Research Report

Guidehouse Insights Leaderboard: Customer Engagement and Experience Analytics

Assessment of Strategy and Execution for 14 Customer Engagement and Experience

Analytics Providers

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Section 1
Executive Summary

1.1   **Introduction**

Market stakeholders lack consensus on the definition of customer engagement (CE) or customer experience (CX) analytics. In the context of this *Guidehouse Insights Leaderboard* report, CE and CX analytics refer to electric utility software that facilitates improved enrollment, participation, and engagement in customer-centric utility programs, or that logically contribute to an enriched CX. The baseline requirement for competitors' inclusion is the provision of energy usage insights, but at the risk of focusing too heavily on yesterday's news (home energy management, behavioral energy efficiency), this iterative update to the *Guidehouse Insights Leaderboard: Home Energy Management Providers* employs a broader approach to the topic.

Whereas energy usage intelligence was the foundation of stakeholder strategies just a few years ago—and still is to a large degree—conversations are shifting to more ambitious goals centered around end-to-end program management, smart home optimization, EV management, and complex rate analytics, among others. These principles underlie the assumptions and findings in the *Leaderboard* and its associated databook. The criteria by which CE and CX analytics vendors are compared in this *Leaderboard* are:

- Vision

- Go-to-Market Strategy

- Partners

- Technology

- Geographic Reach

- Sales, Marketing, and Distribution

- Product Performance

- Product Portfolio and Integrations

- Pricing

- Staying Power

1.2   **Leaderboard Grid**

Three companies achieved Leader status in this analysis: Oracle, Uplight, and Bidgely. These providers stand out from the competition because of their technological sophistication, holistic product and use case portfolios, sizable

customer bases, and relative geographic reach. Nine companies ranked as Contenders: Apogee Interactive, NET2GRID, Sense, GridX, Eliq, Powerley, Copper Labs, Voltaware, and Elevation Energy Solutions. Two companies ranked as Challengers—Emporia Energy and Greenpocket—and none were ranked as Followers.

Chart 1-1.   *The Guidehouse Insights Leaderboard Grid*
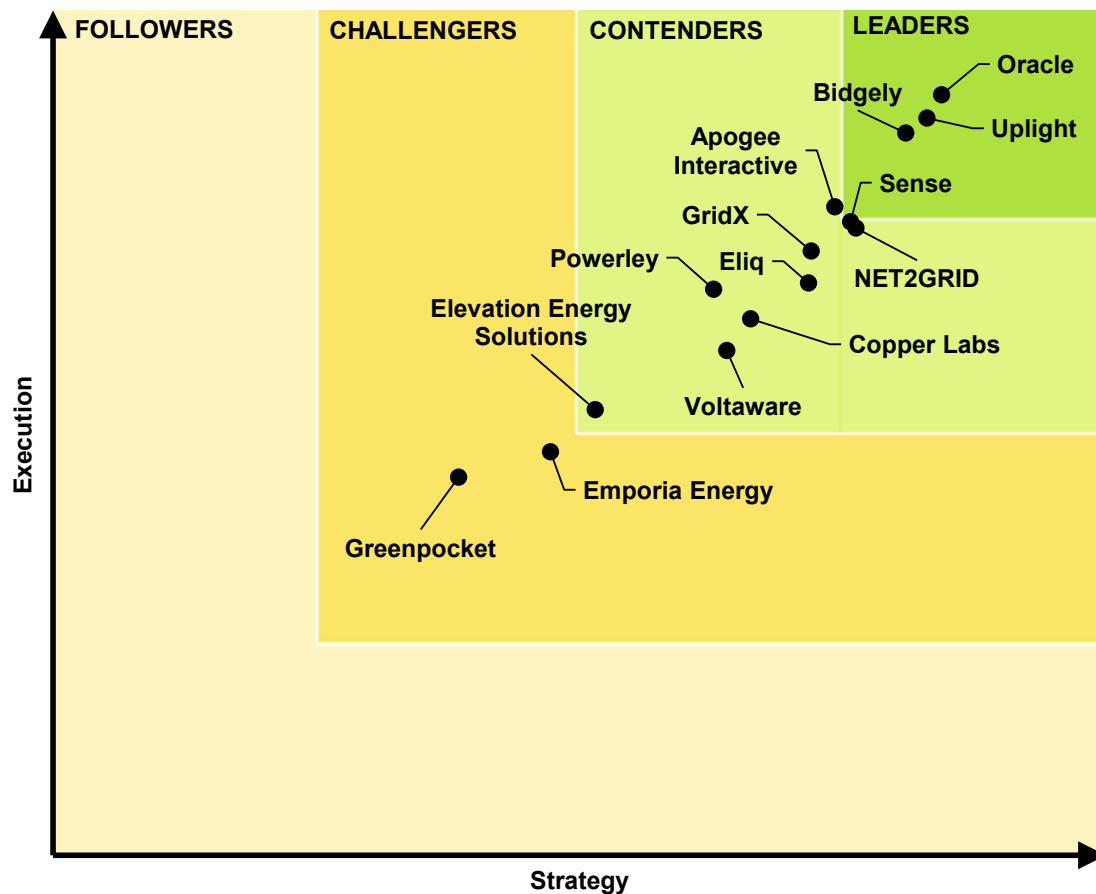
Leading CE and CX analytics providers continue adequately differentiating themselves via superior algorithms and user experiences (UX), holistic application portfolios, logical strategic partnerships, broadening geographic reach, and established customer bases. These vendors are mostly standardizing around software-first strategies (supplanting in-home energy monitors), end-to-end distributed energy resources/demand response (DER/DR) program management, time-of-use (TOU) and complex rate analytics, grid-edge intelligence, EV optimization, and enterprise wide visibility, such as a single view for the utility, customer, and customer service representative [CSR]).

However, no one size fits all. This Guidehouse Insights report reviews each competitor's unique differentiators and opportunities for enhancement, which inform and rationalize their *Leaderboard* scores.

Section 2
Market Overview

2.1 **Market Definition**

For this *Guidehouse Insights Leaderboard* report, the provision of energy usage insights is the baseline requirement for vendor inclusion, but the analysis also gives weight to analytics software that facilitates greater CE, CX, and customer satisfaction (CSAT) scores. Utility software can include (among other features):

- Load disaggregation

- Program management

- Online marketplaces

- Time-of-use (TOU)/complex rate analytics

- Call center optimization

- Distributed energy resources (DER)/demand response (DR) control and optimization

- EV detection and management

2.2 **Market Drivers**

Drivers for improving CE and CX stem from both the utility side and the customer side of the meter. CE/CX is still a relatively nascent market trend for utilities. As new use cases are explored, market competition increases, and customer expectations intensify, these market forces will facilitate higher levels of customer-centric investment. Key market drivers for CE technologies are:

- **Evolving utility-customer relationships.** Customers have come to expect higher levels of service from their utilities, in part because of a paradigm shift in consumer expectations in other industries, from cable (Netflix) to lodging (AirBnB) to music (iTunes) to retail (Amazon) to transportation (Uber/Lyft). The common thread tying these industry shifts together is a period of technological disruption, with customer-centric thinking winning out in the end. These revolutionary business models leverage technological innovation to provide seamless, fast, and convenient service to electric customers. This is where the utility sector is headed.

- **Proliferation of DER and smart devices.** CE technologies are driven by networked devices at the home that generate site-specific data. With the deeper penetration of advanced metering infrastructure, connected thermostats, and smart appliances, more consumption data is available for

utilities to share with customers. This data helps them better understand usage and bills, which furthers both engagement and satisfaction.

- **Evolving regulations.** Many regulators are aligning CSAT scores with utility rate cases; those with the best performance earn the highest profits. This trend will only become more pronounced as regulators gradually shift from cost-of-service to performance-based ratemaking models. In at least 13 US states, performance incentive mechanisms, such as performance-based regulation, are being used to reward performance on desired metrics.

- **Deregulated markets.** In deregulated electricity markets, energy retailers are subject to customer choice, and thus have an increased incentive to differentiate themselves. Improving the CE has emerged as one of the prime points of differentiation that electric retailers desire—more importantly, their customers want it, too.

- **TOU and complex tariffs/rates.** Time-varying pricing is becoming more widespread and is a powerful driver due to the growing perception that it is a best practice; currently the US has 53,192 approved rates, which is a tenfold increase over the past five years. Most utilities offer customers in any given class at least one time-variable pricing option. New disaggregation methods employed for TOU recommendations and DR enrollment are some examples of new capabilities supporting improved CE, load shaping, and sales conversion.

- **Contact-center inefficiencies.** Utilities are among the worst performers in minimizing customer efforts and are often ill-suited to manage customer communications effectively in a service-based future. Analytics combined with state-of-the-art customer contact solutions can help improve CSAT, take cost out of the business, and increase profitability.

2.3 Market Barriers

Despite high interest in CE/CX and movement toward more customer-centric business strategies, many utilities are still failing to engage their customers adequately, in a fashion that is truly responsive to current conditions. For the most part, barriers revolve around cost, complexity, and a relative lack of capabilities to deploy the full gambit of CE/CX applications. Although the aforementioned drivers largely outweigh these market inhibitors, their negative impact is strong and weighs heavily on decision makers.

- **Accounting rules.** Traditional electric company regulation creates an inherent bias toward CAPEX because electric companies earn a rate of return on it, but not on OPEX. The oft-cited **accounting rules challenge** creates the illusion for many investor-owned utilities (IOUs) that software as a service (SaaS) solutions are not easy to capitalize, which is where most funding is available. This situation ends up incentivizing investment in more complex and expensive

control implementation summaries (CIS) and customer relationship management (CRM) projects.

- **Customer privacy.** Enhanced CE often requires more customers providing more personal information, which can heighten privacy concerns and impede adoption. While many of the CE and analytics solutions described in this report rely on voluntary data collection, the leveraging of advanced metering infrastructure (AMI) data alone can cause concern among utility customers.

- **Cybersecurity.** Cybersecurity continues to be one of the largest barriers to the mass adoption of cloud and SaaS. Despite most cloud providers' state-of-the-art security, utilities fear ceding control of critical cybersecurity functions.

- **Daunting technology choices.** Given the variety of digital CE tools available, utilities must sift through solutions to choose the best ones, prioritize them from an investment perspective, and get buy-in for deployment from management and regulators—all of which can be challenging hurdles to overcome.

- **Lack of motivation.** Outside of North America and Europe, most developing markets are still focused on reliability, grid development, and capacity expansion, with considerations about CE and CX remaining secondary, or even tertiary.

Section 3
The Guidehouse Insights Leaderboard

3.1   **The Guidehouse Insights Leaderboard Categories**

Guidehouse Insights scored the vendors in this *Guidehouse Insights Leaderboard* according to four categories: Leaders, Contenders, Challengers, and Followers, defined in the following subsections.

3.1.1   Leaders

Leaders are vendors that scored 75 or above in both Strategy and Execution. These companies have clearly differentiated themselves from the competition through highly-sophisticated capabilities, noteworthy customer bases, extensive product portfolios, and well-reasoned product roadmaps. Leaders are currently in the strongest position for long-term success in the CE and CX analytics market.

3.1.2   Contenders

Contenders are vendors that scored between 50 and 75 in both Strategy and Execution. While these companies have a solid foundation for growth and long-term success, they have not attained a superior position in the market. They are well-positioned to become Leaders, but must differentiate themselves via functionality and portfolio enhancements, cost breakthroughs, broadened geographic coverage, and elevated sales and marketing strategies.

3.1.3   Challengers

Challengers are vendors that scored between 25 and 50 in both Strategy and Execution. While the vendors are fundamentally sound, they face significant challenges stemming from a lack of strategic vision or investments or risks to successful potential execution. Challengers may also be early in their arc of new technology launches, therefore resulting in Execution scores that are based on small numbers of projects.

3.1.4   Followers

Followers are vendors that have failed to distinguish themselves and scored below 25 in Strategy and Execution. These companies are not currently expected to challenge the Leaders unless they can substantially alter their strategic vision and expand their resources. Their long-term viability is in doubt unless systemic changes are made within the organization. No companies scored as Followers in this *Leaderboard*.
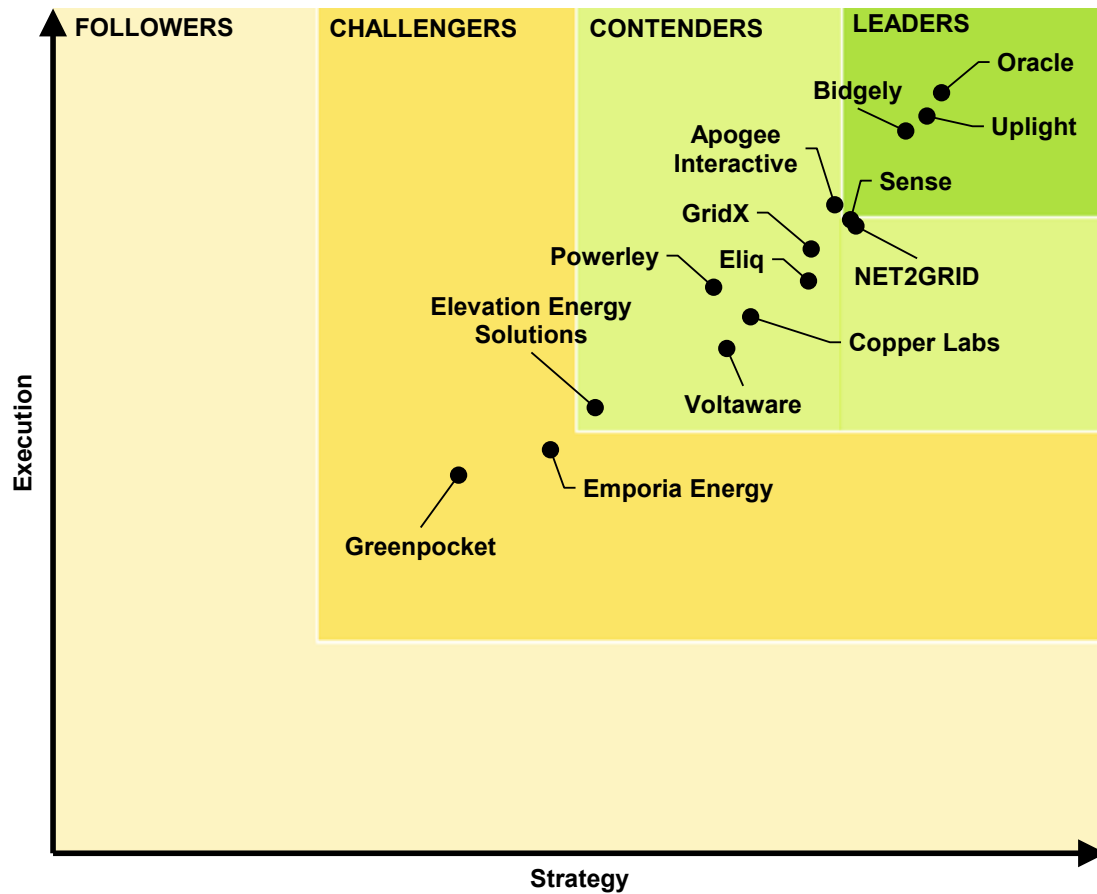
3.2   **The Guidehouse Insights Leaderboard Grid**

Three companies achieved Leader status in this analysis: Oracle, Uplight, and Bidgely. These providers stand out from the competition because of their

sophisticated technologies, holistic application portfolios, sizable customer bases, and broad geographic reach. Nine companies ranked as Contenders: Apogee Interactive, NET2GRID, Sense, GridX, Eliq, Powerley, Copper Labs, Voltaware, and Elevation Energy Solutions. Two companies ranked as Challengers: Emporia Energy and Greenpocket.

Chart 3-1. **The Guidehouse Insights Leaderboard Grid**

(Source: Guidehouse Insights)

Leading CE and CX analytics providers continue adequately differentiating themselves via:

- Superior algorithms and user experiences (UX)

- Holistic application portfolios

- Logical strategic partnerships

- Broadening geographic reach

- Established customer bases

These vendors are mostly standardizing around:

- Software-first strategies (supplanting in-home energy monitors)

- End-to-end distributed energy resources/demand response (DER/DR) program management

- TOU and complex rate analytics

- Grid-edge intelligence

- EV optimization and enterprise wide visibility, such as a single view for the utility, customer, and customer service representative (CSR)

However, no one size fits all. The following company profiles rank the unique differentiators and opportunities for each competitor's enhancements, which rationalize the *Leaderboard* scores.

Section 4
Company Rankings

4.1   Leaders

To qualify for the Leaders category, a company must score 75 or higher in both Strategy and Execution. This *Guidehouse Insights Leaderboard* features three Leaders: Oracle, Uplight, and Bidgely.

4.1.1   Oracle

Overall Score: 87.2

Strategy: 84.4

Execution: 90.0

Oracle, headquartered in Austin, Texas (US), is an enterprise software and IT company with reported revenue of $42.4 billion in 2022. It employs more than 170,000 people globally. Oracle Energy and Water (previously Oracle Utilities) offers a full suite of cloud solutions including IT, OT, and analytics solutions for utilities related to customer care and engagement, metering, work and asset management, grid and network management, and data analytics.
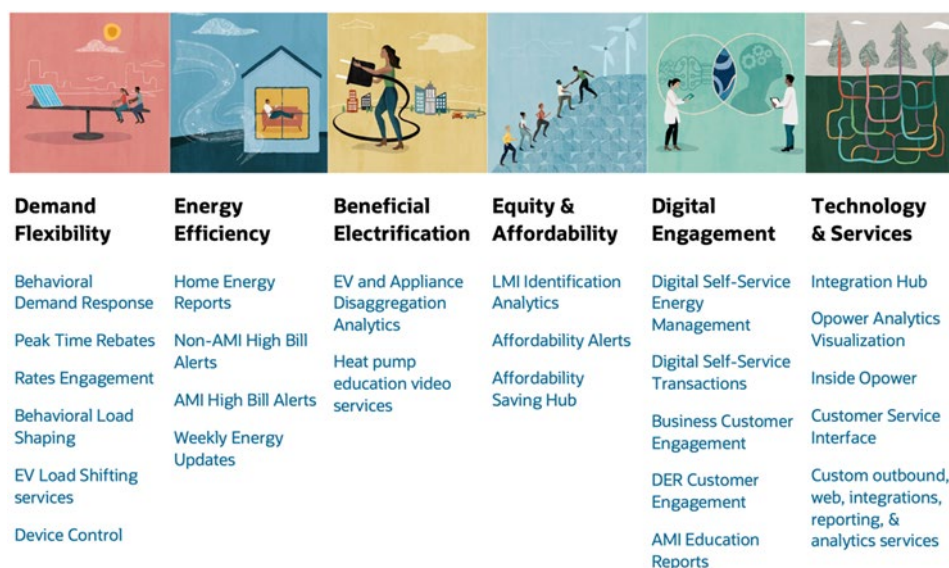
Oracle, which is a pure-play software provider, has been in the utility business for more than 50 years. The company boasts differentiated capabilities in software development, data and model management, cloud services, and more. It is recognized as a well-established leader in the IT and analytics space, and its team of industry experts provides an additional layer of in-house domain knowledge related to relevant marketplace offerings.

Oracle's suite of CE/CX analytics solutions, as well as its DR management capabilities, are in part due to the Opower acquisition in May 2016. At that time, Opower was already serving 100+ utilities and ~60 million meters. Today, Oracle provides Opower products with the cloud technology and operations underlying all Oracle SaaS applications, and develops and supports Opower products with a team of industry experts in utility CE and demand-side management.

The Opower platform powers dozens of products and services used to influence customer action and facilitate improved CE, CX, and CSAT. These services include, but are not limited to, behavioral energy efficiency and DR, peak time rebates, behavioral load shifting, low-to-moderate (LMI) identification analytics, affordability alerts and savings hub, digital self-service transactions, DER CE, AMI CE reports, agent service, sales and key account management, marketing automation, and personalized video and campaign services. Custom solutions are also available through the Opower X professional services practice.

Unlike some competitors, Oracle does not offer marketplace solutions directly; however, this is by design, as the company instead partners and integrates with third-party marketplaces, such as EFI, Resource Innovations, Enervee. Using Opower Integration Hub, utilities can personalize their marketplaces (among other point solutions) and embed them into their web portals.

Figure 4-1.   *Oracle Product Portfolio*

Demand Flexibility	Energy Efficiency	Beneficial Electrification	Equity & Affordability	Digital Engagement	Technology & Services
Behavioral Demand Response	Home Energy Reports	EV and Appliance Disaggregation Analytics	LMI Identification Analytics	Digital Self-Service Energy Management	Integration Hub
Peak Time Rebates	Non-AMI High Bill Alerts	Heat pump education video services	Affordability Alerts	Digital Self-Service Transactions	Opower Analytics Visualization
Rates Engagement	AMI High Bill Alerts		Affordability Saving Hub	Business Customer Engagement	Inside Opower
Behavioral Load Shaping	Weekly Energy Updates			DER Customer Engagement	Customer Service Interface
EV Load Shifting services				AMI Education Reports	Custom outbound, web, integrations, reporting, & analytics services
Device Control					

(Source: Oracle)

With a portfolio of systems across billing, customer, and operations, Oracle has the widest breadth of solutions among its profiled competitors. This offers a differentiated cross-selling advantage given the modularity of its solutions, cost-effective integrations, and extensive IT/OT customer base. For example, native integration between the Opower platform and Oracle NMS DERMS fosters a more holistic platform capable of supporting both grid-centric and customer-centric use cases. Examples are advanced distribution management systems (ADMS) and edge distributed energy resources management system (DERMS), respectively. In doing so, Oracle offers full service from customer to network, identifying DER opportunities, inspecting installations, registering devices, enrolling in programs, and verifying performance.

The company mostly sells its solutions through direct sales channels but can also tap into a broad network of technology partners and systems integrators to facilitate additional sales channels. It has generated one of the largest customer bases in the space and has shown a unique ability to serve both Tier I-II and Tier III-IV customer segments. While most competitors focus their sales efforts exclusively on either large or small to medium sized utilities, Oracle customers span from less than 10,000 meters to more than 5 million.

Oracle also benefits from the most geographically diverse customer base among companies profiled in this *Guidehouse Insights Leaderboard*. It has deployed its customer solutions to 50+ countries around the globe; the majority of its competitors operate in only one or two regions. Its largest footprint is in North America, followed by Europe, Asia Pacific, and the Middle East. Latin America and Africa are the only untapped markets to date, albeit this is expected given low AMI penetrations and unique financial and social challenges.

Insights into Oracle's overall pricing competitiveness are based upon its Go-to-Market, Geographic Reach, Product Performance, and Sales & Marketing takeaways. Its disproportionately large customer base speaks to the company's market competitiveness to date, albeit this is partially due to Opower's early successes. However, given the high number of RFPs bidding for recently awarded projects, Oracle's pricing can be inferred to be competitive or on-par with similar competitors.

Oracle's deep expertise in software development, data and model management, cloud services, and more, aids the company in maintaining strong competitiveness and relevance. This expertise is supplemented by an expansive team of developers and utility experts that provide Oracle with the internal skills and overall subject matter knowledge that will be needed to extend the company's reach across new markets and customer types.

www.oracle.com

Chart 4-1.   Oracle Corporation Strategy and Execution Scores
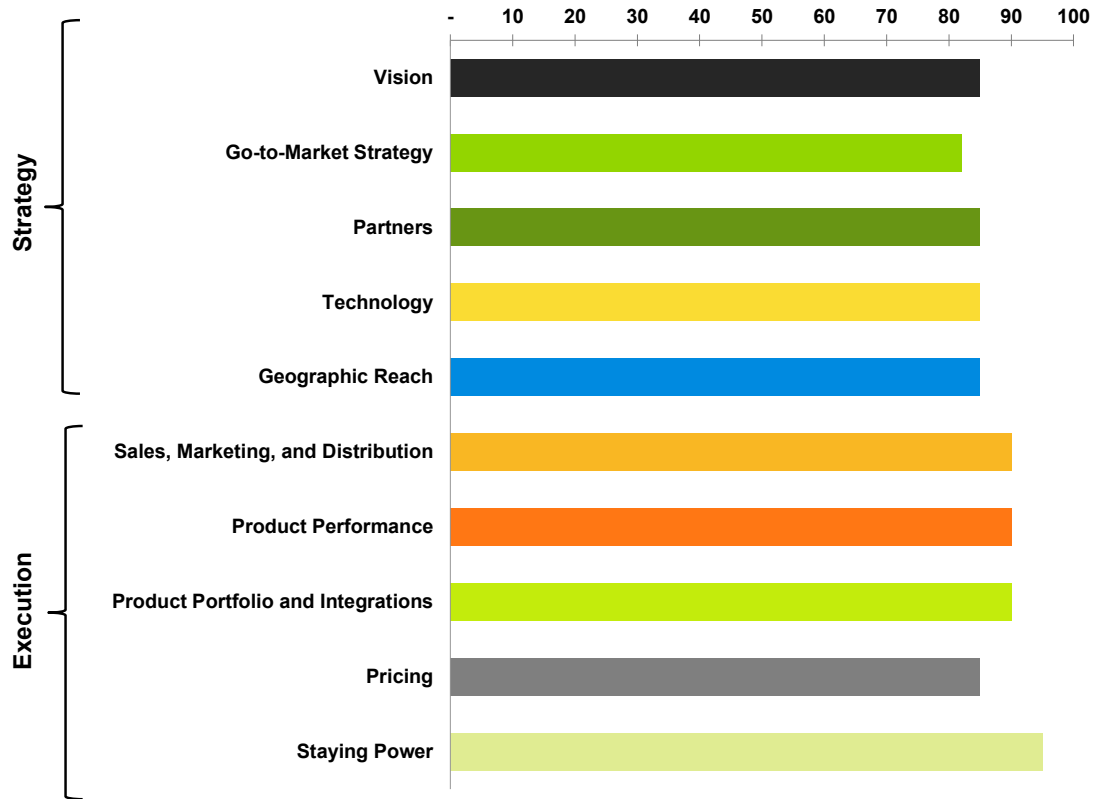
(Source: Guidehouse Insights)

4.1.2   Uplight

Overall Score: 85.2

Strategy: 83.0

Execution: 87.3

Based in Boulder, Colorado (US), Uplight is a privately held utility CE, enrollment,
and load flexibility SaaS provider for energy companies. Formed in July 2019,
Uplight has successfully merged the offerings of several competing companies into
what is now a cohesive whole. This feat would have been impressive on its own,
but the company accomplished this while retaining existing customers and gaining
new ones.

Uplight offers one of the broadest product portfolios among its profiled competitors
(Table 4-1). Its solutions cut across three core products: digital CE, marketplace,
and load flexibility, and include home energy reports, utility marketplaces, web

portals, energy alerts, rate optimization, online energy assessments, voice assistants, next best actions (NBA), and device control (Orchestrated Energy), among many others.

Table 4-1.   ***Uplight Product Portfolio***

Category	Description
Energy efficiency	**Behavioral EE** includes multichannel CE via home energy reports (HERs), usage alerts and updates, and hosted portals. Uplight's NBA engine delivers personalized energy-saving tips and program promotions to each customer based on more than 300 unique customer data points.
	Marketplace is a utility-branded digital storefront with instant rebate processing and bundled enrollment into load flexibility programs (e.g., DR, TOU optimization).
Customer engagement	This includes online portals, high bill alerts, billing cycle updates, and other touchpoints for residential and larger commercial and industrial (C&I) customers.
Rates engagement	These include personalized rate comparisons, what-if analyses, and rate-informed energy usage insights powered by GridX's billing-grade rate engine.
Demand management	Uplight's marketplace and bring your own device (BYOD) programs can be used for targeted web marketing (i.e., customers with a propensity to enroll). Load flexibility includes both DR events and daily load optimization.
EVs	This solution suite integrates EV supply equipment (EVSE)-specific offerings with its marketplace and load flexibility products.
Business customer solutions	With the acquisition of Agentis in 2021, Uplight added CE support for small to medium businesses and larger C&I customers.

(Source: Guidehouse Insights, Uplight)

Underlying this breadth of offerings is the Uplight Data Platform, which cuts across CE, transaction and enrollments, and intelligent grid orchestration to facilitate greater efficiencies and scale. Leveraging an application programming interface (API)-first strategy, a single point of integration, and unified data ingest capabilities enables Uplight to provide a 360-degree view of each customer. The company cites several Product Performance qualifiers and differentiators, such as:

- **BEE programs have delivered noteworthy energy savings at scale.** Across more than 60 measurement and verification (M&V) evaluation reports, Uplight BEE programs consistently met program savings targets and have attained an average savings realization rate of 101%.

- **Hybrid disaggregation model provides accurate and comprehensive end-use disaggregation insights to AMI and non-AMI customers.** Uplight's machine learning model improves over time as more interval usage is

digested; its disaggregation algorithm has also been independently validated for accuracy by both NREL and Pecan Street.

- **Uplight has focused heavily on enabling scalable and seamless DER enrollment.** Over the past two years, Uplight increased the number of managed devices from less than 100,000 to 350,000 (>3x increase). This supplements a 180 % improvement in enrollment rates for the most recent 12 months versus a year prior, with Uplight now supplying, on average, 12 MW of flexible load to the grid every month.

The company also benefits from a strong and growing network of strategy and solution partners. Its overarching partnership with Schneider Electric, which owns 30% of Uplight, provides support from a well-established industry leader and offers technological synergies under SE's Grid to Prosumer approach. The company has also streamlined its software development strategy, focusing in-house development on its core capabilities, and partnering to support use cases that fall outside of traditional focus areas. These include:

- **Qmerit** for marketplace-enabled EVSE installation scheduling

- **GridX** for billing-grade rates engine for TOU/complex rate analytics

- **Rolling Energy Resources** for vehicle telematics

- **UtilityAPI** for Green Button Connect

- **Several DER integration partners**

Uplight's entire software portfolio is SaaS-based, with the majority of its customers using Google Cloud, and some using AWS or Azure. The company generally prices its products on a SaaS basis with some pay-for-performance cost variables based on savings and delivery. Uplight also recently established a professional services group, which enables it to accelerate the scale and standardization of company offerings. Uplight has contracted with 80+ utility clients (~110 million meters), including eight of the top-10 by market value. The company mostly engages with large IOUs (i.e., >100,000 meters) in North America, though it also maintains a small European footprint. Uplight's future success will lie in its ability to extend its Sales & Marketing reach into Tier II-IV customer markets while maintaining its Tier I competitiveness, and broaden its Geographic Reach by tapping into the Schneider Electric resource pool.

www.uplight.com

Chart 4-2.   Uplight Strategy and Execution Scores
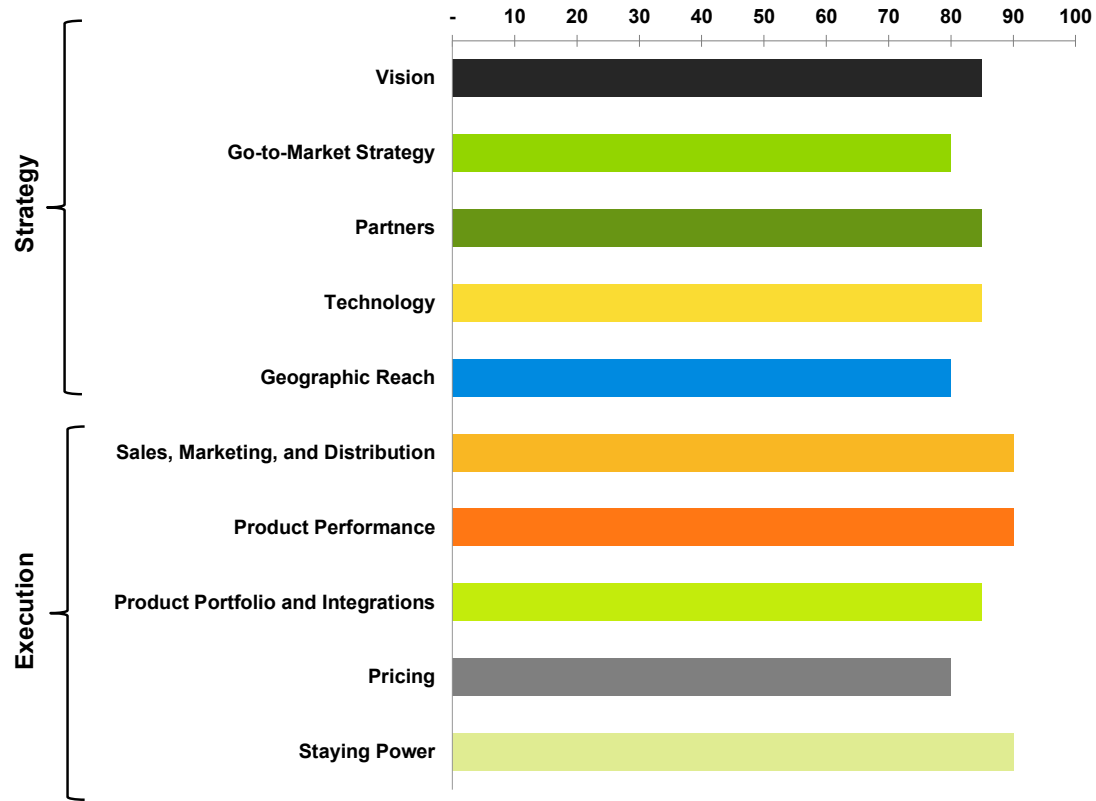
(Source: Guidehouse Insights)

4.1.3   Bidgely

Overall Score: 83.3

Strategy: 81.0

Execution: 85.5

Based in Mountain View, California (US), Bidgely is an energy intelligence SaaS provider focused on helping utilities use disaggregation, data, and AI to achieve their business and grid objectives and engage their customers. Founded in 2011, the company boasts 16 patents (accepted or in-process) for AI-based disaggregation data science.

Bidgely began its foray into the CE/CX space by delivering hyper-personalized energy usage insights and recommendations   to homes with smart meters. It has since broadened its strategic vision in the name of business scalability (gas and water customers, small to medium sized businesses), technological innovation

(dynamic, configurable solutions), and personalized customer journeys. It reports that it is the only vendor in the market today offering AI-based, true disaggregation,[1] citing the static, rudimentary data models (e.g., regression models, physics-based models, statistical analysis) used by other CX vendors as a point of technological differentiation.

Bidgely's UtilityAI disaggregation platform is the core of its entire product suite. Designed from the ground-up using an in-house   rather than bolt-on approach, it delivers personalized insights based on actual customer energy use data, and encompasses products and modules that can be broadly classified into three engagement categories:

- Direct end-customer engagement such as alerts, paper reports, and web

- Call center optimization and support , such as widgets or portal

- Utility platform enhancement, such as widgets and APIs

Figure 4-2.   Bidgely Product Portfolio
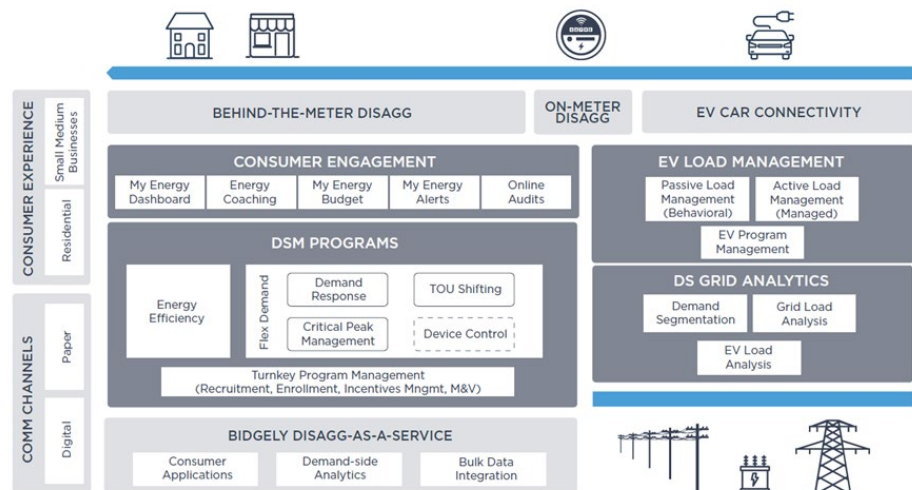
Bidgely's solution stack embeds energy intelligence across multiple applications

(Source: Bidgely)

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[1] *According to Bidgely, "True Disaggregation is the process of breaking down premises-level energy consumption data on a device-by-device (or category) basis to isolate what appliances and energy habits are contributing to the total consumption. Each appliance type has its own unique signature, which is detected by AI algorithms utilizing energy-use data, weather data, and dwelling data to identify and track true customer behavior through their actual appliance usage across time."*

The company has traditionally focused on direct end-customer engagement, including the provision of paper HERs, eHERs, consumer web portals, and call center tools, all of which are described below.

- **Paper HERs**: Bidgely's platform references the customer's unique energy profile/persona(s) and determines which specific features from Bidgely's HER Features Catalog should be included. All paper reports come with an option for the user to scan personalized QR codes for no-login web portal access.

- **eHERs and Smart Alerts**: Utility-branded digital alerts are generated by Bidgely's Next Best Interaction engine[2], including those for EE journeys, CX journeys, EV journeys, and DR journeys. Through a combination of routinely scheduled and dynamically triggered alerts, customers receive tailored insights and recommendations according to their usage and needs.

- **Consumer web portals and widgets**: White labeled solution to engage energy customers with a set of personalized insights, recommendations, and services associated with their energy accounts. Key features include bill itemization, similar home comparison, bill analysis, rate comparison, activity maps, recommendations and savings tips, and built-in engagement reporting. These tools are available as a standalone portal or as widgets that can be integrated into existing customer portals.

- **CARE call center solution**: Available as a standalone portal or embeddable widgets (e.g., Salesforce integration). Bidgely has developed tools to provide call center agents with detailed customer energy use insights to resolve billing, program, and general inquiries. Capabilities include high bill analyzer, co-browsing, enrollment assistance, and engagement history.

Building upon its established positioning in the (traditional) CE space, Bidgely's Analytics Workbench was developed to support utility-side operational use cases. The modular BI tool uses appliance disaggregation algorithms to generate behind-the-meter (BTM) insights in support of a wide range of utility applications, including grid analytics, EV analytics, rate design, load research, soft M&V, and DSM targeting & market segmentation.

Bidgely has been particularly focused on enhancing its EV analytics capabilities, including support for EV-specific behavioral load shifting engagement. This culminated earlier this year with the release of the company's turnkey managed charging offering. Developed as mobile-first and to be integrated, the active,

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[2] *Identifies the optimal energy insights and recommended actions for each customer at a given point in time, delivering combinations of unique insights and actions. A string of "Next Best Interactions" (NBIs) delivered over time through the customer's preferred channels, is what the company refers to as a hyper-personalized customer journey.*

telematics-based managed charging option allows customers to access telematics functionalities directly via email alerts and notifications (without needing to install a separate mobile app). Bidgely reports that its AMI-based targeting and recruitment capabilities are a key differentiator, as it can detect EVs with greater than 90% accuracy and segment EV-owning customers based on their particular charging behaviors.

Bidgely mostly develops, delivers, and supports its products in house. The company does not currently use system integrators or third-party sellers for its standalone products, though it does benefit from several business and technology partners that leverage or contribute to its Go-To-Market, Technology, and Sales & Marketing strategies.

Table 4-2.   *Bidgely Partnerships*

Partner	Description
Salesforce	Integrates Bidgely insights into Salesforce Marketing Cloud and Service Cloud
GridX	Integrates GridX's billing-grade rate engine with Bidgely's disaggregation insights
Kubra	Integrates Bidgely technologies into Kubra operational account management (bill pay, outage management, connects "my account")
EFI	Offers Bidgely enriched marketplace capabilities
Itron	White labels Bidgely's EV and solar detection agents, providing inroads to the nascent second-generation smart meter market
NISC	Provides Bidgely the ability to sell into downstream cooperative markets
Moro Hub	A strategic player in the Gulf Cooperation Council countries of the Middle East, that provides Bidgely with regional market opportunities

(Source: Guidehouse Insights)

Bidgely has contracted with ~40 utility clients (30 active customers) in support of ~30 million endpoints. While most of its customers reside in North America, the company has increased its share of international customers in recent years throughout Europe (Edison, Electric Ireland, Sorgenia, VSE), India (BSES Rajdhani Power Limited), Australia, and the Middle East. Its partnership network, highlighted above, promises to facilitate improved sales opportunities across both international (Moro Hub) and downstream (NISC) markets moving forward.

Bidgely's impressive market traction is partially a function of its nearly unmatched marketing prowess; the company's perceptive approach to promoting brand awareness is one of its greatest strengths. It also reports several notable key performance indicators (KPIs) to illustrate its market competitiveness and viability,

such as 85% (end customer) CSAT, 95% customer retention (which has never been displaced), and +43 executive net promoter score. The company recently announced that it had reached the milestone of helping utilities save 1 TWh of energy through CE programs.

The company cites its technological and performance-based differentiators as rationale behind several brownfield (i.e., conversion) wins. Bidgely reports having replaced or augmented Oracle/Opower (Rocky Mountain Power, Pacific Power, SDG&E), Uplight (Georgia Power, NV Energy), Franklin (Entergy New Orleans), and others over its tenure.

Its pricing model mirrors most of its SaaS competitors in the space, consisting of onetime onboarding and implementation fees, along with annually recurring (per-meter) license fees. While some competitors offer cheaper solutions on a per-meter basis, Bidgely mentions that this has not been a major obstacle in RFP solicitations given its emphasis on technological sophistication and outcome-oriented sales strategies.

www.bidgely.com

Chart 4-3. **Bidgely Strategy and Execution Scores**
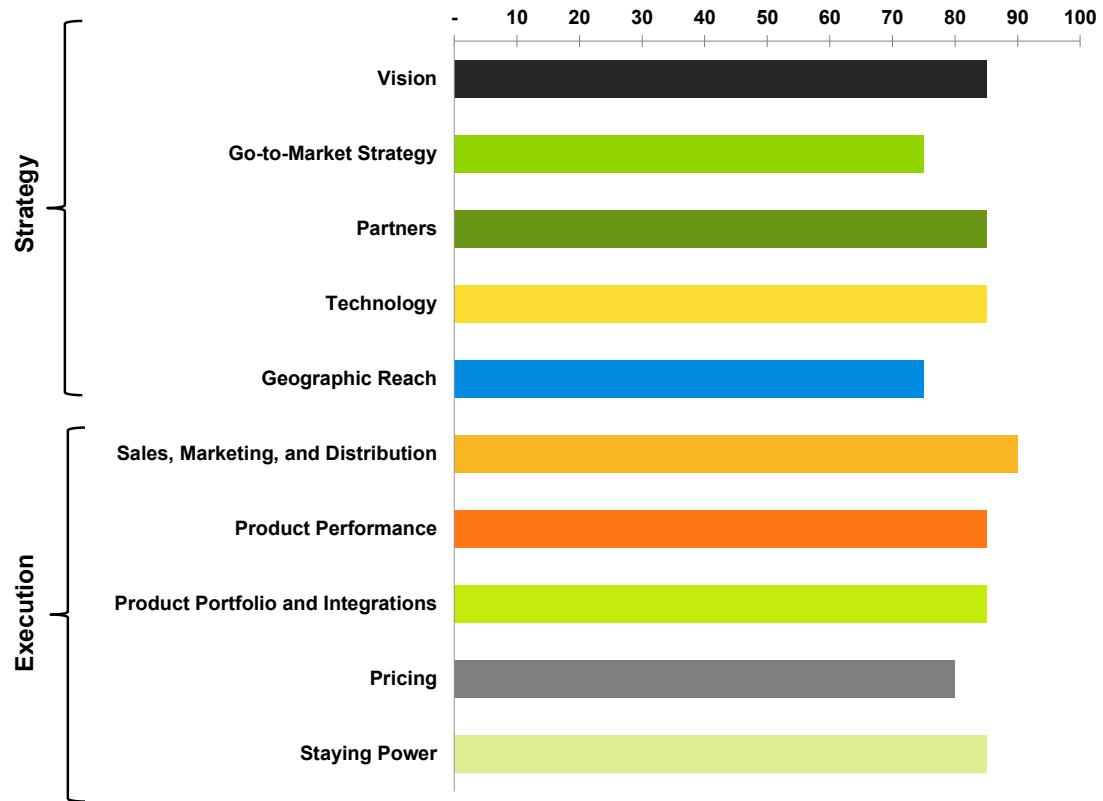
(Source: Guidehouse Insights)

4.2   **Contenders**

To rank in the Contenders category, a company must score between 50 and 75 in both Strategy and Execution. In this *Guidehouse Insights Leaderboard*, nine companies ranked as Contenders: Apogee Interactive, NET2GRID, Sense, GridX, Eliq, Powerley, Copper Labs, Voltaware, and Elevation Energy Solutions.

4.2.1   Apogee Interactive

Overall Score: 75.5

Strategy: 74.3

Execution: 76.8

Apogee Interactive provides web-based energy analysis and CE software for utilities. Founded in 1993 and based in Atlanta, Georgia (US), the company serves hundreds of North American electric and gas utilities with its SaaS-based Empower digital engagement platform.

Apogee's Empower platform covers a wide range of use cases, including online energy audits, virtual energy audits, field audits, personalized video messaging, program promotions, mid-cycle alerts, and interim energy monitoring. These solutions enable residential customers to visualize, manage, and optimize their energy usage via online dashboards and personalized messaging.

Apogee came to prominence in the energy audit vertical using a combination of energy bills, home profiles, and smart meter data (not required but helpful if available) to produce in-depth field audits. The company followed with the development of personalized video messaging, which Apogee notes is a significant step-up from static online or email-based approaches. While its online tools have seen the greatest uptake to date, the company reports a growing number (~40) of personalized video messaging customers.

Table 4-3. **Apogee Interactive's Product Portfolio**

Solution	Description
Envoy	Proactive outbound communication solution that leverages Apogee's proprietary AMES engine, using AI to match programs to customers' needs and deliver personalized messaging
Energy Advisor Enterprise	Flagship home energy calculator that allows customers to assess their energy consumption, so they can immediately discovering specific ways to reduce household energy use
Energy Advisor EPIC	Uses Apogee's analysis engine to target and send customized messages to renters, low income customers, and customers who live in multifamily dwellings
Special purpose calculators	Specific-use applications that analyze a single use of energy in a home, such as appliances or EVs

(Source: Guidehouse Insights, Apogee Interactive)

Apogee manages a growing library of interactive video themes (50) used for explaining energy bills, quantifying savings potential, requesting DR event participation, and providing high and mid-cycle bill notifications. The company also cites differentiated capabilities in its home energy audits, energy analysis engine, bill quantification (e.g., dynamic bill savings estimation), TOU rate comparison, abbreviated bill explanation, and prescriptive energy usage insights. Apogee points to the seamless simplicity of its customer survey for home energy audits when compared to its competitors' solutions. For example, its analysis engine requires less than 12 survey questions to achieve ~90% accuracy in computing energy cost and savings.

Apogee has also developed a rate comparison tool, which is particularly noteworthy given the nascency of, and growing demand for, complex rate analytics. The online applications and personalized videos can show customers what they are likely to save under various alternative rate options.

Apogee's technological prowess was evidenced in the U.S. Department of Energy (DOE) and Lawrence Berkeley National Laboratory's assessment of online energy usage insights and predicted savings. According to Apogee, its tools were rated twice as accurate at predicting costs and savings as the next best-performing software provider. The company reports several notable KPIs to illustrate the efficacy of its underlying technologies, including 15 times higher click-through rates (30 versus industry standard ~2), 15% reduction in high bill calls, 10% increase in program participation via video messaging, and 98% of customers reporting increased (58%) or unchanged (40%) CSAT.

Apogee has attracted ~300 utilities to date, equating to tens of millions of end customers. Both of these metrics contribute positively to its Sales & Marketing

scores. The majority of its customers (~95%) are electric utilities, and range from smaller cooperatives and public utilities to large IOUs. The company reports a growing collection of Tier I wins, such as Xcel Energy, ComEd, ConEd, Exelon, Alabama Power, and Tampa Electric. Apogee scores lower than some of its competitors on Geographic Reach, but this is partially by design given the company's Go-To-Market Strategy.

Apogee boasts an impressive customer retention rate of over 90%, which can be ascribed to its technological prowess, as well as its cost-competitive pricing. The company claims its video messages can be delivered at a fraction of other CE methods (i.e., 1/20th). As long as Apogee maintains the quality, scope, and cost-competitiveness of its offerings, where it scored exceptionally well, it should be well-positioned to maintain its position or move up on a future *Guidehouse Insights Leaderboard*.

www.apogee.net

Chart 4-4.   **Apogee Interactive Strategy and Execution Scores**
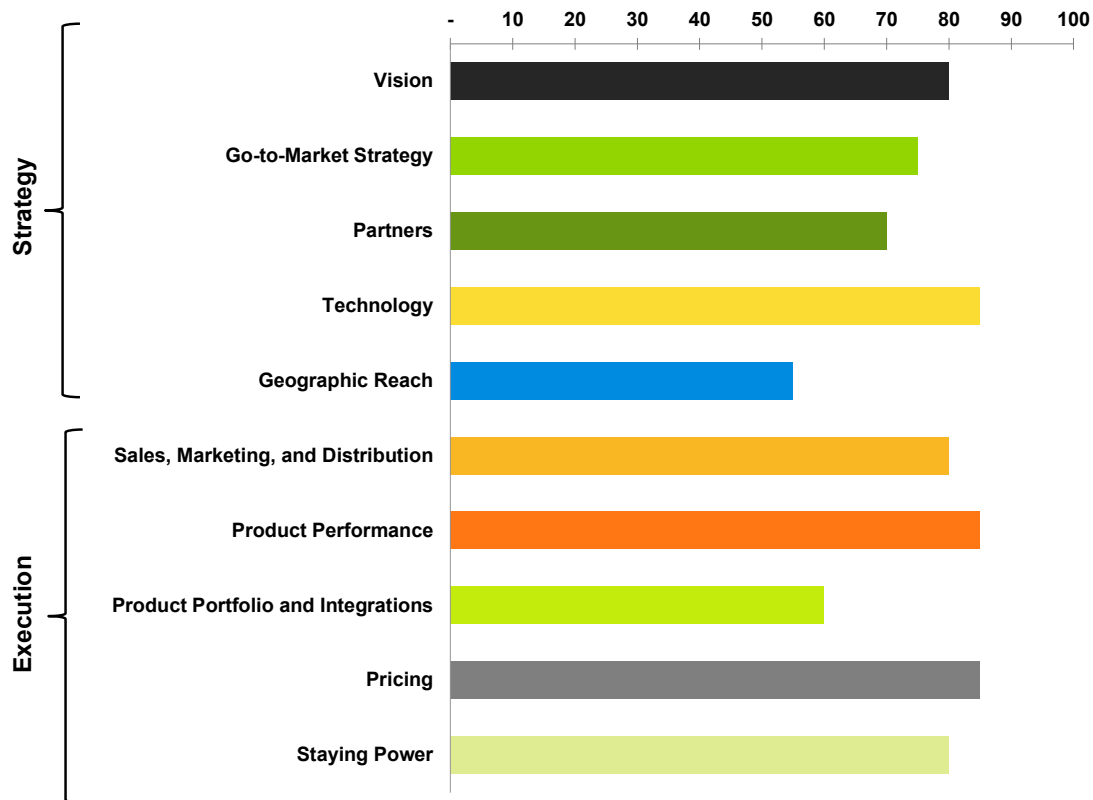
(Source: Guidehouse Insights)

4.2.2   NET2GRID

Overall Score: 75.3

Strategy: 76.3

Execution: 74.3

Based in Zeist, Netherlands, NET2GRID provides energy monitoring hardware and software for electric companies and retail markets. Founded in 2011, the company made its foray into the space with in-house developed, white label hardware aimed at high frequency data capture and analyses. It has since transitioned to more flexible, software-oriented approaches under the banner of business scalability.

NET2GRID offers CE and customer intelligence solutions that inform both end users and energy companies with daily energy insights and daily profile updates for each household. Its solutions are compatible with AMI (15-60 minutes) or near-real-time (1-10 seconds) data sources both on AWS cloud and on-edge-based firmware, using inside-the-meter intelligence (i.e., Itron) or in-house, white label hardware. Among its significant technological differentiators, the company sees its ability to process AMI/meter data management (MDM) data of all granularities (i.e., from sub-second to 60-minute) and to generate customer insights immediately without any end-user profile input. NET2GRID also reports that its API-first approach to hyper-personalized energy insight profiles offers an advantage over white label UX solutions.

The company has elevated its Product Portfolio (see Table 4-4) in recent years to support a broader set of software-oriented use cases, including non-intrusive load disaggregation, smart energy services (e.g., PV monitoring and self-consumption optimization, tariff-based EV charging schedule optimization), and an overall expansion of its business-to-business (B2B) SaaS application suite.

It also offers consulting and test-drive services to ease the complexities of client onboarding. For example, the company's Ynni Living Lab is used to help customers build and pilot their own mobile apps and interfaces in a sandbox environment prior to scaling up to territory-wide deployments.

Table 4-4. *Net2Grid Product Portfolio*

Solution	Delivery Mechanism	Applications & Functionalities
Customer engagement	Business-to-consumer (B2C) API or file exchange	Daily base intelligence reports Monthly benchmark comparisons Monthly savings recommendations Real-time power and energy data insights Real-time energy event alerts
Customer intelligence	B2B API	CE application suite (listed above) for CRM services EV detection (Level 1 and Level 2 chargers) PV production and self-consumption BTM DER capacity and candidate estimations
SmartBridge Energy Readers	Hardware	Granular data capture (1-10 seconds) and on-edge processing Inside-the-device, near-real-time disaggregation algorithms Real-time energy usage insights Compatible with legacy or smart meters (meter-agnostic)

(Source: Guidehouse Insights)

The elevated portfolio complements a series of recent Go-To-Market pivots, including NET2GRID's strategic partnership with Itron for developing localized analytics applications for next-generation smart meters, and expanded customer targets. Other analytics providers are similarly engaged with leading smart meter manufacturers, but NET2GRID was the first to introduce real-time EV detection and interactivity alerts into Itron's Distributed Intelligence meter app store.

The company also boasts unique wins in retail markets; for example, Rabobank NL, a Dutch financial services company, integrated NET2GRID energy insights into its mobile banking app to give end users visibility into their energy usage. The company reports increased interest from these non-traditional customer segments (e.g., telco, OEMs, and smart home providers) and is aiming to capitalize as an early mover among its competition.

NET2GRID has attracted over 15 utility clients to date, including E.ON, EDP, and EDF, with over half of these customers signing within the past two years. While some competitors can cite larger customer bases in total, the frequency of recent wins and 100% customer retention rate act as positive contributors to NET2GRID's Sales & Marketing score.

The company also trails in terms of high volume Tier I wins; however, it has shown strong competitiveness in Tier II-IV markets. The majority of its customers reside in

Europe, though the company has made recent inroads in North America and Asia
Pacific in an effort to expand its Geographic Reach.

www.net2grid.com

Chart 4-5.   NET2GRID Strategy and Execution Scores
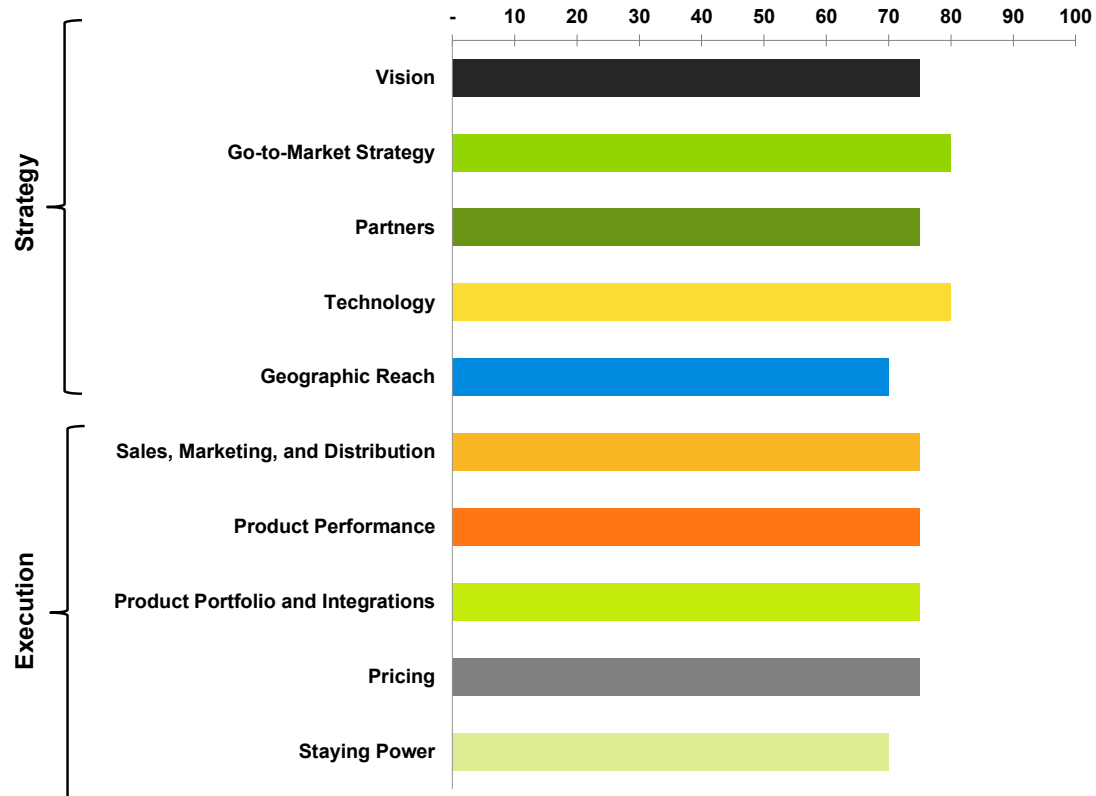
(Source: Guidehouse Insights)

4.2.3   Sense

Overall Score: 75.4

Strategy: 75.8

Execution: 75.0

Based in Cambridge, Massachusetts (US), Sense was founded in 2013 and
provides home energy monitoring hardware and software under both B2C and B2B
business models. The company is currently focusing on its value as an
edge-computing software provider. The privately company employs approximately
140 people.

Sense entered the energy management space by selling its in-home monitoring hardware to end customers under a pure-B2C business model. The device (and associated mobile app) collects high resolution waveform data to detect energy consumption at the device level from the electric mains, and can be supplemented with information from smart plugs, connected lighting, and solar inverters. The basic Sense package retails for about $300 and the offering for homes with solar PV sells for $350.

From a software perspective, most of Sense's CE/CX functionality resides in its native mobile app; it also has a web version. The company has not historically invested in web portals under the assumption that customers do not use these tools very often, so it is not the prime vector for engagement. The company notes that static data is insufficient for fostering true engagement, and instead opts for real-time, interactive views on energy usage and cost insights.

In an effort to scale its business, Sense has partnered with multiple solution providers under B2B business models. Most notably, Landis+Gyr is embedding Sense's software directly into its next-generation Revelo smart meters. Sense has similarly integrated its application into Schneider Electric's Square D Energy Center energy monitors, along with building out its network of aggregation and settlement partners (e.g., OhmConnect). The bulk of Sense's business today and moving forward will be via software-based strategic partnerships.

Sense is building on its early partnership with Landis+Gyr, having recently announced a new partnership with Itron. While Sense will continue to offer its flagship in-home energy monitors, the focus of the business is transitioning to embedded software in next-generation smart meters. The company is also in active discussions with other AMI providers.

While Sense has traditionally employed a direct sales approach for its in-home energy monitors, its metering partnerships (Landis+Gyr, Itron) will act as the primary sales channels moving forward. Notably, while other third-party analytics partners can access L+G and Itron ecosystems and their high resolution data streams, Sense is building its software directly into edge intelligence cards, that is, every meter has Sense's core software stack sitting on top of it. Then the utility can decide which apps to purchase and deploy.

Because Sense has access to extremely high resolution data in the home, it can identify disturbances, motor stalls, or even more complex safety and home health use cases. In identifying situations such as power quality disturbances in the home, it can assess related grid-based issues like transformer failure. The company reports significant interest in operational use cases like asset performance management and power quality analysis, and sees growing interest from ADMS providers for possible integrations. For example, Sense has ongoing

pilot work with Portland General Electric and Southern Company on power quality use cases.

While Sense has historically operated exclusively in North America, its metering partnerships are fostering a global Sales & Marketing strategy. While the company maintains a North American bias, it has been active in Europe and Asia Pacific, recently announcing a partnership with EDMI, an Australian metering company. While its customer base is limited by the nascency of the metering partnerships themselves, Sense reports ~6 million meters under contract. The company is fully contracted with National Grid's three million customers in Massachusetts and New York, including a combination of data service subscriptions and consumer mobile apps. It has also been in discussions with some smaller customers; downstream competitiveness will benefit from L+G and Itron's base of Tier III-IV customers.

Sense charges an annual SaaS fee for its data subscription model (based on which APIs are in use). Pricing is fixed regardless of utility size, though it does offer volumetric discounts tied to the number of purchased services. Sense does benefit from one unique pricing advantage: it bundles SaaS contracts with meter expenditures to minimize traditional regulatory barriers, such as accounting rules. Sense also leverages its real-time mobile experience to drive performance-based revenue in utility energy efficiency and demand flexibility portfolios, as well as in market-based virtual power plant (VPP) partnerships.

Sense is realizing its vision by investing significant capital in transmission and distribution and engineering work on the path to software-enabled smart meters. It received an injection of $130 million last year, which contributes positively to its *Staying Power* score. Most of this investment is being allocated to R&D and data science enhancements.

www.sense.com

Chart 4-6. **Sense Strategy and Execution Scores**
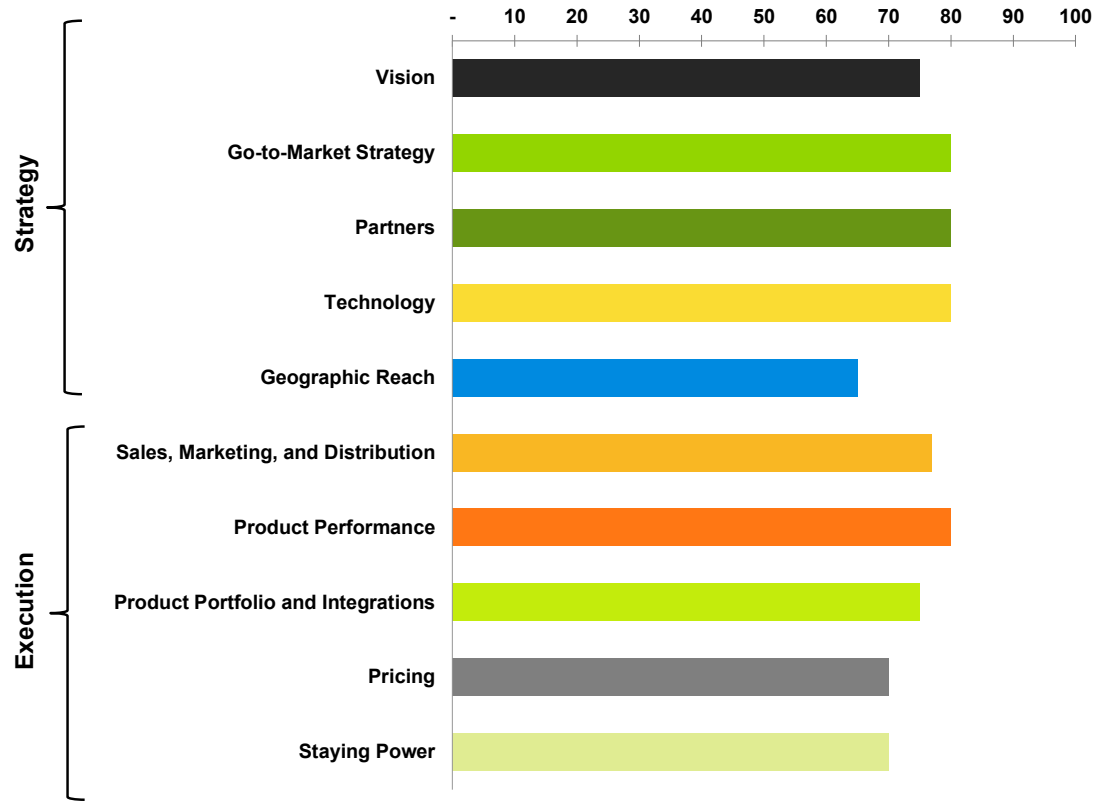
(Source: Guidehouse Insights)

4.2.4 GridX

Overall Score: 71.8

Strategy: 72.0

Execution: 71.5

Founded in 2010, GridX provides complex rate analytics to electric utilities and energy companies. Based in Walnut Creek, California (US), the SaaS company specializes in rate design and analytics, customer marketing and conversion, customer service, and add-on billing. GridX is building on its early success as a standalone analytics supplier by partnering with an array of software providers to facilitate greater Sales and Go-to-Market channels.

GridX's Enterprise Rate platform consists of four product categories and eight unique solutions. Each of the primary coverage areas noted above includes two use-case-based applications, shown in Table 4-5. GridX mostly delivers its products as cloud-based software and via a set of APIs that integrate with customers' or partners' existing infrastructure and applications, though it can also design and build custom widgets under a no/low-code approach, which is a single line of code approach.

In terms of Go-To-Market Strategy, GridX benefits from its partner-based approach, albeit with limited international and Tier II-IV market footprints to date. Most of its wins have been the product of direct sales channels in North America, however, burgeoning cross-selling opportunities also influence the company's Go-To-Market Strategy score, as well as its Partners, Sales & Marketing, and Staying Power scores.

Table 4-5. **GridX Product Portfolio**

Category	Solution	Description
Rate design and analytics	*Design*	Develops and tests modern rate plans that incentivize desired customer behavior, enhance grid reliability, prevent revenue erosion, avoid customer rate shock, and improve rate case outcomes
	Analyze	Runs full-population, billing-quality analytics on current and proposed rate scenarios to identify customer impacts, inform personalized marketing campaigns, and drive enrollment in rates and programs
Customer marketing and conversion	*Empower*	Gets the attention of busy customers by embedding highly accurate cost insights into existing utility marketing content, or into leading third-party engagement tools
	Explore	Provides end users with tools to visualize and bundle clean energy options, such as eVs, solar, storage, and communicates the cost impact of their choices
Customer service	*Key account managers*	Enables key account managers to discover the optimal rate for their largest accounts and perform real-time scenario and usage-based bill and cost analyses
	Customer service reps	Enables customer service reps to perform real-time ad hoc rate analyses to answer questions about rates, pricing, bills, and costs
Add-On billing	*Calculate*	Enhances legacy CISs by automating the process of billing modern rates, which is often manual
	Balance	Uses smart meter interval data to account for unbilled revenue on a customer-by-customer basis

(Source: Guidehouse Insights)

GridX benefits from its bold, non-traditional approach to demand-side flexibility. While its competitors report that they offer utility-, CSR-, and customer-facing rate insights, GridX is unmatched in the breadth of its supported use cases and rate structures, such as TOU, DR, real-time pricing, and EV.

This variety has spawned a surge in partnership interest from traditional DSM providers, many of which lack basic rate analytics capabilities. The coalescence of growing demand and a paradigm shift to partner-based approaches has facilitated this uptick in merger and acquisition activity. Table 4-6 highlights a subset of these recent engagements.

Table 4-6. **GridX Partnerships**

Partner	Date Announced	Description
Bidgely	August 2023	Bidgely is using GridX technology to enhance its platform with rate comparison tools, what-if analyses, and rate design functionality.
Sense	May 2023	Sense is using real-time, localized, dynamic pricing data to enhance its energy usage insights.
Smart Energy Water	November 2022	SEW is integrating cost information into its Smart Customer Mobile platform to deliver rate-based customer insights.
Questline	October 2022	Questline Digital is integrating cost insights into its engagement strategy solution to facilitate personalized rate plan campaigns for customers.
Uplight	May 2022	Uplight is using its billing-grade rate modeling engine and cost insights to improve customer communications strategies.

(Source: Guidehouse Insights)

GridX reports 26 million meters currently under management. The company has shown impressive year-over-year growth, adding approximately nine million meters—a compound annual growth rate of 23.4%—between mid-2021 and 2023. Its customers are mostly large IOUs, and include PG&E, PSEG Long Island, Consumers Energy, Avangrid, Southern California Edison, SMUD, Xcel Energy, Puget Sound Energy, Evergy, Eversource, and Southern Company. While GridX could improve its Staying Power score relative to others, it benefits from strong financial backing of ~$50 million to date, limited competition, and a growing portfolio of technology- and sales-oriented partnerships.

www.gridx.com

Chart 4-7.   GridX Strategy and Execution Scores
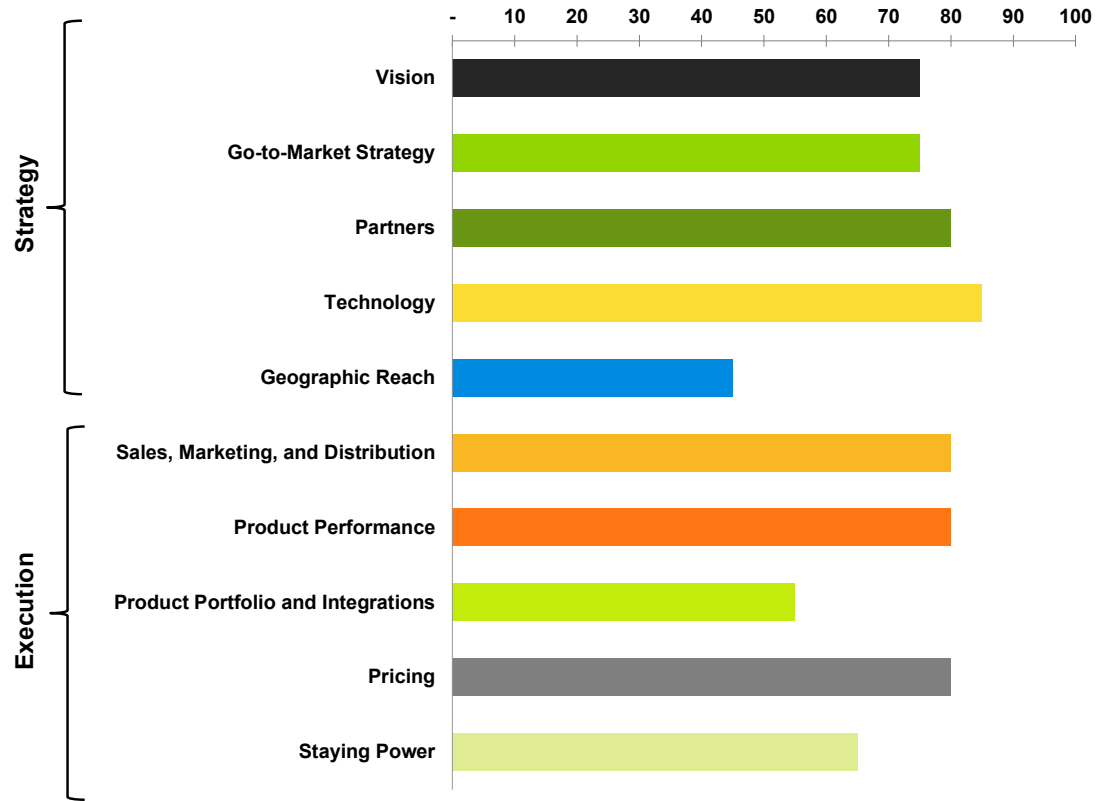
4.2.5   Eliq

Overall Score: 69.8

Strategy: 71.8

Execution: 67.8

Based in Göteborg, Sweden, Eliq was founded in 2015 and provides residential
and commercial CE/CX software to electricity, gas, and district heating customers.
The company has attracted 35 utility customers in 14 countries, most notably Total
Energies and Fortum. Eliq benefits from strong CSAT, established case studies,
and a growing portfolio of supported use cases.

Eliq employs a product-centric strategy based on in-house software development.
The company's energy monitoring platform features a collection of
customer-centric applications, including appliance-level usage insights (using its
in-house disaggregation algorithms), comparative (i.e., neighbor) analyses,

consumption forecasting, and usage anomaly alerts. It can also quantify energy savings estimates and deliver prescriptive insights through its Energy Advisor tool. These applications are primarily delivered through API integrations, though it also offers embedded white label components and standalone apps that can be rapidly deployed, particularly for smaller utilities.

While Eliq trails some of its competitors in the breadth of its product portfolio, (e.g., DER/DR program management), it has expanded its functionality in recent years to support environment, social, and corporate governance reporting and PV disaggregation use cases. The company views the latter as a key technological advantage in the market given its ability to parse out solar PV generation and consumption accurately.

Eliq cites several notable KPIs as a function of its energy monitoring platform. It claims differentiation in its end-customer value, citing lifetime-customer retention rates of ~72% among all users of its platform, and average energy savings of 6.8% across multiple countries and years.

The company mostly leverages direct sales channels, but has also partnered in an effort to expand its Go-To-Market reach. For example, Eliq provides its disaggregation capabilities to Schneider Electric for use in its smart energy management solutions, and is engaged with Microsoft and SAP under co-selling partnerships, the latter of which is still in the integration partnership stage. These complement Eliq's existing B2B reseller partnership with SMS, the largest smart meter operator in the UK. The company's Go-To-Market flexibility extends to its support for homes with or without smart meters, as well as circuit-level home energy monitors for real-time data collection.

Eliq's majority European customer base is rather top-heavy, though the company has also demonstrated its ability to support low and mid-market (i.e., 10,000 meters) utilities. Eliq reports high CSAT evidenced by its low churn rate—outside of a few unique exceptions, one being UK consolidation.

Eliq employs a traditional SaaS pricing model, with a fixed monthly fee and variable per-meter fees based on the suite of selected APIs, in addition to pay-for-performance options. While the company does not claim to offer the cheapest solution in the market, it cites its strong returns on investment, data science expertise, and purpose-built solutions as key rationale for recently awarded wins.

www.eliq.com

Chart 4-8. *Eliq Strategy and Execution Scores*
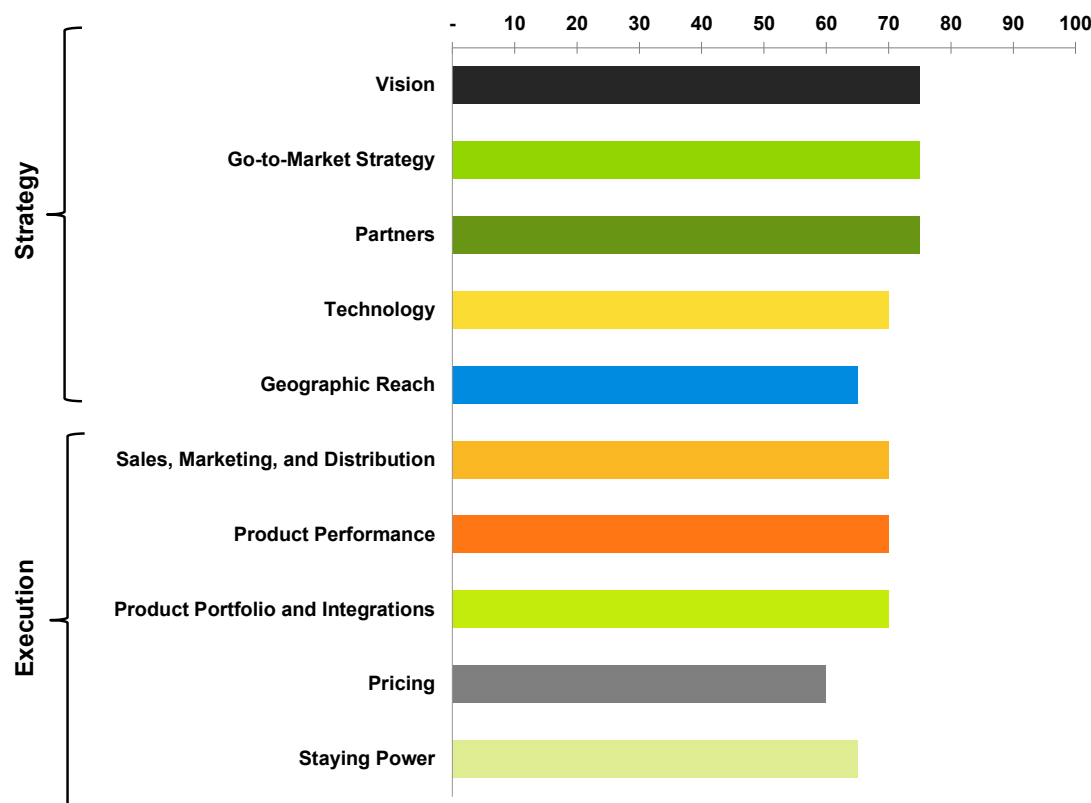
(Source: Guidehouse Insights)

4.2.6   Powerley

Overall Score: 64.9

Strategy: 62.8

Execution: 67.0

Privately held Powerley was founded in 2015 through a JV between DTE Energy
and technology company Vectorform. It provides home energy monitoring
hardware and software using both B2C and B2B models. Headquartered in Royal
Oak, Michigan (US), the company employs approximately 50 people.

Powerley offers three levels of its energy management platform. The entry level
offering, Lite, is a mobile app that provides energy usage information for
homeowners. The Live and Link offerings include the Powerley Energy Bridge, an
in-home energy monitor that facilitates real-time data collection and insights
delivery. This legacy device has been supplanted by the company's Powerlync

product, which is set for production early next year and comes at a dramatically lower cost than traditional hardware. It can connect directly to smart meters, so it does not require CT clamps or connection to circuit panels.

Figure 4-3.   Powerley Use Case Portfolio by Product

Use Case	Lite	Live	Link
Energy visualizations	◑	●	●
Budget management	●	●	●
Personalized coaching		●	●
Disaggregated breakdowns	◑	●	●
Bill pay and outage maps	●	●	●
Advanced rate management	◑	●	●
DER management		●	●
DR management		◑	●
Smart home control and automation			●
Voice control			●

(Source: Guidehouse Insights, Powerley)

The company is strategically bifurcating into two focused product offerings: pure software and hardware-plus-software. This enables Powerley to target under-engaged customers with software tools to help manage bills, increase CSAT, and reduce the cost to serve, among other benefits. For customers who want to be more actively engaged with their utilities and energy usage, real-time data streams offer more granular, prescriptive insights and advanced use cases.

Powerley cites its extensive user interface and UX development, high CSAT (75%-80%), and high accuracy disaggregation (99.8%) as its key differentiators, with ongoing investment aimed at smart HEM and minimizing consumer requirements. Powerley was also one of the first among its competitors to develop rate-based analytics functionality, including TOU comparison, bill quantification, and prescriptive insights to optimize usage based on the rate type. The company benefits from its early foray into this space to hedge against HEM market maturity.

Powerley is moving to make its products more flexible and embeddable in utilities' mobile applications—white labeling—and has broadened its portfolio of service offerings via API touchpoints and support for web-based experiences. It is also leveraging in-home connectivity, such as the ability to detect outages in real time, to develop more utility-facing use cases. Lastly, it is exploring engagement opportunities that next-generation smart meters and grid-edge intelligence, though this is at an early stage.

Powerley mostly employs direct sales channels, though the company has been vocal about ongoing discussions with potential technology partners that could extend its Go-To-Market reach. Other relevant partners include meter manufacturers and DERMS providers, with Powerley acting as the sub-aggregator.

Powerley has 10 utility customers, with five to six million meters, and reports approximately 500,000 active application users. Its customer base primarily consists of IOUs, though it has worked with a few smaller cooperatives and municipalities. The company has deployed its product throughout multiple territories in the Americas, and has had pilots in Europe and Australia. It also reports small scale activity throughout Latin America and the Caribbean. As the company looks to scale, it has identified Australia and the Middle East as future targets.

It employs a standard SaaS pricing model with volumetric discounts. Its software-only package costs a few dollars per meter per year, while real-time insights are more in the range of $20 to $30 per meter. In terms of its Staying Power score, its flagship customer, DTE, is also an investor in the company, which provides an additional element of fiscal protection.

www.powerley.com

Chart 4-9.   Powerley Strategy and Execution Scores
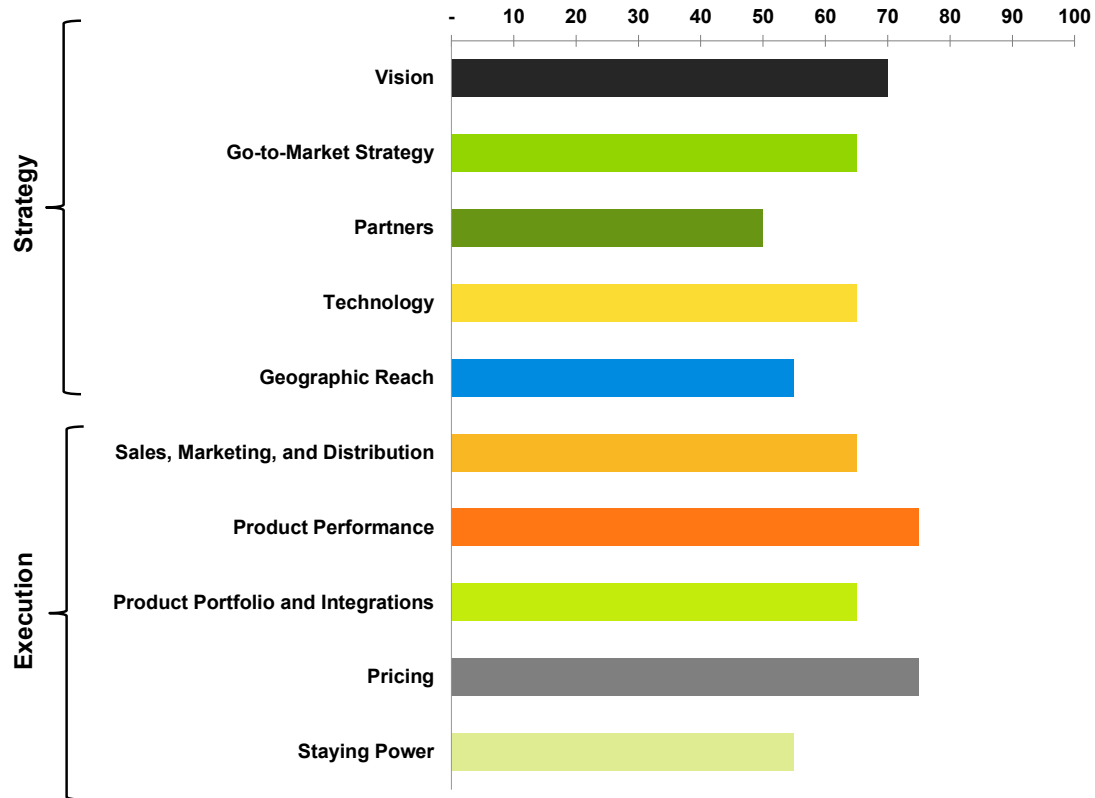
(Source: Guidehouse Insights)

4.2.7   Copper Labs

Overall Score: 64.9

Strategy: 66.3

Execution: 63.5

Based in Boulder, Colorado (US), Copper Labs provides energy and water management hardware and software for electric, gas, and water utilities. Founded in 2016, the company focuses on real-time grid intelligence and is building upon its success in selling in-home hardware with a new outdoor, neighborhood-level solution that aims to compete with second-generation smart meters.

Copper Labs began its foray into energy management with a small in-home device designed to access consumption data remotely and in near-real-time, paired with a customer-facing mobile application. The meter-agnostic device has since been complemented by the development of pole- or rooftop-mounted devices that

perform the same function across hundreds of automated meter reading (AMR) meters. The new specialized hardware device sits at the neighborhood-level, rather than at the building-level, and enables near-real-time grid-edge intelligence at a significantly lower cost than next-generation smart meters. For example, while its in-home energy monitors sell for $99 per unit (plus a SaaS fee of $1 per meter per month), neighborhood-level collection devices are expected to cost ~$10 per home, a fraction of the cost.

Copper Labs' new solution leverages ubiquitous broadband to resolve the bandwidth and latency issues found with mesh networks. This allows the company to scale its solutions without the need for in-home hardware or reliance on consumer Wi-Fi networks. One benefit over inside-the-meter intelligence is the ability to support customers without reliable Wi-Fi in their homes. The company's vision supports its claim that first-generation AMI deployments have largely failed to deliver sufficient value, face an ever challenging mesh network latency problem, and often reduce the effective useful life of metering infrastructure. It instead suggests that utilities opt for more simplistic, low cost meters upon replacement and leverage the cost efficiencies of its hardware offering, particularly considering the frequency of challenging rate petitions.

Moving forward, the company is exploring the art of the possible in developing new and compelling use cases, such as identifying inefficient HVAC. It currently supports real-time voltage detection, which supports conservation voltage reduction, and voltage monitoring. The company sees itself as moving beyond simply selling into DR programs to grid modernization, decarbonization, and customer equity opportunities. Further, it is actively developing short-term load forecasting capabilities, as well as billing forecasts that correlate with weather forecasts. Lastly, the company has a patent on outage detection, among a range of other data services.

While the nascency of its new product offering does impact its Sales & Marketing scores, the Vision and Technology underlying the proposition are sound and logical. The company will inevitably face competitive challenges from Itron, Landis+Gyr, and others; its future success will lie in its ability to target and educate customers and regulators proactively about the value of its solution relative to next-generation smart meters.

The company remains mostly focused on North America given the large installed base of AMR meters and future potential in the AMI space. While the number of in-home device customers is unavailable, its neighborhood-level collector has attracted the interest of multiple IOUs, such as National Grid. The company has only churned one small utility pilot customer, though the product's nascency should be noted in this context.

www.copperlabs.com

Chart 4-10.   Copper Labs Strategy and Execution Scores
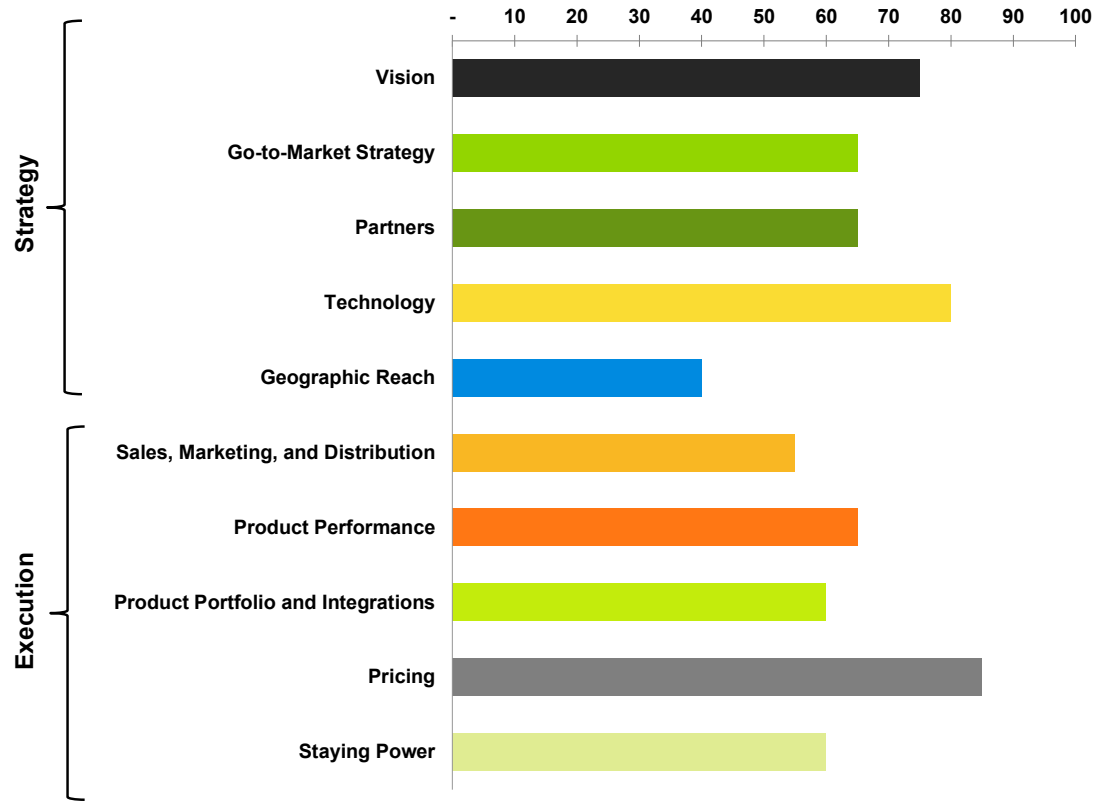
(Source: Guidehouse Insights)

4.2.8   Voltaware

Overall Score: 61.9

Strategy: 64.0

Execution: 59.8

Established in 2014, Voltaware offers energy intelligence solutions to electric utilities throughout Europe. Based in London, UK, the company was founded on delivering high resolution, appliance-level insights, but has perceptively pivoted by supplementing its Consumer Access Devices (CADs) with support for low resolution insights, without the additional hardware requirement.

Voltaware supports energy efficiency, predictive maintenance, safety and security, and TOU and complex rate analysis via its in-house disaggregation algorithms and IRIS energy management platform. The company's primary business model is B2B sales with energy providers and utilities, though it also has a B2C (in-home

energy monitor) offering in the UK in conjunction with Octopus Energy. Further, the company is actively exploring edge-based partnership opportunities under the banner of business scalability, such as with meter manufacturers in Asia Pacific and Central Europe.

For homes with smart meters, Voltaware accesses this data via APIs. For smart meter customers who demand real-time insights, it sells third-party CAD devices under a plug-and-play architecture—maintaining partnerships with CAD manufacturers throughout Europe. In the future, it may explore manufacturing its own CAD hardware, but will likely rely on established partnerships in the near term. Other areas of exploration include analytics for dynamic tariffs and grid flexibility, both coupled with real-time disaggregation.

The IRIS platform can deliver insights based on 10-second (or higher) data intervals. It is delivered almost exclusively as a white labeled product with utilities integrating select applications in their client-facing apps. In cases where a utility does not have an existing mobile app, Voltaware can help develop one. The company does have a subset of customers that are not white labeled.

Voltaware has contracted with more than 20 utilities and 250,000 endpoints. The majority of these customers are using interval-based AMI data under a software-oriented approach. The company operates primarily in Europe, including UK, France, Italy, Spain, Greece, and Denmark. It reports near- to mid-term ambitions in the UAE, and longer-term ambitions of entering the US market.

Voltaware employs a traditional SaaS pricing model, which typically costs a few pounds per year (based on temporal parameters). It also offers volumetric discounts and a non-traditional, white labeling pricing model that may offer it an advantage over its competitors, which charge large upfront platform development fees.

www.voltaware.com

Chart 4-11.   Voltaware Strategy and Execution Scores
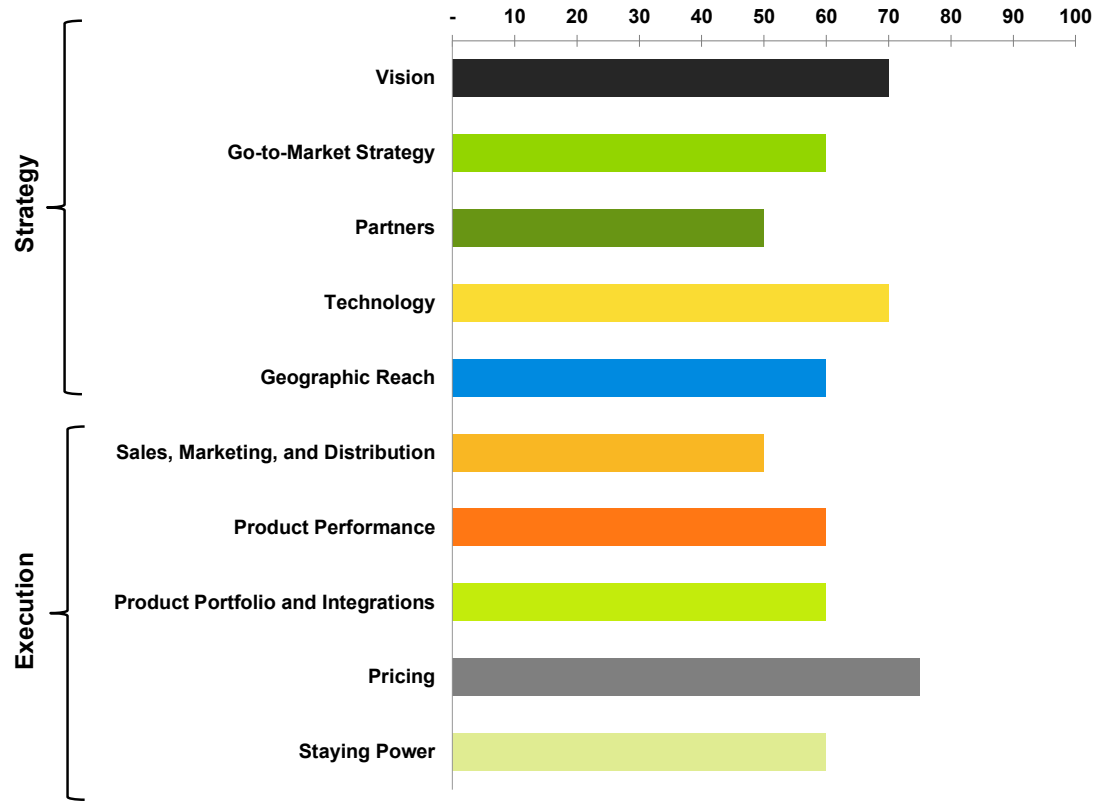
(Source: Guidehouse Insights)

4.2.9   Elevation Energy Solutions

Overall Score: 52.1

Strategy: 51.5

Execution: 52.8

Founded in 2014, Elevation Energy Solutions offers solar panels, home energy
storage systems, energy efficiency retrofits, and energy management platforms to
homeowners, institutional operators of single-family rental properties, and utility
providers. Based in Chandler, Arizona (US), the privately held company has more
than 200 employees.

Elevation made its foray into this space as a residential energy solutions contractor
and was named Contractor of the Year by the DOE from 2019 to 2021. It has since
expanded its Product Portfolio and Go-To-Market Strategy by acquiring Curb
Energy in 2020, an energy management hardware and software provider. The

combination of solar, energy efficiency, and smart energy management is a unique business model among its competitors profiled in this *Guidehouse Insights Leaderboard*. The integrated solution offers customers insights on their home energy usage, as well as comparative data for similar homes.

The CURB offering is different from other home energy monitors in that it uses up to 18 sensors for submetering major home appliances. Data from the device enables homeowners, landlords, and utilities to implement continuous VPP solutions, as well as to engage in advanced demand management and HVAC predictive analytics. The company views its hardware offering as a throughput to future value-added services sales. It is, however, expensive compared to its competitors, selling for $650 per unit, along with SaaS fees of $5 per month.

In employing a direct measurement approach, Elevation offers greater data accuracy than its disaggregation-based counterparts. While these competitors hold an advantage because they can scale more quickly, Elevation can deliver near-perfect insights by not having to rely on algorithmic models. The company views its revenue-grade accuracy as a critical differentiator. Furthermore, Elevation has built cellular communications into its devices with redundant Wi-Fi.

The company employs direct sales channels, as well as a network of indirect channels, such as roofing companies and HVAC companies, which complement a handful of utility partnerships. Curb has deployed 150,000 appliance-level sensors on HVAC, solar installations, stovetops, and so forth.

Elevation benefits from its unique Go-To-Market play for rented premises such as apartments. It is addressing tenants' inability to install smart thermostats, EV chargers, and solar energy directly, by partnering with six of the top landlords in the US. Under these engagements, Elevation is installing customer-sited DER and providing landlords with ancillary revenues from DR aggregation and optimization. The company has developed its own algorithm to help aggregate DR resources on behalf of utilities, and can also integrate into third-party systems. One example is EnergyHub.

The company focuses its Sales & Marketing efforts mostly in select areas of the US and has aggressive plans to expand distribution in areas that it does not serve. While international expansion is not a near-term objective, device compatibility presents viable market opportunities moving forward. Unlike its profiled competitors such as Sense, the company's hardware works in North America and Europe.

www.poweredbyelevation.com

Chart 4-12.   Elevation Energy Solutions Strategy and Execution Scores
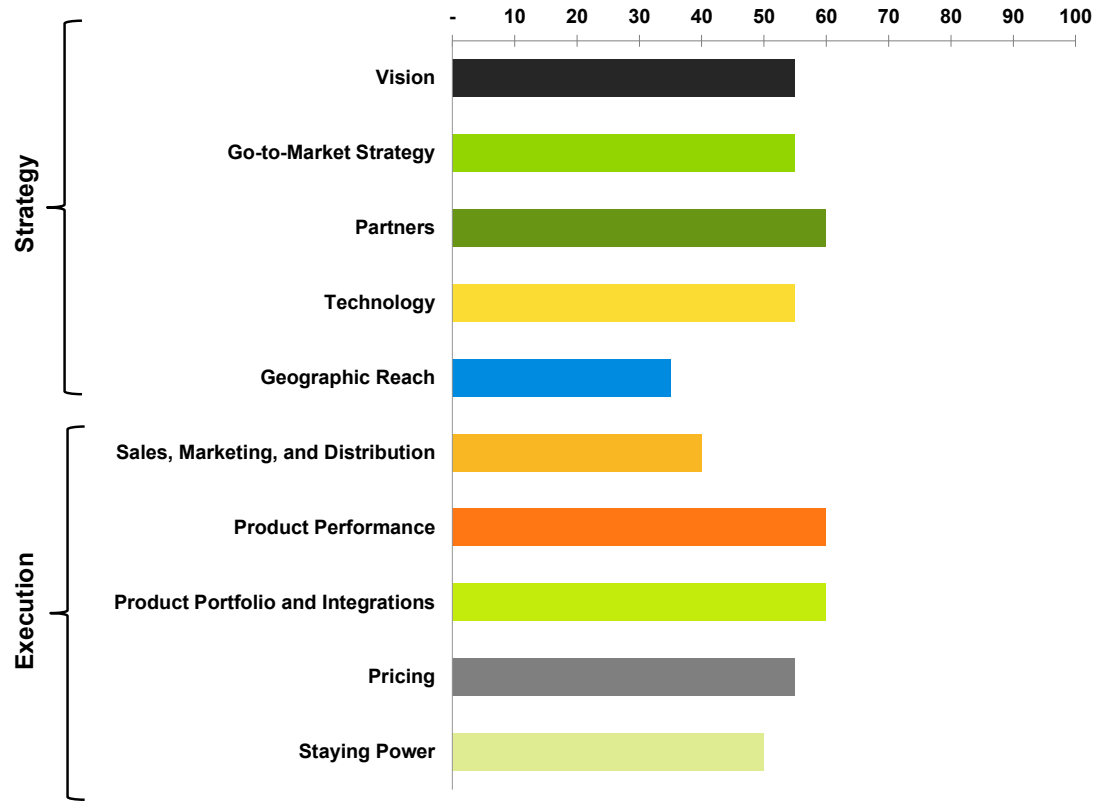
(Source: Guidehouse Insights)

4.3   Challengers

Challengers are vendors that scored between 25 and 50 in both Strategy and Execution. In this *Leaderboard*, two companies ranked as Challengers: Emporia Energy and Greenpocket.

4.3.1   Emporia Energy

Overall Score: 47.5

Strategy: 47.3

Execution: 47.8

Based in Littleton, Colorado (US), privately held Emporia Energy was founded in 2018 and provides real-time energy monitoring solutions to residential and commercial customers using a B2C business model. It employs about 40 people.

Emporia's sensor-based energy management system is enabled by its Gen 2 Vue Energy Monitors, which include two sensors that attach to main electrical panels, and up to 16 additional sensors that attach to individual circuits.[3] The device collects real-time power flow information, such as appliances, solar panels, and ESSs, and allows customers to view their granular energy usage by the second, minute, hour, day, week, month, or year. These kilowatt-hour usage insights can be quantified into expected bill impacts based on utilities' rate schedules, and are delivered through the company's mobile app, as well as through Google and Amazon Alexa. However, reporting periods are strictly calendar-based, so they will not necessarily match electric bills, and they lack support for temporal comparative analyses, offering possible areas for enhancement.[4]

In an effort to expand its geographic reach, Emporia recently released EU- and UK-compatible (energy monitoring) smart plugs. Further, in May 2023, it announced a partnership with EnergyHub to provide utility customers access to an EV-agnostic charging system. Through the EnergyHub EV platform, the Emporia Level 2 EV Charger enables utility-customer participation in managed charging, behavioral charging, and charging analytics programs. The Emporia system also provides a stronger charge of 48 amps, and a longer cable, 24 feet long, than any other Level 2 EV charger at that same price point.[5]

Device costs range from ~$85 to ~$165 based on the number of circuit-level sensors included (0, 8, or 16). This aligns with, or is cheaper than competitive offerings. Emporia sets no ongoing subscription fees, which further sets it apart from its competitors. For comparison, Sense's Flex Energy Monitor retails for ~$349 and comes with two additional pairs of sensors.

Emporia is pursuing a disruptive strategy based on gaining market share with low pricing. Its ultimate objective is to attain critical mass and then offer value-added advanced services. This is a high risk/high reward approach that will take time to evolve. However, if the strategy works and expands its marketing and sales channels, Emporia Energy will certainly move up in the *Leaderboard* rankings.

www.emporiaenergy.com

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[3] TechHive, "Emporia Vue Gen 2 review: Energy tracking in both directions," May 3, 2023, **https://www.techhive.com/article/1804290/emporia-gen-2-vue-energy-monitor-review.html**.
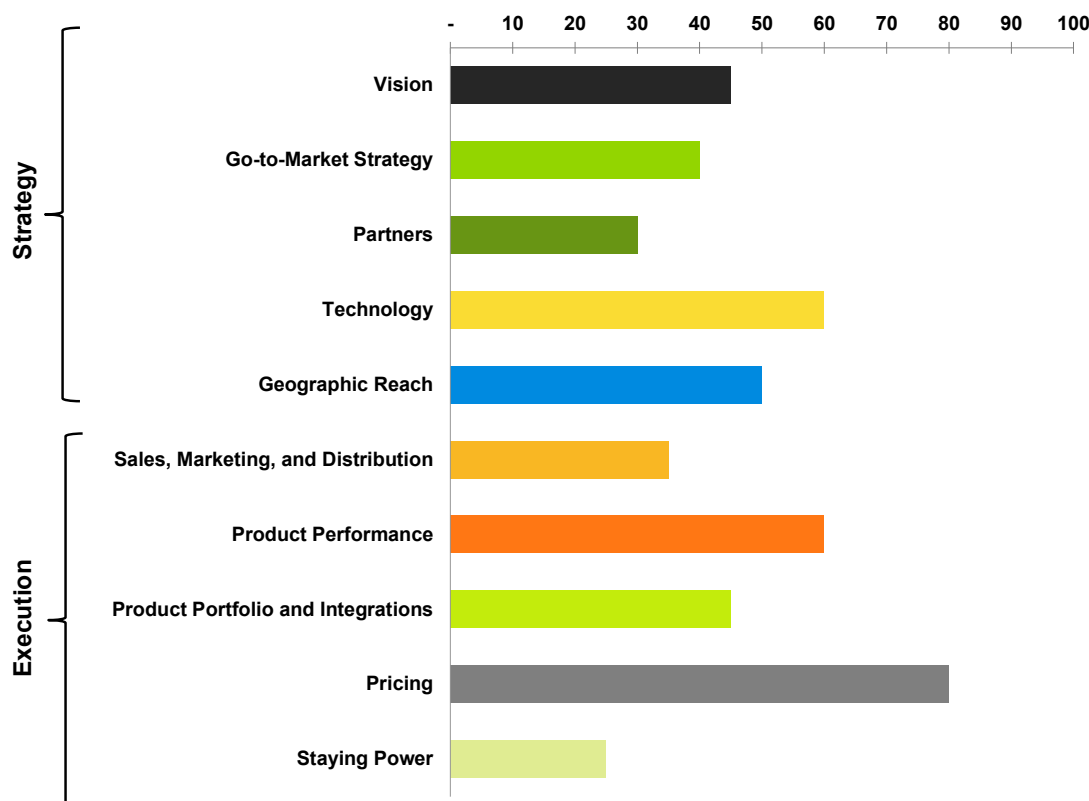
[4] TechHive, "Emporia Vue Gen 2 review: Energy tracking in both directions," May 3, 2023, **https://www.techhive.com/article/1804290/emporia-gen-2-vue-energy-monitor-review.html**.

[5] EnergyHub, "EnergyHub partners with Emporia to maximize utility customer hardware choice for EV managed charging programs**,"** May 17, 2023, **EnergyHub partners with Emporia to maximize utility customer hardware choice for EV managed charging programs - EnergyHub**.

Chart 4-13.   Emporia Energy Strategy and Execution Scores

4.3.2   Greenpocket

Overall Score: 41.7

Strategy: 38.5

Execution: 44.8

Founded in 2009, privately held Greenpocket GmbH provides energy management and visualization software throughout Europe. Based in Köln, Germany, the company serves more than 80 energy companies, with a focus on the German market. It has 35-40 employees.

The company offers two product lines: residential and C&I. It is a pure software company, with no associated hardware, and its software is modular and customizable. It serves corporate customers directly, rather than through B2C sales, and offers its solution via a white labeled SaaS model.

Greenpocket has contracted with more than 40 energy companies in Germany alone. The company claims to cover a large share of the German smart meter market; while it is small today, it is set to accelerate rapidly over the next decade.

Germany is unique in its smart meter nascency and market framework, which is set up as a regime of bidirectional smart meter gateways that enable device control to foster the adoption of renewable energy and DER. This system introduces complex security and privacy requirements. While Greenpocket cannot claim any future wins, it is well-positioned, given established case studies in the German market.

www.greenpocket.com

Chart 4-14.   Greenpocket Solutions Strategy and Execution Scores
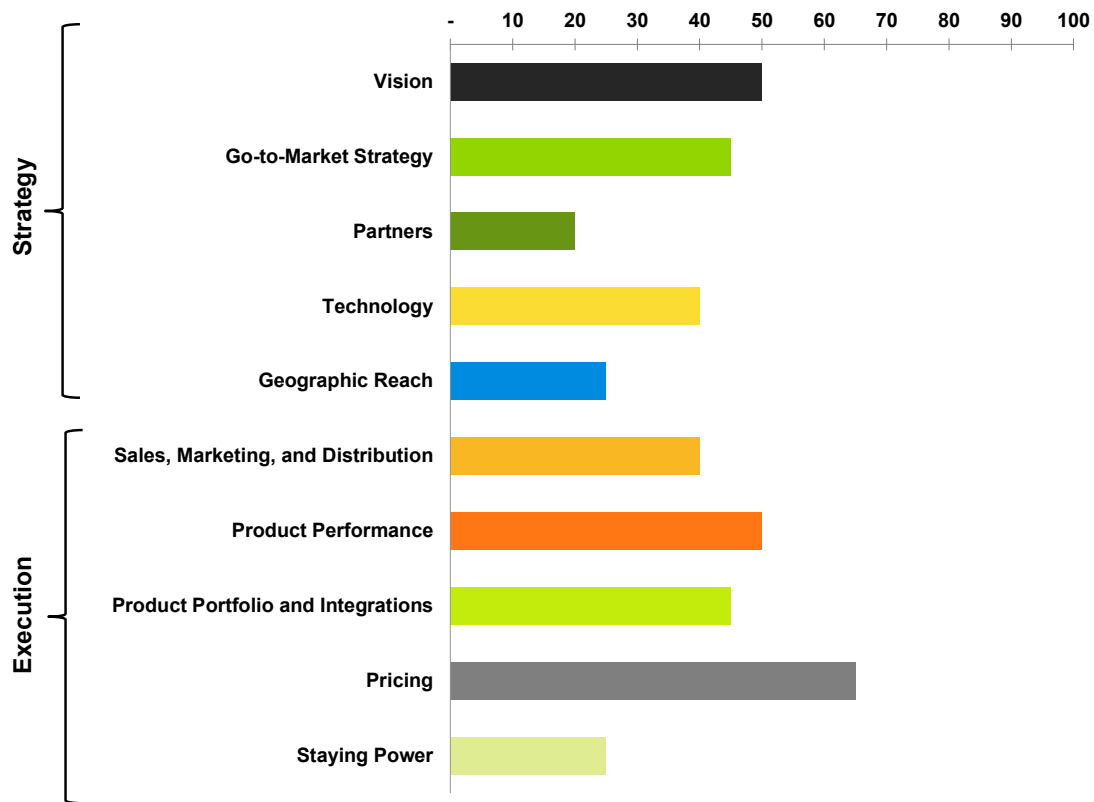
(Source: Guidehouse Insights)

Section 5
Acronym and Abbreviation List

ADMS ....Advanced Distribution Management Systems

AI .... Artificial Intelligence

AMI ....Advanced Metering Infrastructure

AMR .... Automated Meter Reading

B2B... Business-to-Business

B2C .... Business-to-Consumer

BTM... Behind-the-Meter

BYOD ....Bring Your Own Device

C&I .... Commercial and Industrial

CAD...Consumer Access Devices

CAPEX ....Capital Expenditure

CE ....Customer Engagement

CIS .... Control Implementation Summaries

CRM .... Customer Relationship Management

CSAT..Customer Satisfaction

CSR.. Customer Service Representative

CVR.. Conservation Voltage Reduction

CX .... Customer Experience

DER..Distributed Energy Resources

DERMS ....Distributed Energy Resources Management System

DOE...Department of Energy

DR .... Demand Response

DSM ....Demand-Side Side Management

EaaS...Energy as a Service

EIBP .... Energy Information Brokerage Platform

EU ....European Union

EV.. Electric Vehicle

EVSE...EV Supply Equipment

HEM ....Home Energy Management

HER... Home Energy Report

HESS.. Home Energy Storage System

HVAC .... Heating, Ventilation, and Air Conditioning

IOU ....Investor-Owned Utility

IT .... Information Technology

IVR .... Interactive Voice Response

KPI.. Key Performance Indicator

M&V...Measurement and Verification

MDM... Meter Data Management

NBA..Next Best Actions

OEM .... Original Equipment Manufacturer

PQ ....Power Quality

PV.. Photovoltaic

SaaS..Software as a Service

TOU.. Time-of-Use

UAE ....United Arab Emirates

US .... United States

VPP .... Virtual Power Plant

Section 6
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Section 8
Scope of Study and Methodology

8.1   **Scope of Study**

Guidehouse Insights has prepared this *Guidehouse Insights Leaderboard* to
provide participants in the CE and CX analytics market with an analysis of the
current competitive landscape. It is intended to help providers in this market
understand how companies and brands fit into the overall global market
landscape.

The major objective of this *Leaderboard* is to provide a timely overview of the
companies involved in the CE and CX analytics market, as well as their Strategy
and Execution in developing, marketing, and delivering CE and CX solutions.
Company ratings capture the vendor's standing at the time of the report and are
not a retrospective of past accomplishment or an indication of future success. In
this market, ratings are likely to shift as companies and CE and CX analytics
applications continue to evolve.

8.2   **Sources and Methodology**

Guidehouse Insights' industry analysts use a variety of research sources in
preparing Research Reports. The key component of Guidehouse Insights' analysis
is primary research gained from phone and in-person interviews with industry
leaders including executives, engineers, and marketing professionals. Analysts are
diligent in ensuring that they speak with representatives from every part of the
value chain, including but not limited to technology companies, utilities and other
service providers, industry associations, government agencies, and the investment
community.

Additional analysis includes secondary research conducted by Guidehouse
Insights' analysts and its staff of research assistants. Where applicable, all
secondary research sources are appropriately cited in this report.

These primary and secondary research sources, combined with the analyst's
industry expertise, are synthesized into the qualitative and quantitative analysis
presented in Guidehouse Insights' reports. Great care is taken in making sure that
all analysis is well-supported by facts, but where the facts are unknown and
assumptions must be made, analysts document their assumptions and are
prepared to explain their methodology, both in the body of a report and in direct
conversations with clients.

Guidehouse Insights is a market research group whose goal is to present an
objective, unbiased view of market opportunities in its coverage areas.
Guidehouse Insights is not beholden to any special interests and is thus able to

offer clear, actionable advice to help clients succeed in the industry, unfettered by technology hype, political agendas, or emotional factors that are inherent in cleantech markets.

8.2.1   Vendor Selection

The companies evaluated in this *Leaderboard* are providers of CE and CX analytics software. This includes the provision of energy usage intelligence, behavioral energy efficiency, DER/DR program management, smart home optimization, EV management, complex rate analytics, and other software that contribute to improvements in CSAT.

8.2.2   Ratings Scale

Companies are rated relative to each other using the following point system. The ratings are a snapshot in time, showing the current state of the company. These scores are likely to be fluid as new competitors enter the market and customer requirements evolve.

- Very Strong   91 – 100
- Strong   76 – 90
- Strong Moderate   56 – 75
- Moderate   36 – 55
- Weak Moderate   21 – 35
- Weak   11 – 20
- Very Weak   1 – 10

8.2.2.1   Score Calculations

The scores for Strategy and Execution are weighted averages based on the subcategories. The overall score is calculated based on the root mean square of the Strategy and Execution scores.

8.2.3   Criteria Definitions

8.2.3.1   Strategy

The criteria described here must match those covered in this *Guidehouse Insights Leaderboard*. More specifically, they should match the criteria listed in the Executive Summary and the Excel file.

- **Vision:** Measures the company's stated goals in designing market solutions against the actual needs of customers based on the entire environment in which it will operate. In this case, companies with a perceptive and forward-looking vision for CE and CX receive higher scores. Clear and compelling visions that are effectively communicated to the industry also result in higher scores.

- **Go-to-Market Strategy:** Evaluates the company's strategy for reaching the target market, including the sales and marketing channels used and the processes for informing the target market about brand differentiation and product value. Higher scores are the result of companies going to market through multiple channels to reach a variety of industries and forming partnerships with key organizations.

- **Partners:** Measures the company's established partnerships with key organizations that will likely provide an advantage in financial backing, sales, business, and product development. Higher scores are given to companies that have established partnership networks or are operating within an ecosystem that furthers the traction of their offerings.

- **Technology:** Evaluates whether the company has developed or patented (or both) technology that provides a significant business advantage over competitors that is likely to have an enduring effect on its success. Higher scores are given if the company's technology is already a proven market success or delivers unique product attributes.

- **Geographic Reach:** An evaluation of companies' ability to reach national and international customers through networks of distributors, partnerships, and other resellers. Scores are lower if the company does not have a sales or dealer strategy for multiple regions.

8.2.3.2   Execution

- **Sales, Marketing, and Distribution:** Evaluates the company's marketing and sales performance and current distribution channels. Higher scores are given to companies with brand recognition and significant sales.

- **Product Performance:** Evaluates the competitive performance of the company's CE and CX analytics solutions. Higher scores are given to companies with higher CSAT and energy savings results.

- **Product Portfolio:** Addresses the company's breadth of offerings related to CE and CX analytics. Companies that score highly in this category have products that address a variety of smart meter analytics applications and have integrated with third-party solutions to offer more comprehensive solutions.

- **Pricing:** Determines the suitability of product pricing based on its cost-effectiveness, whether products are available at multiple price points, and how pricing compares to that of competitor products.

- **Staying Power:** Evaluates whether the company has the financial resources to withstand the strains of an emerging market and increasing competition. This criterion also measures the maturity of a company's solution, including how long it has been present in the market. Higher scores are given to companies that show signs of being able to persist in the future.

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