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Powering Up Profits:

The Ultimate Guide to Product Monetization in the Utility Sector

White paper

Introduction

The utility sector plays a pivotal role in supplying essential services like electricity, natural gas, and water to modern societies. The energy landscape has witnessed significant transformations in recent years, driven by sustainability concerns, technological advancements, and changing consumer preferences.

Moreover, the need to stay competitive and maximize profits requires utility companies to adopt innovative strategies to monetize their products, available resources and data effectively.

This comprehensive guide explores the changing nature of the Utility sector, the importance of monetization, and the key strategies that Utility companies can employ to harness their potential into profits.

Changing Nature of Energy: Past, Present, and Future of Utility Sector

The Past:

The Utility sector has evolved significantly over time, from its inception as tightly regulated monopolies to its current dynamic landscape. Historically, utility companies operated under regulated frameworks, providing essential services to consumers. However, deregulation and advancements in technology reshaped the overall business structure, allowing for increased competition and the emergence of new business models.

The Present:

At present, the sustainability and imperative to decarbonize the energy supply remain the preferred quotient amidst the concerns of depleting natural resources and the increased cost of research and development. Every day, governments, businesses, and consumers are assertively demanding cleaner and greener energy options, pressurizing utilities to incorporate strategic renewable energy sources and energy-efficient plans.

According to the US Energy Information Administration (EIA), the generation of renewable energy in the United States has been steadily increasing. In 2020, renewable energy sources accounted for 20% of total electricity generation, with wind and solar contributing the most significant share. As Utility companies transition towards low-carbon energy sources, they must adapt their business models to accommodate distributed energy resources (DERs) and embrace prosumers who generate their own energy.

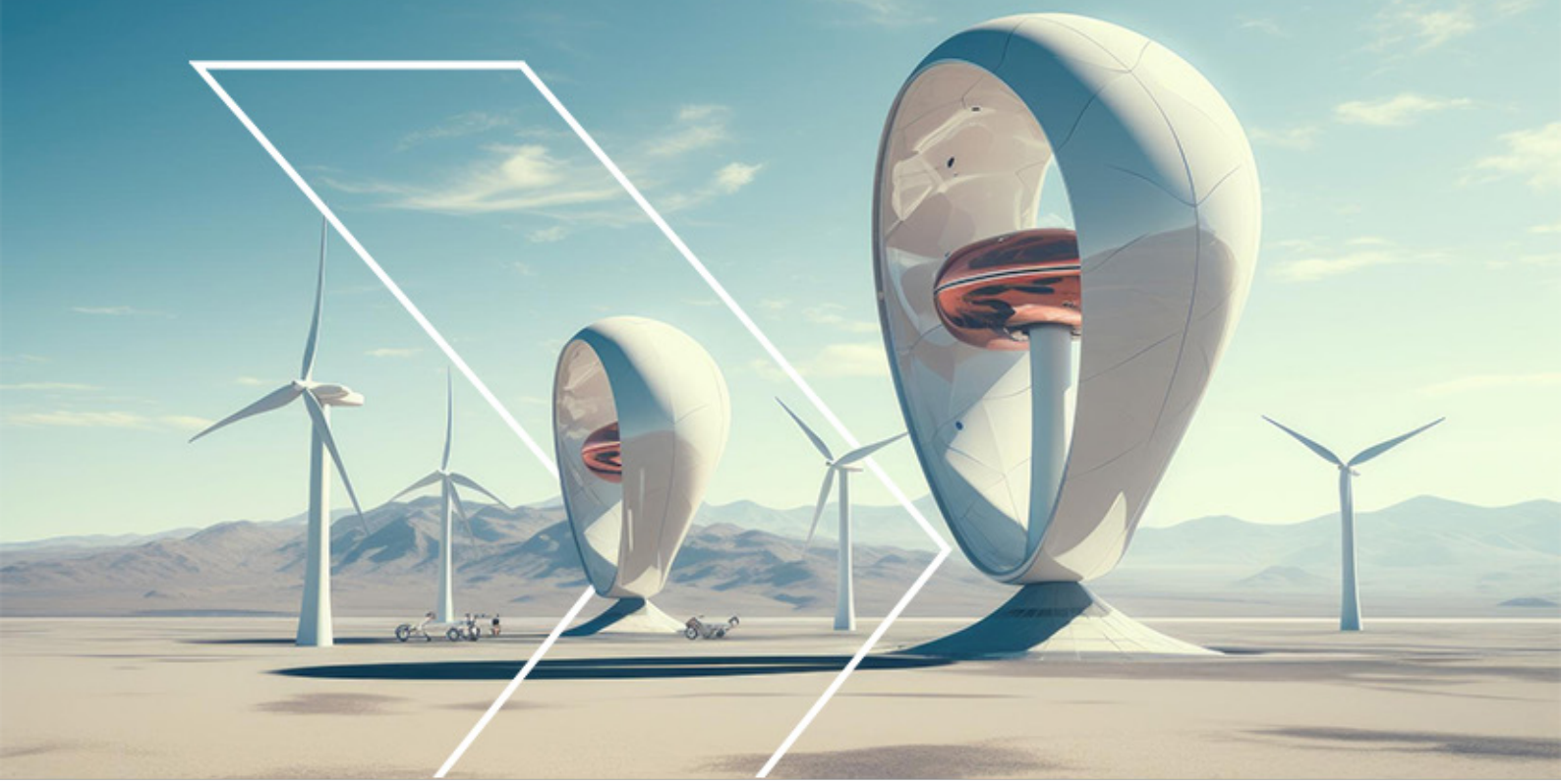
For example, Green Mountain Power (GMP), a utility company in Vermont, has embraced the concept of a virtual power plant (VPP) to harness the power of distributed energy resources (DERs). Through partnerships with residential and commercial customers, GMP aggregates solar panels, energy storage systems, and demand response capabilities into a VPP. By utilizing this network of decentralized energy assets, GMP can optimize energy generation and distribution, reducing reliance on traditional power plants and contributing to decarbonization efforts.

The Future

The future (as we speak) will be shaped by the shift in the Utility sector from a play to a technologically governed SaaS industry with the current rapid development of connected services, location-based commerce, new in-car payment methods, data mining, extracting, collection, and distribution.

Moreover, the integration of digital technologies in the US Utility sector is enabling the development of smart grids.

These smart grids allow Utility to monitor real-time energy consumption, optimize grid operations, and offer customized services to consumers. And this is not the end. The 4th Industrial Revolution, fuelled by the confluence of AI, Big Data, 5G, Distributed Ledger Technology, and IoT, will further open new income opportunities for Utility over the course of the next ten years.



Decoding Monetization: Product, Profits & People

Monetization in the Utility sector involves effectively converting products and services into profitable revenue streams. To succeed in this competitive market, Utility must focus on three key aspects

1 Product

Utility companies should prioritize product development and diversification. By offering innovative energy solutions and value-added services, such as energy management and demand response programs, they can attract a broader customer base and create additional revenue streams.

2 Profits

Maximizing profits requires Utility companies to optimize their operations and reduce costs. By leveraging technology and data analytics, Utility can streamline its processes, optimize resource utilization, and enhance overall efficiency, leading to higher profit margins.

3 People

Customer satisfaction and retention are vital for Utility companies. Building strong customer relationships through personalized services, timely communication, and excellent customer support can lead to increased customer loyalty and positive brand perception.

5 Mistakes That Any Utility Company Can Rectify for Better Profit Margins

Before any utility company stresses exploring the probable avenues of additional/new revenue, they must regulate their existing operational structure. This includes the identification and rectification of mendable issues. Some of these issues can be:

1. **Capital expense limitations can be Solved by exploring already available resources**

   Utilities often grapple with the financial burden of maintaining and upgrading their extensive infrastructure. These high capital expenditures can limit their ability to invest in any additional innovative technologies or research to drive extra revenue growth. Therefore, finding common ground with the available resources becomes utmost necessary.

2. **Redundant asset maintenance costs can be converted into cash streams for funding innovations**

   Holding onto outdated and inefficient energy generation assets can lead to increased operational costs (i.e., unnecessary maintenance, depreciation cost, and storage/floor space costs) and reduced profit margins. The utility must conduct regular asset assessments and audits to identify resources that are no longer economically viable and plan for their retirement.

3 **Possible customer dissatisfaction could be handled with digitalization**

The digitalized world and end-consumers require real-time grievance resolution and service. Poor customer service, billing issues, and unreliable energy supply can result in customer churn, leading to revenue losses and damage to the company's reputation.

4 **Decreased operational wastage can be gained by data-driven process optimization**

Irregularities in generation, distribution, or consumption can negatively impact profits. Utilities must prioritize energy efficiency and optimization measures, such as grid modernization and demand-side management, to reduce wastage and operating costs.

5 **Consumer sustainability could be managed by going hand in hand**

Consumers today prefer sustainable and environment-friendly energy consumption. Utility companies that fail to align with such sustainability goals and disregard responding to public opinions, risk losing customers and facing regulatory scrutiny, potentially leading to financial losses.

Harnessing **Potential into Profits**

Once the operational/process optimization is achieved, utility companies can then focus on investing or strategizing their new revenue sources. Listed below are some strategies followed by use cases that would help outline a productive plan.

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Energy as a Service (EaaS)

According to a report by Deloitte, the EaaS market is expected to grow significantly in the coming years, providing utility companies with an opportunity to offer energy management, demand response, and energy efficiency solutions to customers. By delivering comprehensive energy solutions, Utility can foster long-term relationships and generate recurring revenue streams.

Use Case: Duke Energy's Commercial EaaS Offerings

Duke Energy, a leading utility company in the Southeastern United States, offers Energy as a Service (EaaS) packages tailored to commercial and industrial customers. Beyond supplying electricity, Duke Energy provides energy efficiency audits, demand response programs, and on-site renewable energy installations.

By delivering comprehensive energy solutions, Duke Energy has forged stronger relationships with its customers while generating additional revenue through value-added services.

Focus on Scalability

Utilities must adopt scalable solutions to accommodate the growing demand for renewable energy and DERs. By investing in flexible infrastructure and technologies that can adapt to changing market conditions, Utility can seize new growth opportunities.

The electrification of transportation is a promising revenue opportunity for Utility in the United States. According to the International Energy Agency (IEA), the number of electric cars on the road in the United States reached over 1.8 million in 2020.

By investing in EV charging infrastructure and offering innovative charging solutions, Utility can tap into the growing EV market and create new income channels.

Use Case: ChargePoint's Utility Partnerships

ChargePoint, a prominent electric vehicle charging network provider, has collaborated with multiple Utilities in the United States to expand EV charging infrastructure. Through strategic partnerships, ChargePoint helps Utility offer EV charging stations to customers, while the Utility gain valuable data insights on charging patterns and energy demand.

This collaborative approach not only accelerates the adoption of electric vehicles but also presents Utility with a new revenue stream in the emerging EV market.

Tailored Pricing Models

The consumption of energy is very personal and therefore customers are interested in customized energy pricing plans. Implementing dynamic pricing models such as time-of-use (TOU) pricing and demand-based pricing allows Utility to cater to customers' unique energy needs, leading to increased satisfaction and loyalty.

Use Case: Salt River Project's (SRP) Time-of-Use Plans

Salt River Project, a public utility in Arizona, offers time-of-use (TOU) pricing plans to its customers. SRP's TOU plans incentivize customers to shift energy-intensive activities to off-peak hours when electricity rates are lower.

This customer-centric approach not only aligns with individual energy needs but also helps SRP manage demand more effectively, reducing the strain on the grid during peak periods.

Make Your Grid Smart

The implementation of smart grid technologies enables Utility to monitor energy flows in real-time, optimize grid operations, and offer personalized services to customers.

Smart grids also facilitate the integration of renewable energy sources and improve energy efficiency. The energy storage market in the United States is gaining momentum, driven by the need for grid stabilization and integration of renewable energy sources.

According to a study, the US energy storage market is projected to grow over 15-fold by 2026. Utilities can monetize energy storage assets by offering grid services such as frequency regulation, peak shaving, and backup power solutions.

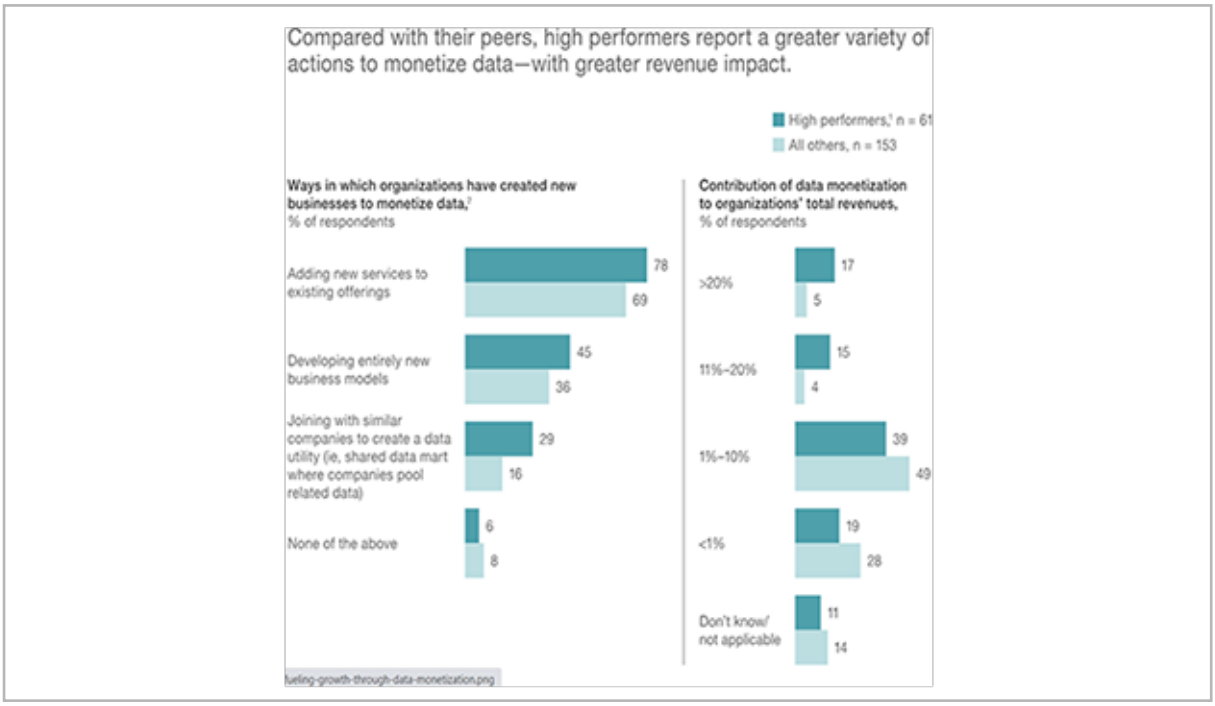
Use Case: AES Corporation's Energy Storage Projects

AES Corporation, a global energy company, has deployed several utility-scale energy storage projects across the United States. One notable example is the Alamitos Battery Energy Storage System (BESS) in California. This 400 MW system stores excess energy during off-peak periods and releases it during peak demand, providing valuable grid services to the California Independent System Operator (CAISO) and earning revenue through ancillary services.

Data Monetization

Utilities in the United States have access to vast amounts of data generated by smart meters and IoT devices. By analyzing this data and offering valuable insights to customers and third parties, Utility can generate additional revenue through data monetization. And this creates a massive opportunity for the utility industry to diversify its revenue stream with little or no effort!

Data monetization can be done in two ways – (a) internal data monetization for process streamlining, customer understanding, and identifying upsell or cross-sell opportunities. (b) external data monetization by creating products or services (like reports, surveys, one-off datasets, etc.) using internal data assets and selling them to third parties. In general, these services can be categorized as data as a service and insights as a service



Source: McKinsey & Company

There are several use cases where utility industry companies have leveraged their existing data to branch out to new revenue sources with minimal investment. One such example is Pacific Gas and Electric (PG&E). The company leverages its vast trove of data to offer data analytics solutions to commercial and industrial customers.

By analyzing consumption patterns and identifying energy-saving opportunities, PG&E provides customers with actionable insights to optimize their energy usage. This data-driven approach not only enhances customer satisfaction but also generates additional revenue for PG&E through data monetization.

Future Belongs to Digital Transformation

Digitalization is a key enabler of growth in the Utility sector. Embracing digital technologies like IoT, data analytics, and artificial intelligence can optimize operations, enhance customer experience, and unlock new revenue streams.

According to J.D. Power's 2021 Electric Utility Residential Customer Satisfaction Study, utilities that prioritize digital communication and customer service have higher customer satisfaction ratings. By investing in user-friendly digital platforms, mobile apps, and customer support services, Utility can provide seamless and personalized experiences to customers.

Use Case: National Grid's Mobile App

National Grid, a major utility in the Northeastern United States, has developed a user-friendly mobile app that provides customers with real-time energy consumption data, bill notifications, and outage updates. The app's intuitive interface enhances customer engagement and enables National Grid to deliver personalized services, fostering stronger relationships with its customers.

Energy Service Companies (ESCOs)

According to a report by the American Council for an Energy-Efficient Economy (ACEEE), the ESCO market in the United States reached $5.9 billion in 2020. Partnering with ESCOs enables Utilities to offer comprehensive energy efficiency solutions to customers. By leveraging ESCOs' expertise and financing options, Utility can promote energy conservation while sharing in the energy savings.

Use Case: Exelon's Energy Efficiency Partnership

Exelon Corporation, one of the largest utility holding companies in the United States, collaborates with ESCOs to implement energy efficiency projects for commercial and industrial customers. By leveraging the expertise of ESCOs, Exelon delivers comprehensive energy-saving solutions, leading to reduced energy consumption and shared energy cost savings.

Microgrid Developers

Microgrids offer localized energy solutions that enhance grid resilience and cater to specific customer needs. According to a study by Navigant Research, the US microgrid market is expected to reach $36.6 billion by 2027. The utility companies can partner with microgrid developers to deliver reliable and sustainable energy services to critical facilities or remote communities, creating a value-added revenue stream.

Use Case: Ameren's Microgrid Projects

Ameren, a utility serving the Midwest, has partnered with microgrid developers to deploy resilient microgrid systems in critical facilities. Through these partnerships, Ameren enhances grid reliability, ensures uninterrupted power supply, and caters to the specific energy needs of vital infrastructure, such as hospitals and emergency response centers.

Create Value for Customers (Demand-side Management for Customers)

Demand-side management allows Utility to work closely with customers to optimize energy consumption patterns. By providing customers with tools and incentives for energy conservation, Utility can create value and build strong customer relationships.

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Apart from these, the utility industry can also focus on:

Predictive Analysis for Loss Reduction

Predictive analytics can help Utility anticipate equipment failures, grid disturbances, and energy consumption patterns. By predicting potential issues, the utility can proactively address them, reducing downtime and mitigating revenue losses.

Embrace Renewable Energy

Utility businesses have a ton of potential to improve product profitability as a result of the global transition toward renewable energy. To expand the product portfolio and fulfill the rising demand for clean energy, product managers should investigate and make investments in renewable energy options like solar and wind power.

To enhance revenue creation, utility firms might also create novel business models like community solar initiatives or virtual power plants. Utility businesses can support sustainability while also increasing their long-term profitability by utilizing renewable energy sources.

Deliver energy-efficient solutions:

Promoting energy efficiency benefits both utility companies and customers. Product managers can create and promote energy-efficient goods including energy management systems, LED lights, and smart appliances.

While enabling utility providers to better manage peak demand and increase profitability, these solutions enable users to cut their energy consumption and utility bills.

Collaborations with government organizations and incentives, including rebates and tax credits, can encourage customers to purchase more energy-efficient items, which will boost utility companies' profitability.

Conclusion

The Utility sector is at a critical juncture, facing unprecedented changes and challenges. To power up their profits, Utility companies must adapt to the evolving energy landscape, prioritize customer-centric strategies, and leverage technology and data-driven insights. Quinnox offers tailored integration solutions for utility companies, streamlining their operations and enhancing efficiency. With expertise in integrating diverse systems and technologies, Quinnox empowers utilities to optimize processes, leverage data insights, and achieve seamless collaboration across their operations.

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