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Customer Innovation

Virtual Energy Coach - Pilot Project Executive Summary

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Prepared For
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1.0 Executive Summary

This report looks at the lessons learned from the Virtual Energy Coach (VEC) pilot launched by Power Takeoff (PTO) in partnership with ComEd, along with recent program design changes and lessons learned from PTO's deliver of the Virtual Strategic Energy Management (vSEM) program for other utility client partners. VEC and vSEM refer to the same program model; the different names reflect how the program is branded for different utility clients. Throughout this report, VEC is used when discussing the ComEd pilot specifically, and vSEM is used when describing broader learnings and processes from implementation across PTO's utility portfolio. Most of the learnings and program design changes come from delivery of the program at other utilities, where higher customer enrolment has provided greater experience with program delivery.

Designed as a fully remote, low-barrier alternative to traditional Strategic Energy Management (SEM), the VEC pilot was developed to bridge the gap between PTO's existing Virtual Commissioning (VCx) program and traditional SEM initiatives.

The pilot launched in November 2024 with a contracted savings goal of 1.5 GWh and an original contract end date of December 31, 2025. A shorter-than-planned enrollment period, slower-than-expected customer acquisition, and measurement and verification (M&V) modeling challenges near the end of customer engagement delayed program delivery. As a result, the contract was extended through June 2026.

The program initially enrolled six unique customers spanning 16 total sites. Ultimately, five customers across seven sites successfully completed the program. The reduction in participating sites resulted from customer staffing constraints, limited savings opportunity at one site, and M&V modeling challenges. The participating sites achieved combined savings of 422,090 kWh/yr (28% of goal).

Pilot Objectives

The VEC pilot was developed to work in tandem with the existing VCx program by serving customers that were not eligible for the VCx program and creating opportunities to achieve additional and deeper energy savings. To accomplish this, the VEC pilot incorporated several features that extended beyond the VCx delivery model:

- Longer and deeper customer engagements
- More diverse measure types
- Expanded customer eligibility
- Site-specific M&V modeling

Building on the success of the VCx program working with small-to-medium businesses (SMB) and public sector customers, the VEC pilot was initially designed to target the same market segment. The pilot did not initially target the following facility or customer types:

- Heavy manufacturing

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- Light industrial
- Refrigeration warehouses
- Water and wastewater treatment
- Warehouses and distribution centers
- Healthcare office and hospitals

To support these design criteria and meet the evaluation requirements, the VEC pilot was built to align with traditional SEM requirements and the Consortium for Energy Efficiency (CEE) minimum elements.

Within this framework, the goal of the VEC pilot was to:

1. Expand the reach of recommissioning programs to customers that are considered ineligible for VCx and various other utility-incentivized recommissioning programs.
2. Test a pathway to expanding SEM to smaller customers through a fully remote, lower-barrier delivery model.

Program Summary

The VEC pilot initially enrolled six customers representing 16 sites. Not long after enrollment, the Department of Military Affairs withdrew from the pilot, indicating they were too busy and short staffed and did not have the time to commit. Over the next few months, an additional eight sites associated with the remaining customers were withdrawn as well, leaving five customers and seven sites actively participating in the pilot.

By the end of the pilot, the seven invoiced projects achieved a combined annual energy savings of 422,090 kWh (28% to goal). This represents an average of 7.3% energy savings per customer.

Table 1. Summary of Participating Customers

Customer	*Account Name*	*Project Status*	*Completion Date*	*Savings (kWh/yr)*
Alsip-Hazelgreen OakLawn School District 126	Prairie Junior High School	Invoiced	Dec 20, 2025	10,063
HBK Enterprises	Hbk Enterprises Llc	Invoiced	Dec 20, 2025	43,828
Valley Lo Club Association	Valley Lo Club Association	Invoiced	Dec 20, 2025	61,425
Alsip-Hazelgreen OakLawn School District 126	Stony Creek Elementary School	Invoiced	May 8, 2026	56,154
Woodstock Community School District 200	Prairiewood Elementary School	Invoiced	May 8, 2026	172,362
Alsip-Hazelgreen OakLawn School District 126	Hazelgreen Elementary School	Invoiced	May 8, 2026	28,351
Volflex Inc	VOLFLEX HOLDING LLC	Invoiced	May 8, 2026	49,907

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Key Lessons Learned

The VEC pilot has evolved significantly since its inception, defining its own market segment and focusing primarily on operational improvements for medium-to-large commercial and small industrial customers. The initial iteration of the pilot is in a lot of ways quite different than how it looks today as vSEM. The vSEM program now overlaps slightly with VCx by focusing on larger and more complex customers and prioritizing portfolio accounts where customers have more than one facility. The lessons below summarize the key findings from the VEC pilot and the broader experience gained through vSEM delivery.

1. **Recruitment Obstacles**
    - **Challenges:** Traditional "cold outreach" has inherently low enrollment rates, making it important to minimize any other barriers or obstacles to enrollment. Limitations to the size, type and quantity of customers in the pipeline of potential customers throughout this pilot further limited the enrollment pipeline and contributed to lower participation. Two factors were particularly challenging:
        - Account Owner approval: Outreach required Account Owner approach for each prospective customer.. This introduced delays and reduced the amount of outreach that could be completed during the enrollment period.
        - Managed Account Eligibility: Large Customer Services (LCS) managed accounts were not eligible during the VEC pilot. Experience with vSEM in other jurisdictions has since demonstrated the success in leveraging the established relationships and customer quality of managed account customers.
    - **The Solution:** Including managed accounts in the program and implementing a referral or "warm introduction" process by LCS Account Managers in the vSEM program has improved enrollment rates significantly. Employing targeted outreach to specific customer types, providing insight and analytics reports, and providing case studies has resulted in further improvements. Increasing the size and type of customers being targeted has also increased the pool of viable participants.
2. **Redefining Customer Eligibility**

    Experience from the VEC pilot and subsequent vSEM programs has helped refine which customers are best suited for vSEM and how they should be evaluated for participation.
    - **M&V Filters:** Early program designed applied tighter filters that limited customer eligibility when baseline data looked difficult to model. Relaxing these filters proved to be inconsequential to successful modeling, allowing a broader range of customers to be considered.
    - **Custom Modeling:** The program transitioned from custom modeling as the standard approach to a hybrid modeling approach utilizing the standard VCx baseline model first and applying custom modeling only as necessary. The hybrid approach may be appropriate when site energy use is primarily production based, if onsite generation exists (such as solar), or if energy use is highly correlated to occupancy or other similar trackable metrics.

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The program now uses a hybrid modeling approach and selects the model that is most suitable for each facility. This was identified for customers within the VEC pilot and among all vSEM programs.

- **Customer size:** Program experience has also helped establish clearer guidelines for customer size:
    - Single sites consuming under 1 GWh/yr are poorly suited for vSEM's long term behavioral focus and should remain in VCx.
    - Portfolio accounts, defined as customers with more than one facility, work best in vSEM rather than VCx, due in part to the extended duration of the program. vSEM also works well with large customers typically reserved for traditional SEM programs.
    - The most common customer size across the program is 1 – 10 GWh/yr. Customers greater than 10 GWh/yr are certainly eligible for the program, however more evaluation of potential opportunity is required prior to enrolment, with not all customers always being eligible.
    - There has been success with larger customers up to 60 GWh/yr, and in many ongoing programs, customers up to 60 GWh/yr are eligible.
    - The smaller customer size in the VEC pilot helped define the minimum size eligibility, while the larger customers in other vSEM programs have shown how much potential and opportunity exist for delivering vSEM with these larger customers.
- **Customer Type:** The vSEM program has more recently been focusing on expanding into additional markets, such as manufacturing, hospitals, and grocery. Across these expanded customer types, average savings per customer has increased from 170,000 kWh/yr to 396,000 kWh/yr, demonstrating the potential for vSEM to serve a broader range of customer types and sizes than initially thought. Unfortunately, the VEC pilot concluded before these additional customer types could be enrolled.
- **VCx and VEC Eligibility:** Customers are pre-selected for the appropriate program, but there is now overlap where certain customers are eligible for either one. Where customers are well-suited for either offering, we encourage customers to select which program they participate in.

3. **Customer Engagement**
    - **Relationship Building:** Strong customer relationships is the most critical aspect to embedding an SEM mindset and achieving behavioral changes within customer organizations. All the most notable case studies and success stories are a result of strong customer relationships. Using M&V modeling and PTO's Energy Analyzer platform as a feedback loop, Energy Coaches can help customers visualize their energy use, become empowered by the savings, and foster further eagerness to implement opportunities. Customers take ownership of the savings they've achieved once they can quantify their success.

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- **Program Name:** Based on experience across its utility programs, PTO recommends using the program title "vSEM" consistently. vSEM is utilized successfully in all other utility jurisdictions where there is an existing SEM program without creating confusion. Consistent naming also reduces the need to rebrand marketing materials, email signatures, and cold outreach sequences and provides greater consistency with our outreach team and Energy Coaches. As some customer portfolios span multiple utility territories, a common program name also provides a more seamless customer experience.

Recommendations

Should ComEd be interested in pursuing the vSEM program again in the future, most of the program changes are already incorporated into the current delivery model. The following additional changes are recommended to improve enrollment, increase savings potential, and allow Energy Coaches to focus more of their time on customer engagement and program delivery.

1. **Strengthen the Customer Pipeline:** Ensuring a customer pipeline of adequate quality and quantity is imperative for achieving enrollment and savings targets.
    a. **Customer size:** Increase the size of eligible customers from 3.5 GWh/yr to at least 10 GWh/yr. Large customers offer greater savings potential and can benefit from vSEM's longer-term engagement iterative approach to identifying, implementing, and measuring operational improvements. Involvement of the LCS account managers, the SEM enrollment team, and the vSEM delivery team should also be established to help ensure success in managing outreach to customers across multiple programs. In particular:
        i. Customers that are not interested in SEM due to the time commitment, site visits, or cohort-based delivery model may be interested in vSEM as an alternative. Customers have also noted the value of operational-focused recommendations, which allows them to pursue savings opportunities without feeling any obligation to spend time evaluating capital cost-based recommendations.
        ii. Larger customers will also benefit from vSEM's iterative feedback loop of implementing changes and then quickly receiving modeled estimates of savings. This feedback loop and direct correlation to savings often encourages customers to make more complex operational changes and iterate these changes further when compared to programs that are unable to provide ongoing M&V modelling throughout engagement.
    b. **Managed Accounts:** Make managed accounts eligible for the program. Experience from other vSEM programs indicates that these customers are some of the best candidates for successful participation, particularly when existing account relationships can be leveraged to support recruitment and engagement.

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2. **Improve Enrollment Success:** Leverage the existing relationships between Account Managers and their customers to reduce barriers to enrollment and maximize overall savings potential.
    a. **Warm Introductions:** Account Owners (and LCS Account Managers if applicable) should facilitate introductions of Energy Coaches to customers where possible. Energy Coaches can provide pre-populated email templates to help reduce the effort required from Account Managers while creating a warmer, more credible introduction to the program.
    b. **Minimize Enrollment Roadblocks:** Remove the requirement for individual Account Owner approval before performing cold outreach to customers. During the VEC pilot, this requirement slowed recruitment and limited the amount of outreach that could be completed within the enrollment period, reducing the overall savings potential of the program. This is particularly important if the future program's contracted savings goal is greater than 500,000 kWh/yr, as achieving higher savings targets requires sufficient time and flexibility to recruit an adequate number of customers.
3. **Reduced Salesforce Administrative Requirements:** Investigate opportunities to reduce or eliminate the manual requirement for Energy Coaches to update ComEd Salesforce accounts. Streamlining or automating these administrative requirements would allow Energy Coaches to devote more time to customer engagement, opportunity identification, and program delivery.

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