucratic or resource-intensive, especially when internal staff are already stretched thin.

LIMITED INTERNAL CAPACITY AND EXPERTISE

Many large firms lack dedicated energy teams or the technical expertise to evaluate and implement complex efficiency projects. Some reports indicate that even when opportunities are identified, internal staff may lack the necessary bandwidth or authority to act on them.[34] This is particularly true in decentralized organizations where energy decisions are made at the facility level without centralized support or coordination.

DATA LIMITATIONS AND MEASUREMENT CHALLENGES

Studies emphasize the importance of robust energy data for identifying opportunities and tracking performance.[35,36] However, many firms lack submetering, benchmarking tools, or analytics capabilities, making it difficult to justify or evaluate projects.

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[29] Vyas, S., & Sharma, A. (2023). Energy Efficiency in Commercial Buildings: Challenges, Opportunities, and Solutions. *Journal of Energy Conservation, 1*(4), 7–10. https://openaccesspub.org/article/2024/jec-23-4568.pdf

[30] UNEP DTU Partnership. (2017). *Overcoming Barriers to Investing in Energy Efficiency*. https://unece.org/DAM/energy/se/pdfs/geee/pub/Overcoming_barriers-energy_efficiency-FINAL.pdf

[31] Lawrence Berkeley National Laboratory. (2024). *Driving Uptake for Energy Efficiency Financing Programs*. https://eta-publications.lbl.gov/sites/default/files/driving-uptake-for-energy-efficiency-financing-programs.pdf

[32] DOE. (2015). *Barriers to Industrial Energy Efficiency: Report to Congress*. U.S. Department of Energy. https://www.energy.gov/sites/prod/files/2015/06/f23/EXEC-2014-005846_6%20Report_signed_0.pdf

[33] Weiss, J., Stephens, P., & Stowe, M. (2017). *Realigning Utility Incentives for Industrial Customers*. ACEEE Summer Study. https://www.aceee.org/files/proceedings/2017/data/polopoly_fs/1.3687911.1501159090!/fileserver/file/790281/filename/0036_0053_000003.pdf

[34] DOE. (2015). *Barriers to Industrial Energy Efficiency: Report to Congress*. U.S. Department of Energy. https://www.energy.gov/sites/prod/files/2015/06/f23/EXEC-2014-005846_6%20Report_signed_0.pdf

[35] IEA. (2025). *Energy Efficiency Policy Toolkit 2025 – Industry*. International Energy Agency. https://www.iea.org/reports/energy-efficiency-policy-toolkit-2025/industry

[36] California Public Utilities Commission (CPUC). (2025). *Strategic Energy Management Program Overview*. https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/energy-efficiency/strategic-energy-management

Generic Program Design

One report critiques the "one-size-fits-all" approach of many programs, which fail to account for sector-specific needs, operational constraints, and business models.[37] Industrial firms, for example, require customized solutions that align with production cycles, safety protocols, and process integration.

Programs that are rigid in design, offering limited measure options or fixed incentive structures, may not appeal to large firms seeking tailored solutions. SEM and ISO 50001-based programs offer more flexibility but require significant upfront commitment and cultural change.[38]

Misaligned Utility Incentives

Weiss and colleagues highlight that utility business models may not prioritize industrial customer engagement.[39] Regulatory frameworks often reward utilities for residential or small business savings, leaving large customers underserved. Additionally, program-year-based operational and performance standards often fail to align with the timelines of large business planning, decision-making, and construction. The program-year focus is also inherently project-based, which undervalues and fails to emphasize the valuable ongoing, repeated participation and engagement that is common among large business customers.[40]

High Baseline Efficiency

Some large firms have already implemented major efficiency upgrades, leaving fewer opportunities for low-cost improvements. The UNEP DTU Partnership suggests that these firms require advanced solutions, such as process optimization, waste heat recovery, or electrification, which are more capital-intensive and technically demanding.[41]

4.3.3 Recommendations for Overcoming Barriers

The study team identified several recommended strategies throughout the literature that are likely to be effective in overcoming some of the barriers. While the first recommendation calls for offering a specific intervention type, namely SEM, the other recommended strategies are more thematic and meant to apply to large business recruitment and engagement in general. It is worth emphasizing that AIC's EA-driven, feeder-supported process of recruiting and engaging their biggest business customers already incorporates a significant percentage of these recommendations.

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[37] SEE Action Network. (2014). *Industrial Energy Efficiency: Designing Effective State Programs for the Industrial Sector*. https://www.energy.gov/sites/default/files/2021-07/industrial-ee.pdf

[38] DOE. (2023). *50001 Ready Program Overview*. U.S. Department of Energy. https://www.energy.gov/50001Ready

[39] Weiss, J., Stephens, P., & Stowe, M. (2017). *Realigning Utility Incentives for Industrial Customers*. ACEEE Summer Study. https://www.aceee.org/files/proceedings/2017/data/polopoly_fs/1.3687911.1501159090!/fileserver/file/790281/filename/0036_0053_000003.pdf

[40] Note that this bullet did not originate from the literature but is an observation of the research team made after concluding the in-depth interviews with the EAs. Though somewhat out of place in this section, it seemed important to mention in the context of barriers, so it was also mentioned here.

[41] UNEP DTU Partnership. (2016). *Best Practices and Case Studies for Industrial Energy Efficiency Improvement*. https://c2e2.unepccc.org/wp-content/uploads/sites/3/2016/02/best-practises-for-industrial-ee-web.pdf

STRATEGIC ENERGY MANAGEMENT (SEM)

SEM integrates energy efficiency into an organization's core operations and culture. Programs like the CPUC SEM Program,[42] and DOE's 50001 Ready provide frameworks for firms to adopt SEM practices, offering tools, training, and technical assistance.[43] SEM helps overcome barriers by securing executive buy-in, aligning energy goals with business objectives, and building internal capacity.

TAILORED PROGRAM DESIGN

Most of the literature cited in this review highlights the unique nature of large business customer circumstances and the resulting barriers. The ability to address barriers in the field is a function of having the necessary tools or offerings available to address the diversity of situations that arise. The feeder channels serve as a toolbox, providing EAs with the ability to respond quickly and nimbly to real-life customer needs. With large business customers, potential energy savings are usually substantial enough that white-glove treatment, individualized, customized recruitment and engagement, although costly, are worthwhile investments.

Lawrence Berkeley National Lab recommends performance-based incentives that reward verified energy savings.[44] They recommend that programs develop sector-specific playbooks and bundle services, such as audits and financing, to reduce transaction costs.

CAPACITY BUILDING AND TECHNICAL SUPPORT

The SEE Action Network and UNEP DTU emphasize the importance of training, audits, and third-party support.[45,46] Programs should incorporate technical assistance into their delivery and provide proactive, ongoing support to ensure effective implementation and long-term success.

POLICY AND REGULATORY REFORM

Weiss and colleagues, as well as the IEA, advocate for performance-based regulation, benchmarking, and integration with environmental, social, and governance frameworks.[47,48] Policies should incentivize long-term engagement and innovation.

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[42] California Public Utilities Commission (CPUC). (2025). *Strategic Energy Management Program Overview*. https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/energy-efficiency/strategic-energy-management

[43] DOE. (2023). *50001 Ready Program Overview*. U.S. Department of Energy. https://www.energy.gov/50001Ready

[44] Lawrence Berkeley National Laboratory. (2024). *Driving Uptake for Energy Efficiency Financing Programs*. https://eta-publications.lbl.gov/sites/default/files/driving-uptake-for-energy-efficiency-financing-programs.pdf

[45] SEE Action Network. (2017). *Saving Energy in Industrial Companies: Case Studies of Energy Efficiency Programs in Large U.S. Industrial Corporations*. https://www.energy.gov/sites/default/files/2021-07/saving_energy_industrials_0.pdf

[46] UNEP DTU Partnership. (2016). *Best Practices and Case Studies for Industrial Energy Efficiency Improvement*. https://c2e2.unepccc.org/wp-content/uploads/sites/3/2016/02/best-practises-for-industrial-ee-web.pdf

[47] Weiss, J., Stephens, P., & Stowe, M. (2017). *Realigning Utility Incentives for Industrial Customers*: Using Strategic Energy Management to Increase Customer Participation in Energy Efficiency Programs. An ACEEE Summer Study paper. https://www.aceee.org/files/proceedings/2017/data/polopoly_fs/1.3687911.1501159090!/fileserver/file/790281/filename/0036_0053_000003.pdf

[48] IEA. (2025). *Energy Efficiency Policy Toolkit 2025 – Industry*. International Energy Agency. https://www.iea.org/reports/energy-efficiency-policy-toolkit-2025/industry

ENGAGEMENT AND RECOGNITION STRATEGIES

Dedicated account managers, peer networks, and recognition programs (e.g., ENERGY STAR®,[49] ISO 50001) can motivate participation and foster a culture of improvement. Roles like AIC's EAs are crucial for maintaining contact and engagement with large customers over time.

4.3.4 SYNTHESIS

The initial research objective guiding this literature review was to identify the strategies and tactics employed by other utilities to reach customers and generate participation in their C&I portfolios. What emerged from the literature review is that large business customer recruitment and engagement is complicated, and that any key strategy or tactic will need to directly address the array of barriers that exist to customers' participation in energy efficiency efforts. While some barriers are common to all customers, residential and business, large businesses face unique barriers due to the scale and scope of their operations. This complexity and uniqueness require a level of individualized treatment that is unnecessary or even inappropriate for smaller business customers. It also requires different recruitment strategies.

The barriers common to residential and smaller business customers tend to be quite similar: cost concerns, a lack of awareness about energy-efficient technologies, and a limited understanding of available programs and incentives. Beyond providing incentives to address financial issues, typical intervention strategies for residential and small business customers often include widespread informational and educational campaigns, a strategy unlikely to prove effective for large businesses. While incentives are important, widespread promotions and education are generally not necessary for large businesses, as many large companies have staff members who are knowledgeable about available technologies and aware of relevant programs. Typically, other barriers hinder their participation.

Moreover, each large business will face a unique set of barriers, and individualized treatment based on each customer's specific circumstances is required. Rarely, a large business may encounter a significant cost barrier and require monetary incentives alone to spur its participation; however, typically, large businesses face a range of barriers, and different tools are required to address each one.

From the diverse literature, the research team identified 10 key barriers that large businesses face when implementing energy-efficient projects at their facilities. The list is not comprehensive but instead highlights the 10 barriers the research team found most salient to the current study:

- Limited Awareness of Programs and Technologies
- Lack of Executive Buy-In and Strategic Integration
- Capital Constraints and Investment Criteria
- Risk Perception and Uncertainty
- Complexity and Administrative Burden
- Limited Internal Capacity and Expertise
- Data Limitations and Measurement Challenges
- Generic Program Design
- Misaligned Utility Incentives
- High Baseline Efficiency

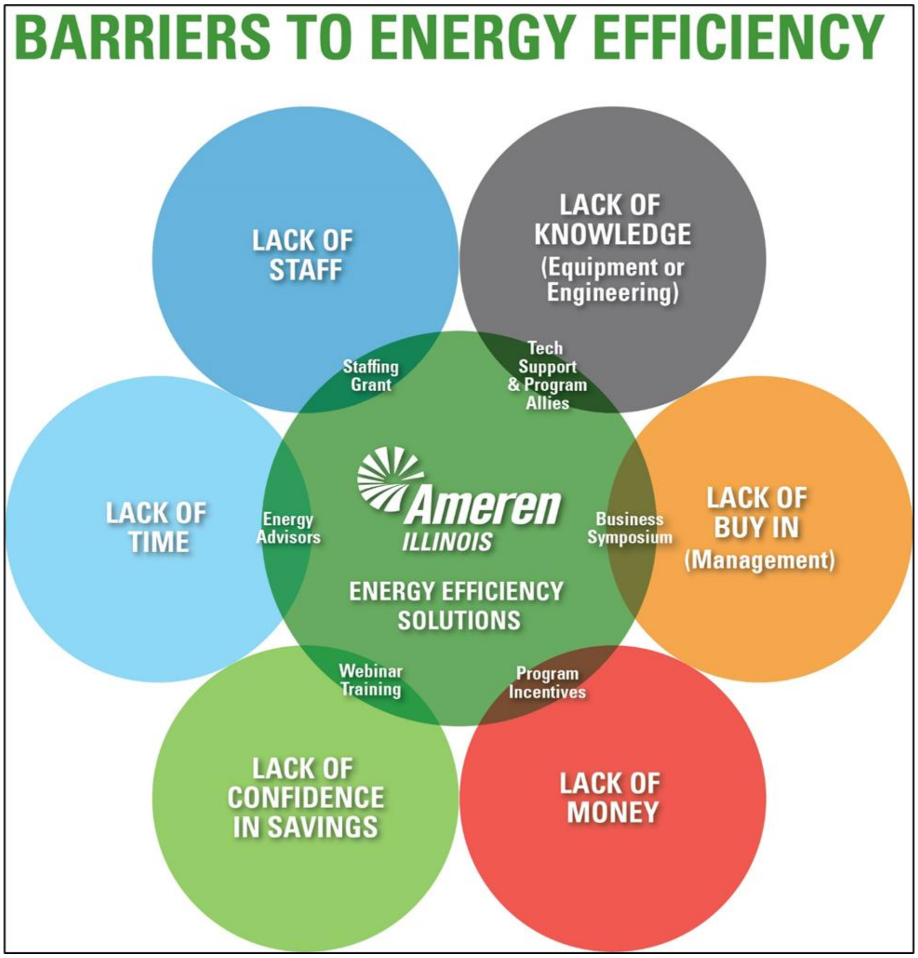
[49] The ENERGY STAR® name and mark are registered trademarks owned by the US EPA.

The literature also offered some general recommendations and strategies for addressing the collection of barriers, including:

- Strategic Energy Management (SEM)
- Tailored Program Design and Incentives
- Capacity Building and Technical Support
- Policy and Regulatory Reform
- Engagement and Recognition Strategies

AIC is already addressing many of the barriers and utilizing most strategies identified in its overall large business recruitment and engagement strategies. Figure 2 was shared by one EA following their in-depth interview; it is a diagram of the *Barriers to Energy Efficiency* that has been in existence for some time and has been circulated and referred to among the EAs and other staff (its origins are unclear).

Figure 2. Figure Shared by Energy Advisor



The first six barriers listed in this chapter closely resemble the six shown in the figure. We go further to assert that all six barriers are related to or stem from the seventh barrier we introduced: Data Limitations and Measurement Challenges.[50]

[50] Our review of the literature was completed prior to receiving the diagram of barriers from the EA. When drafting the report, we decided to present our barriers in the same order as the diagram for alignment.

Lack of knowledge among large business customers often centers on a lack of awareness of opportunities, as they may not have access to the necessary technology to track usage or the requisite staff skills to utilize the information effectively. Lack of buy-in is often a function of senior management and decision-makers not being provided reliable, compelling, and competitive business cases. Large businesses do not typically lack funds; the real issue is that funds are not limitless, and capital resource allocation in large businesses is competitive. Energy efficiency projects must compete against other potential uses for funding dollars, and sound and detailed information and data are necessary to inform the proposals. A lack of confidence in savings can typically be directly related to a lack of reliable underlying data for making reliable energy savings estimates. Lack of time often has an informational underpinning: that is, time is only seen as scarce because projects are often not considered worthy due to a lack of a compelling business case or solid data to support them. A lack of staff can also have an informational basis: often, firms do not have the necessary staff, or do not allocate adequate staff time, to projects because they have not been provided with sufficient data or other information to show that pursuing such efforts would be to their advantage.

When viewed in this light, almost any barrier can be an issue related to informational or data availability. Notably, nearly all the feeder channels offered by AIC are designed to address informational barriers of this kind. SEM, BEA, PEA, MM, RCx, VCx, and FS projects all provide the necessary information and data to determine a customer's energy efficiency opportunities, evaluate these opportunities, and formulate a compelling business case. Accurate measurements of current usage are needed, as are reliable estimates of energy savings, incentives, ROI, and payback periods. Unlike small businesses (or residential customers), where the information needed to gain participation can be, and often is, rather limited, virtually no project will move forward in a large business context without comprehensive information on all the metrics mentioned above. Most of the feeder channels provide EAs with the tools they need to assist customers in collecting the data and information required to fully inform their energy efficiency efforts. The SGs are unique in that they directly address the staffing barrier.

The literature also suggests that generic program designs can be a significant barrier to large business recruitment and engagement. Large businesses have unique and varied needs, and ensuring that the programs and services offered can address their diverse circumstances is crucial. For AIC, continuing to offer the Custom Initiative is critical, as many large business projects proceed through the Initiative due to its flexibility and adaptability, which are particularly well-suited to the size and complexity of large customer projects.

AIC programs serving large businesses must also contend with the high baseline efficiency in their service territory. AIC energy efficiency efforts began well over a decade ago. Many large business customers are repeat participants who have previously completed energy-saving projects. Consequently, many of the introductory, low-effort energy efficiency savings opportunities have already been taken, and the energy savings potential for large customers may be decreasing over time. Though the in-depth interviews with EAs suggest there is still significant potential remaining among the largest customers.

The core principle is that large business energy efficiency projects must demonstrate their own economic viability. While extra preference may be given to a less financially competitive energy efficiency project in situations where the customer has established environmental, energy, or greenhouse gas goals, this should not be relied upon. Many large customers lack such targets, and even those that have them still require financial accountability. Ultimately, some energy-efficiency projects may not be able to compete effectively with other company priorities for their limited resources.[51]

For those projects that do have a viable financial case, a strong business rationale is essential to advance the project through the customer's corporate decision-making process. The feeder channels equip EAs with the necessary tools to

[51] This is especially the case when non-energy impacts are excluded from consideration.

address the unique informational and data needs involved in identifying and evaluating opportunities, as well as building a business case on behalf of customers.

The business case should focus on reducing uncertainty and risk, simplifying participation, raising awareness of opportunities, and addressing capital concerns to gain approval from corporate leaders. These barriers often stem from data limitations, as most feeder channels are designed to supply essential information. This includes details needed to assess energy use, identify opportunities, calculate energy savings, and determine incentives, all of which are crucial for making well-informed business decisions.

Offering feeder channels involves costs, but they mainly serve AIC's largest business clients. These channels should be viewed as a financial investment in recruitment, with the potential for significant returns when considering the energy-saving opportunities of these major customers.

The literature included several recommendations for tackling major barriers to recruiting and engaging large businesses. The research team focused on five of the more salient recommendations from the literature and found that AIC already largely considers each of these recommendations.

Table 19. Recommendations to Recruit and Engage Large Businesses

Recommendations	AIC Approach
Offer an SEM program	AIC, along with most peer utilities, has offered SEM for many years.
Tailor large business recruitment and engagement efforts to be tailored and customized for each customer	AIC's various feeder channels support addressing different needs or barriers, and AIC's Business Custom Initiative is flexible enough to align with the often complex and diverse needs of large customer projects.
Improve capacity building and provide technical support to customers	Unlike other peer utilities, AIC's SGs are specifically designed to support capacity building within a customer's organization directly. The EA role also offers substantial capacity and technical support as they help customers through programs and offerings.
Policy and/or regulatory reform	Current approaches do not generally incentivize continued or repeated participation. Energy efficiency programs and offerings tend to incentivize individual projects, aligning with the program-year-based planning and management cycles. The incremental costs to customers of additional energy efficiency improvements tend to increase over time, as it becomes harder to squeeze savings out of facilities that are simultaneously becoming more efficient. At some point, gaining continued participation will likely require larger or different incentives. The ability to plan, implement, and incentivize projects outside of the program-year-based system will also likely be key for addressing large business new construction (see EA recommendation regarding new construction in Section 4.4.6).
Implement engagement and recognition strategies	AIC has dedicated technical professional staff (i.e., EAs) to address each large business customer's unique needs, including assisting with the design and implementation of engagement and recognition strategies.

Overall, the literature and observations suggest that feeder channels offer a range of services that can be tailored to a customer's specific situation, helping to overcome barriers to participation. They help facilitate recruitment and engagement with large customers by overcoming obstacles that would likely prevent these customers from participating in energy efficiency programs in their absence. EAs are tasked with serving large businesses, which involves offering and implementing these feeder channels. To better understand how EAs utilize the feeder channels to actively engage large business customers, we conducted in-depth interviews with a sample of EAs. The learnings from those interviews are discussed in the following section.

4.4 ENERGY ADVISOR INTERVIEWS

The research team conducted a total of five interviews with EA staff via Microsoft Teams. The interviews were semi-structured, guided by a list of discussion questions, but were conducted flexibly and interactively to ensure we captured emergent details and themes. The guiding research questions and interview topics list were provided in Section 3.3. The list of discussion questions is included in Appendix A. The following sections summarize the key findings for each interview topic.

4.4.1 FAMILIARITY, UNDERSTANDING, AND USE OF FEEDER OFFERINGS

We began each interview with a screen share listing the feeder channels, emphasizing that all the service offerings share the same goal: to encourage customers to participate in energy-saving programs in the future. The evaluation team noted that every EA was familiar with all the offerings, with one stating, "So I mean basically if you took that off the page, that's what I do every day" in reference to the list of offerings. All EAs agreed that the assortment of feeder channels comprises a robust "toolbox" they can access to address the challenges they encounter when recruiting and engaging with large business customers. While some EAs indicated they tended to favor one, two, or three of the offerings far more than the others, the preferences varied between EAs.

All EAs clearly understood that the offerings were intended to generate later program participation, and most seemed attuned to cost concerns. For example, all the EAs indicated that PEAs, due to their overall cost and level of involvement, were used selectively with the largest customers and those with the greatest potential for energy savings. Despite the awareness and familiarity among EAs, they indicated that there is no collective, common way of referring to these service offerings. The interviewer shared the classifications of "Technical Assistance" and "Optimization Services" that have been recently added to AIC's energy efficiency website, but EAs were not familiar with them.

EAs reported working with a large cohort of customers who are quite well-versed with energy efficiency and their savings opportunities, and are also familiar with these offerings. Yet, customers only occasionally request one of these feeder channels. Instead, most participation in the feeder channels comes from EAs recommending an offering to solve a particular customer situation, problem, or use case.

4.4.2 DEFINING LARGE BUSINESS CUSTOMERS

Regarding their focus, EAs mentioned maintaining a top customer list, which most EAs referred to as a Top 1000 list, although one EA specifically noted a Top 2,500 list. Essentially, they mainly work with all DS-4 customers and some DS-3B and DS-3A customers within their regions. According to an EA, the current counts of AIC business customers across the seven territories include 427 DS-4 customers, 756 DS-3B customers, and 1,240 DS-3A customers.

Based on these customer counts, if dispersed equally, each EA would roughly serve about 60 DS-4 customers, 100 DS-3B customers, and 175 DS-3A customers within their respective territories. In reality, there is significant geographic variability, with one EA indicating they only had 25 DS-4 customers in their territory. When further questioned, the EAs estimated that they typically work with "a couple hundred customers." Still, all agreed that most of their time is spent building relationships with DS-4 and DS-3B clients. One EA noted that "once you drop past that top 100, you're basically cold calling on people."

The Industrial EA, who works across all territories, reported that they focus almost exclusively on DS-4 customers. The seven territory EAs said they are generally quite familiar with all the DS-4 customers in their territories, but less familiar with the DS-3B and DS-3A customers in their areas, unless they are frequent participants. This is not to say they never interact with small business customers; they often do. However, they typically pass on smaller customer projects (lower than DS-3B) to Small Business EAs.

One EA mentioned that their focus is driven by achieving specific energy savings goals each year. As a result, they tend to prioritize larger customers, as these typically lead to larger projects and greater savings. They noted, "It is hard to make a living from the small fish." When asked how AIC might better serve the next tier of large business clients, nearly all EAs responded that they did not see a need to shift their focus to smaller customers to achieve savings. Further discussion revealed that there is still substantial energy savings potential within the DS-4 customer group—more than enough to occupy their time, though perhaps not enough to justify additional EAs.

Several EAs agreed that past participation is actually the greatest predictor of future participation and that the remaining large business opportunity lies mainly in addressing older, inefficient equipment, process improvements, and HVAC systems. This is because most large customers have already participated in energy-saving programs, and in many instances, have done so multiple times. One EA described the current state of affairs as "the opposite of low-hanging fruit," with another EA noting that some customers have begun to address their carbon reduction efforts.

It is essential to note that the DS-4 base is constantly changing. One EA mentioned that they had 16–20 new 10-MW customers in this program cycle and are already expecting about 10 more in the next cycle. Some of this is likely due to the fact that some large customers who chose not to participate in the programs during the 2022–2025 cycle are returning for the 2026–2029 cycle. Additionally, ongoing new construction also changes the customer base.

4.4.3 TARGETING AND RECRUITING LARGE BUSINESS CUSTOMERS

Figure 3 presents the EAs' process for recruiting and engaging large business customers. This model represents engagement as a series of steps, starting with initial contact and progressing through participation in an energy-saving program. This is not a formal process within AIC; instead, it was assembled by the research team based on discussions with the EAs. The process illustrates an idealized set of interactions that we use as a model for discussing EA-customer interactions. In practice, as noted throughout this report, everything depends on the customer's specific needs at a specific point in time. Nonetheless, the EAs agreed that the generalized process reflects the experience of most large businesses.

Figure 3. Large Business Customer Engagement Process

Notably, the process is customer-focused and not project-focused. The intention is to depict the customers' overall journey of engagement with AIC, encompassing multiple projects. In this context, Step 1 only occurs once. Steps 2 and 3 could also occur only once, provided the EA gains access to conduct a comprehensive inventory of the entire facility. Steps 4–7 are a cycle that is repeated with each new project. One advantage of thinking about the engagement process in this way is that it highlights the importance and central role of the existing equipment inventory and the development of the list of opportunities, as these serve as the basis for ongoing and future outreach, interactions, and engagement.

Across the board, all the EAs emphasized the importance of securing an internal ally or champion from the outset, with one EA stating, "The most successful thing is to have the right person." The internal champion is the spokesperson and advocate for the project within the customer organization. They are typically the prime contact the EA has with the customer, and they are the staff who work with the EA to advance the project through the customer's internal decision-making process. Despite unanimous agreement that an internal champion is essential, a relatively new EA noted that getting their foot in the door with potential customers has been the hardest part of their job. They reported that there is limited guidance within AIC on this matter, but recognize the strong need to build credibility and legitimacy with customers under their purview. Ideally, AIC already has a strong relationship with the customer that EAs can leverage, but that is not always the case.

When asked what “hook” or “pitch” initially gets them in the door, EAs reported that it often isn’t that straightforward. Instead, they listen to what customers say and focus on both their spoken and unspoken needs. Usually, customers’ only interactions with AIC have been limited to billing questions and communication about service outages, often ending in frustration. As a result, these initial interactions are “almost therapeutic,” providing EAs with the opportunity to ensure customers feel heard. When given the opportunity, customers often share what makes their job hard. EAs have found that utilizing energy efficiency as a means to alleviate these problems is often an effective ongoing strategy. Often, feeder channels can provide the necessary solutions. As one EA put it, overall initial outreach is a bit of: “Ok, let me hear what your experiences are… Now let’s look a little deeper at your usage.”

While initial interactions vary greatly and are highly dependent on the interpersonal skills and approaches of the individual EAs, common messaging seems to center on the rider customers pay on their bills, as evidenced in the following quotes from respondents.

“You see that rider on that bill, we’re trying to get that back to you. How can we work together to help you do this? What does your usage look like?” (EA)

“Hey, we’re just trying to give you your own money back. You pay into this program whether you want to or not. And if you don’t use this money for your projects, somebody else is going to. And so if I can help you get some of those funds for maybe projects you’re going to do next year, let me help you pay for some of that front-end cost and reduce your overall expenditures” (EA).

In general, EAs need to provide a compelling reason for pursuing an energy efficiency project. In some cases, this is an easy sell, and the benefits to the customer are obvious when incentives are factored in (e.g., LED lighting). Most other projects are more complicated, and additional calculations and information are needed for the customer to make informed decisions. EAs often bring non-energy impacts into the discussion to ensure customers have a comprehensive understanding of all benefits. Factors that are difficult to quantify and do not always factor into customers’ cost-benefit calculations, such as increased safety, improved reliability, equipment longevity, reduced maintenance, and enhanced comfort, are often discussed.

Whenever possible, EAs advised focusing on quick, simple “wins” with new customers, as these can be vital for securing longer-term and more substantial participation. These straightforward successes help build a foundation of trust for future engagement. When quick wins are not feasible, the work of targeting large business customers may span years. Building trust with a customer is a key challenge and can be difficult, especially since many have had limited interaction with their utility or have experienced issues such as billing problems or outages. EAs are often the first human representatives of AIC that customers encounter.[52] Therefore, they often need to act as the face of AIC, listening to customers’ broader experiences before even discussing energy efficiency.

When they can demonstrate the value of a large business project to a customer, EAs reported facing administrative challenges because large business projects rarely occur in the year they are conceived or approved, and project

[52] Most of the largest customers do have Key Account Executives (KAEs) that stay in regular communication with the customer, but these are primarily phone-based interactions that primarily target customer service, billing, or outage issues. KAEs do sometimes promote energy efficiency opportunities to their customers, but the hand-off to an Energy Advisor quickly occurs.

implementation often spans multiple program years. They noted that this often creates conflicts with AIC portfolio planning and budgeting, which are program-year-based

One EA emphasized that effective ongoing outreach and communications should be largely a function of the equipment inventories and opportunities lists created early in the customer engagement process. Customers are busy, and EAs need to get to a compelling point quickly. “So if you don’t spell it out, if you just talk about things and don’t give them something tangible, then it just stops right there. As soon as you leave, they go on to something else.” The facility inventories and lists of energy-saving opportunities serve as sources of customer-specific, relevant details that the EAs can leverage to initiate further conversations.

4.4.4 LARGE CUSTOMER DECISION-MAKING PROCESS

The EAs noted that the decision-making processes of AIC’s large business customers are often complex, involving up to fifteen people, though the number varies by customer. Additionally, EAs’ visibility into a customer’s decision-making process is limited by the individuals with whom they interact and their respective roles. Overall, EAs can work with a variety of customer staff: “I can talk to a maintenance guy that’s, you know, just got through high school, or I can talk to the CEO,” although most interactions focus on one individual.

In general, EAs reported usually interacting with three levels of customer staff: (1) someone on the floor, (2) a maintenance supervisor, and/or (3) an engineering manager or manager of some sort. Specifically, EAs most commonly interact with facilities managers, engineering staff, or maintenance managers, who are often pressed for time. EAs emphasize the need to present the situation clearly and concisely. “People are extremely busy.”

Internally, at the customer level, energy efficiency projects are typically treated like any other CAPEX project and must compete with other potential uses of capital resources. Accurate and reliable data on estimated energy savings, ROI, paybacks, and incentive payments are essential for all large business projects. Here, too, the EAs referenced the importance of the internal champion, a staff member committed to advancing energy efficiency projects: “a project isn’t going anywhere without a champion.”

Almost universally, EAs agreed that cost is the primary factor influencing decision-making, although a customer’s internal goals regarding sustainability, greenhouse gases, or other environmental aspects can influence the outcome, though they rarely serve as the decisive factor in project approval.

4.4.5 ONGOING INTERACTIONS WITH LARGE BUSINESS CUSTOMERS

“Understanding what is important to that particular customer. Having a grasp of their capital flow, capital cycle, fiscal calendar, pain points[…] Looking at and understanding their production ups and downs, opportunities, and desires to progress[…] The facility or facilities and their desires and their understanding of our program and how energy efficiency is right[…] Understanding all of those pieces together and then saying: ‘Hey, we might have an offering for this’.”

The more intimately EAs know their customers, the better. Interactions with a customer depend on where the customer is in their energy efficiency journey and the needs of the project. Interactions are often event-driven, such as increased outreach and communication when SGs become available, or the announcement of early completion bonuses. When actively recruiting and engaging a new customer or working with a customer to submit an application, interactions may be frequent, even daily. At other times, interactions slow down, such as when a customer is waiting for the fiscal cycle to end to access the necessary funds.

EAs view themselves as a resource to customers. One general finding from the interviews is that all the EAs manage their time and approach certain tasks differently. This carries through to how they interact with their customers. Administrative processes vary across the EAs. Each advisor has their own style.

One EA reporting telling customers, “I’m an extension of your staff.” Some EAs are very formal and regimented, indicating that they have certain customers on monthly, weekly, and even daily cadences. However, most are generally task-focused, stating that they tend to communicate regularly with the individuals they are working with on a specific project, rather than with everyone else. Another EA reported their time is allocated roughly 80/20: that is, they spend about 80% of their time with customers that are energy efficient and energy conscious, engaged, informed, have greenhouse gas goals, and have a history of participation; 20% of their time is spent trying to get non-participants to participate.

All EAs reported checking in with all their top customer base at least every quarter. While a project is ongoing, EAs generally report liking to have monthly or sometimes weekly meetings with the customer to stay attuned to project progress and keep things moving as much as possible on their end.

One of the primary challenges EAs face in effective, ongoing communication and engagement building with large business customers is staff turnover. Establishing and developing trust, as well as building relationships with internal champions, requires a significant amount of time, effort, and commitment. Some of these relationships have been nurtured over years of ongoing interactions. When a champion leaves a role, EAs report that it is often like starting over with a new customer. However, an advantage is that they should already be aware of the existing equipment and opportunities.

4.4.6 RECOMMENDATIONS FOR IMPROVING LARGE BUSINESS CUSTOMER ENGAGEMENT

Throughout the interviews, EAs were encouraged to share their ideas on how AIC could better engage with large business customers. Three EAs mentioned that a smaller version of a PEA would be helpful. Currently, the PEA is only used with the largest customers who have the highest energy-saving potential. The current PEA involves a four-day onsite engagement and costs about $8,000 to conduct. However, the insights it provides are extremely valuable. Advisors felt that a smaller, shorter, and less expensive version would be useful. These activities should focus on developing facility equipment inventories and listings of energy efficiency opportunities to support future communication and outreach.

One EA recommended new strategies for managing large customer new construction projects and believed that the Business Program’s current offerings in this area do not match how large businesses make their construction decisions. These projects are unique; they can be very large and take many years to complete. This creates difficulties in aligning customer projects with AIC planning cycles, a problem identified in previous studies. Preapproval requirements are also more complicated because energy efficiency upgrades are often added at the last minute and can be changed or removed after initial planning has begun.

Another EA mentioned that a useful addition to the Business Program would be some form of incentive or grant focused on improving lead times. Program-year-based management highlights the importance of completing projects in a timely manner for achieving goals and objectives.

4.4.7 SYNTHESIS

A lot of rich and informative content was collected through the EA interviews and is presented throughout this chapter. Significant insight was gained into how the EAs conduct recruitment and engagement with large customers, as well as how they leverage the feeder channels in doing so. In closing this chapter, we synthesize the information gleaned from these interviews within the context of the three research questions that originally guided the interview task.

HOW DO FEEDER PROJECTS ORIGINATE?

Feeder projects originate from the EAs' day-to-day practices as they work to recruit and engage AIC's largest business customers into energy efficiency projects. The collection of feeder channels serves as a "toolbox" of services to which EAs have ready access. Feeder projects arise when circumstances emerge that necessitate specific data, information, equipment, or resources that would not otherwise be available, thereby posing a barrier to the customer's future participation. The feeder channels could be viewed as investments—they all bear costs, but most do not deliver any direct energy savings—in the recruitment and engagement efforts targeting customers with the greatest potential for energy savings.

HOW DO ENERGY ADVISORS INTERACT WITH AND UTILIZE THE FEEDER PROJECTS TO CONVERT CUSTOMERS INTO ENERGY-SAVING PROJECTS?

EAs recommend the feeder channels based on a customer's unique circumstances. To illustrate how this works in practice, we have outlined four examples below:

1. One of AIC's largest business customers is new to energy efficiency and receptive to the idea of participating, but unsure where to begin. An EA might recommend a PEA or SEM. Given the tremendous energy-saving potential this one customer would offer, PEA or SEM would be a good fit, as they both would provide a comprehensive inventory of the facility's existing equipment and identify energy-saving opportunities throughout the facility. All critical information for facilitating ongoing efforts to convert them into energy efficiency program participants would be produced through participation in one of these channels.
2. An EA who has not yet gained the necessary trust to access the entire facility is conducting an on-site visit with a customer who is apprehensive or hesitant. Upon entering the plant, the EA notices the facility uses dated lighting or identifies an opportunity for a specific upgrade.

   In this instance, a quick and easy MM project could potentially be used to learn more about system usage and identify easy savings opportunities, thereby garnering further trust and credibility.
3. A customer that has completed a couple of projects in the past and is now considering a large retrofit project. The customer is unsure whether including efficient equipment would be worth the investment.

   An EA may recommend that an FS is better suited to this more complicated situation and could provide the customer with a more informed assessment of whether their investment in the more efficient equipment is practical and feasible.
4. A large customer that may not have the staff or resources to address energy efficiency.

   In this instance, an EA may suggest that an SG could provide the staffing or resources needed to move an energy-efficient project forward.

In all these examples, the feeder channels provide EAs with solutions to help large business customers overcome barriers to participation that would have likely prevented them from participating in the program.

ARE PRACTICES CONSISTENT WITHIN AND BETWEEN ENERGY ADVISORS?

There is considerable variability in how EAs approach recruiting and engaging their customers. There are standard practices, such as logging customer communications and project details into the ALEET system; however, even these standard practices appear to be implemented with varying degrees of detail and rigor. Some EAs reported interacting almost constantly with the ALEET system, updating and tracking minor project details; other EAs use the system less regularly, update content less consistently, and vary in the content they enter into the system. Some EAs reported interacting with their biggest customers on a relatively regular basis, while others did so less frequently. That being said, the ultimate role of the EA is to encourage customers to participate in AIC’s energy efficiency programs. Their annual goals are based on attaining certain levels of energy savings, and how they approach that objective seems to be, to a large degree, up to them.

While each EA seems to have their own approach to the job, operations are collaborative, fluid, and dynamic, with a team environment that is quite evident. The knowledge of customers, business practices, strategies, and approaches to interacting with customers varies by EA, but they do not operate in isolation. The EAs appear to work as a team. Knowledge and expertise sometimes reside with individuals working in specific territories, but they may contribute to projects in other territories when their skills or experience are needed. It also seems that decisions are rarely made in isolation, with team and managerial involvement in virtually all large business projects or recruitment efforts. Recommendations for addressing a customer’s unique needs are discussed openly, and solutions are often collectively brainstormed and shared among advisors and management.

Nonetheless, there are some areas of consistency. All EAs seem to agree that the process outlined in Section 4.4.3 guides their overall efforts and involves (1) finding the internal champion and getting in the door, (2) obtaining details on existing equipment, (3) outlining opportunities, (4) presenting and helping evaluate alternatives, (5) supporting the internal champion as they advance a proposed project through their internal decision-making process, (6) helping complete the application, and (7) continually engaging with customers to advance existing projects or promote new ones. The process seldom unfolds identically for each customer, and specific steps may differ; however, most customer interactions follow a common pattern. In the next section, we apply this general pattern to provide recommendations that can enhance consistency. Due to the flexibility required to meet large customer requirements, however, it is uncertain whether aiming for more consistency is actually necessary.

5. DISCUSSION, RECOMMENDATIONS, AND FUTURE RESEARCH

This chapter includes an overall summary and discussion of the findings highlighted throughout this study, presents some recommendations arising from this work, and outlines suggestions for future research.

5.1 DISCUSSION

Although the largest businesses comprise only a small percentage of the total number of business customers, they offer some of the greatest potential for energy savings. AIC's largest non-streetlighting energy efficiency project within the entire 2018–2024 timeframe was a single Custom Initiative project in 2020, resulting in ex ante savings of 10,358,001 kWh. The second-largest project was a 2022 Custom Initiative project with ex ante savings of 9,666,732 kWh, which was a conversion project that occurred after an SG feeder project.

Clearly, when it comes to recruiting and engaging large customers into energy efficiency programs, this enormous potential deserves special attention. In response, AIC has a team of EAs that exclusively serve business customers, as well as a select group of EAs who are specifically focused on serving AIC's largest customers (mostly rate code DS-4 but also DS-3B and occasionally DS-3A).

This study highlights two key differences between large businesses and smaller businesses that need to be considered when formulating and implementing recruitment and ongoing engagement strategies:

- Large businesses tend to have more complex structures and processes than those of smaller businesses. Capital expenditure decisions involve multiple stakeholders across the organization, and energy efficiency projects often need to compete against other potential uses of capital resources. This creates significant informational needs to develop and support solid and competitive business cases. Inventories of existing equipment, along with historical energy usage data, are necessary to identify potential energy-saving opportunities. The opportunities are evaluated, and business cases are developed, based on additional information and metrics such as estimated savings, incentives, total costs, ROI, and payback periods. All of this information is essential for recruiting and engaging nearly all large customers.
- There are important differences between the factors that inhibit or prevent customers from participating in energy efficiency programs and implementing energy efficiency upgrades in their facilities when comparing small and large businesses.

All customers, regardless of sector (residential or non-residential) or size (large versus small), tend to identify financial costs as one of the most important barriers to implementing energy efficiency upgrades. One EA stated, "Cost is the only thing that matters in the end." Addressing this financial barrier and helping to offset first costs is why the vast majority of energy efficiency programs involve incentive payments. But there are also other barriers at play.

For large businesses, the literature suggests factors such as a lack of executive buy-in, perceptions of risk, administrative burden, limited awareness of potential upgrades, and insufficient capacity and expertise hinder participation in energy efficiency programs. The EAs indicated that for large businesses, it is paramount to demonstrate that the solution(s) offered (energy-saving or feeder channels) can be both advantageous and cost-efficient for the customer. In this sense, almost all barriers have an informational basis, as various detailed data and information are needed to inform the decisions.

The feeder channels comprise a variety of tools that EAs can use to address the various obstacles they face when recruiting and engaging AIC's largest customers. The main goal is to motivate customers to adopt energy-saving projects, which involves building trust and demonstrating the benefits of participation. Large business clients are not persuaded by vague claims or general benefits of energy efficiency; successful recruitment relies on referencing each customer's unique situation. For example, saying "Upgrading your motors can save you money. Are you interested?" is less effective than "Upgrading those three motors could save you $X annually, with a payback in about 2.5 years. What do you think?" To offer compelling examples or a solid business case, accurate and reliable data about key project details—such as total costs, projected savings, incentives, ROI, and payback period—are essential.

This study identified a common process underlying nearly all EAs' recruitment and engagement activities. Initially, the EA must secure entry and receive an invitation to the facility. Once there, they assess existing equipment, which can involve a detailed inventory or a simple observation. The EA (or contractor) then combines equipment data with an energy usage assessment to identify potential savings. They support the internal champion and help evaluate different project options, often estimating energy savings, incentives, ROI, and payback periods. When a project is feasible, the internal champion advocates for it within the organization's decision-making channels. At this point, the EA might assist further by attending meetings or endorsing the project. After approval, the EA supports project implementation and continues to promote additional initiatives based on insights gained during the process. This is a general overview, not a strict or universal sequence, aimed at illustrating key steps and informational needs.

An equipment inventory should be regarded as a valuable asset to AIC. It is only achieved after the EA has gained access to the facility and built a trusting relationship with the client. Knowing what equipment is in a facility, along with its energy usage patterns, is essential for identifying energy efficiency opportunities, which is key to engaging the customer further and initiating recruiting efforts. Adding estimates of energy savings, incentives, ROI, and payback provides a complete business case, which is necessary to move most projects through the typical decision-making process of large customers. Both the equipment inventory and the list of opportunities should be compiled and stored consistently.

EAs report that even after years of high participation and ongoing interactions, there is still significant energy-saving potential among these large customers. Most of these customers are not new to energy efficiency; many have previously participated, and others have been informed about and offered efficiency opportunities. EAs noted that few remain unaware of energy efficiency concepts. In fact, the efforts of EAs have largely overcome the general lack of awareness barrier. What persists is a more specific lack of understanding about the available solutions tailored to their particular needs and circumstances. Unlike smaller businesses and residential clients, large customers are unlikely to be motivated by broad advertising or educational campaigns. Instead, a high-effort, personalized, and flexible approach is necessary to address each large customer's unique needs, circumstances, and barriers.

Small business and residential strategies often depend on shared customer traits. But, broad, one-size-fits-all approaches aimed at the general population are unlikely to work well with AIC's smaller group of large business clients. The most consistent finding in this study is that AIC's biggest DS-4 and DS-3B customers need tailored, personalized attention. Still, the higher effort required to recruit and engage these clients is probably justified, considering their significant potential for energy savings.

We conducted an initial analysis of conversion and cost efficiency, but data limitations prevent firm conclusions. Still, there is clear variability in performance across feeder channels, which will likely continue when a formal process linking conversion projects to feeder projects is established. This variability is expected because each feeder channel plays a different role in meeting specific customer needs. The report highlights that, even with improved data, quantitative analyses should not be the sole determining factor of feeder channel performance and its value to the overall Business Program. Instead, qualitative evaluations of the customer barriers each feeder addresses, and whether other feeders also address those barriers, are equally important.

5.2 RECOMMENDATIONS

Consider designing and implementing a data tracking process, with KPIs, to assess the ongoing performance of the feeder channels. Our analysis of historical conversion and cost efficiency shows that evaluating the performance and costs of feeder channels can be quite straightforward and practical. Nonetheless, two key caveats apply. First, data quality must be improved to increase the accuracy, validity, and efficiency of the analysis before final performance decisions are made. We highlighted the limitations of our current method; a process is needed to reliably link conversion projects with feeder projects in tracking data to support more rigorous analysis. Second, evaluating the performance or cost efficiency of feeder channels should not be done in isolation. Even channels with lower cost efficiency may serve to address specific customer barriers that would be unresolved without them. Therefore, both quantitative and qualitative assessments are essential to comprehensively understand the value these channels provide.

For feeder channels that require measure-level analysis (e.g., FS, MM), include a field in the application-level data that indicates what measure(s) were targeted. This information is usually available in supporting documents and records, but it is laborious and tedious to review in that form. The database tracks all measures installed through energy-saving programs; it seems this would be analogous to tracking measures addressed through feeder channels, so usable fields should already exist in the database. Notably, the tracking data include project descriptions for the FS channel; however, these descriptions often lack sufficient detail to determine the project scope or the systems and end uses targeted.

Consider standardizing the collection and storage of customer equipment inventories and opportunities lists. Effective ongoing engagement with large customers relies on understanding their equipment base, energy usage, and potential upgrades. Customer staff are busy, so outreach must include tailored, relevant information that resonates with their specific circumstances. Currently, this information isn't consistently tracked or organized in the system. Implementing a tracking system would ensure that vital data is always accessible to the right team members and would help new EAs get up to speed. Additionally, it would prevent the loss of crucial information if an EA departs unexpectedly.

Consistently log the needs, desires, constraints, limitations, goals, and other factors that are important to a customer. Knowing that a customer has significant resistance to anything involving production shutdowns or delays could be important. Being aware that an organization has energy or environmental goals might be helpful. Recognizing that staff are facing ongoing problems and frustrations with their current HVAC system is valuable. These details often guide the assessment of alternatives and are essential in building a comprehensive business case. Logging this information would be especially beneficial for new EA staff who need to familiarize themselves with the customers in their service territory.

Develop an assessment offering that works for less-than-the-largest customers. AIC must ensure that mid-to-large-sized customers do not get overlooked. Currently, most EA resources focus on recruiting DS-4 clients. Some effort is also directed towards DS-3B and occasionally DS-3A, but all other customers are handled by small business EAs. Although many feeder services are available to smaller clients, some, like SEM and PEAs, are not. Creating SEM and PEA offerings, or similar solutions, for the next customer tier could broaden these services' reach. Several EAs proposed developing an assessment service tailored for smaller yet still sizable customers, such as DS-3B and DS-3A.

Consider offering increased incentive levels to promote ongoing participation to capture deeper savings. Many large businesses are repeat participants in AIC's energy-saving programs, and most of the easy gains have already been achieved. Consequently, the costs to improve facility energy efficiency continue to increase over time. However, EAs noted that there is still significant potential among the largest customers. An incentive plan that rewards ongoing participation might provide an extra level of incentives for repeat customers, helping to keep projects cost-effective for both the customer and AIC.

5.3 FUTURE RESEARCH

Conduct research into the participation barriers faced by AIC's large customers. Much of the discussion in this report focuses on the barriers to participation faced by large customers. Much has also been said about how these barriers are specific to each customer's circumstances. However, this information is second-hand; none of it comes directly from AIC's customers. What barriers do they truly experience across the service territory? Are there barriers or factors that AIC's current offerings do not address? Are there potential solutions that have yet to be considered? What might help their decision-making processes? These and other questions could be explored through in-depth research with large customers.

Develop logic models and/or customer journey maps for the feeder channels. Logic models clearly outline goals and objectives, resources, outputs, and outcomes of intervention efforts. A comprehensive and detailed understanding of how each feeder channel is designed and operates, as well as what it is expected to deliver, is crucial for a thorough understanding and assessment of their performance. Similarly, customer journey maps would illustrate how customers move through AIC's suite of Business Program offerings, capturing the full participation cycle, from initial engagement to enrollment, through active participation. In the context of the feeder channels, these maps would also show how participation in one feeder channel can lead to engagement with another, as well as how activity in a feeder channel ultimately converts to participation in an energy-saving channel. Developing customer journey maps is a useful exercise for optimizing and clarifying program staff's vision of how the various offerings fit together. They also provide both customers and program staff with an intuitive, end-to-end view of what the participation experience looks like.

Conduct additional peer utility research. The peer review completed as part of this study provided high-level insights into how AIC's peers address their non-residential market. We examined their structure and main offerings, but this was a secondary analysis, primarily based on what the research team could easily gather from websites and available documentation. Some of the information was incomplete, inconsistent, and/or difficult to obtain. Additionally, as noted in our review, some of the utilities had previously utilized feeder channels but had phased them out. Others tried them as pilots but did not gain enough traction to continue operating them. In the secondary literature we reviewed, details about these past efforts were limited, and the reasons behind these decisions remain unclear. Conducting primary research with peer utility staff to understand their experiences with feeder channels and their overall approaches to large business recruitment could provide valuable insights.

Conduct messaging research. Getting in the door is the crucial first step in the recruitment process. The interviews with the EAs revealed that they employ a range of messages to introduce energy efficiency to customers. Often, they discuss the energy efficiency rider that customers pay on their bills; sometimes, the focus is on savings opportunities, and other times, non-energy benefits are highlighted. Identifying the most effective approach in different situations would be valuable for strategizing. Additionally, maintaining consistency should be a priority, as the EA is often the only AIC representative the customer interacts with, and the EA can significantly influence and shape AIC's image.

APPENDIX A. ENERGY ADVISOR INTERVIEW DISCUSSION GUIDE

[Open with screen-share list of feeder offerings]:

Feeder Channel	2018	2019	2020	2021	2022	2023	2024	Total	Energy Savings?	Incentive Paid?
Staffing Grant (SG)	28	32	12	6		60	91	229	No	Yes
Virtual Commissioning (VCx)			12	50	49	31	20	162	Yes	No
Building Energy Assessment (BEA)	3	4	84	5	2	31		129	No	Yes
Process Energy Advisor Assessment (PEA)			27	8	13	22	12	82	No	No
Feasibility Study (FS)	3	3	8	16	14	14	18	76	No	Yes
Strategic Energy Management (SEM)	6	17	8	10	7	12	6	66	No	Yes
Metering & Monitoring (MM)	16	4	7	2	10	2	8	49	No	Yes
Large Facility Retro-Commissioning (LFRCx)	8	7	3	7	3	1	5	34	Yes	Yes
Compressed Air Retro-Commissioning (CARx)	9	16	6					31	Yes	Yes
Industrial Refrigeration Retro-Commissioning (IRRCx)	1				4			5	Yes	Yes
Retro-Commissioning Lite (RCxL)		1		1				2	Yes	Yes
Total Feeders	**74**	**84**	**167**	**105**	**102**	**173**	**160**	**865**		

We will discuss this list of service offerings. The one thing they all share in common is the ultimate objective of generating participation in energy-saving programs down the road.

[Foster discussion around the list. Gauge their familiarity and understanding of the offerings, probe their use of the offerings]

1. What is your title and role?
2. [IF NOT COVERED]: How much do you work with large customers?
3. How often does a large customer come to you asking for any of these services?
4. Are any of these services ever offered to medium or small businesses (i.e., less than large) customers?
5. We've heard mention of the lists of the Top 2,500 or the Top 1,000. Which is it, and how do you work with this list?
6. What would it take to penetrate deeper into the Top 1,000? Is time/manpower a constraint? Are more EAs needed?
7. Walk me through an example of how an Energy Advisor might interact with a large business customer. What's the pitch that gets you in the door? Start with a brand-new customer and discuss how you might engage them over time.
8. How often is your inability to find the "right person" or the internal ally the biggest barrier?
9. My understanding is that you frequently develop a list of energy efficiency opportunities. How formal is the list of opportunities? Does one exist for all large customers, or are they developed only when the opportunity presents itself (e.g., PEA, possibly SEM)?
10. What does the large customer decision-making process look like? Who is usually involved in discussions?

11. How often do you typically interact with a large business customer? How do you stay in touch over time if they are not actively working on something? What kind of contact or follow-up occurs specifically after the customer completes/participates in a feeder activity?
12. What are your biggest challenges or obstacles in implementing these offerings?
13. Do you have any recommendations for improving the recruitment of large businesses?

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