

Saudi Arabia Smart Meter Market Assessment, By Product Type [Smart Electric Meters, Smart Water Meters, Smart Gas Meters], By Phase [Single-phase, Three-Phase], By Technology [Advanced Metering Infrastructure, Automated Meter Reading], and End-user [Residential, Commercial, and Industrial], By Region, Opportunities, and Forecast, 2016-2030F

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Abstracts

The Saudi Arabia Smart Meter Market has experienced considerable growth and is expected to expand substantially. Projections indicate that the market will rise from USD 121.4 million in 2022 to USD 240.13 million by 2030, with a CAGR of 8.9%.

Smart meters are essential in Saudi Arabia for energy efficiency, renewable energy integration, and peak demand management. Factors driving market growth include predictive load forecasting, operational cost reduction, improved grid management, real-time data, accurate billing, and environmental sustainability goals, contributing to a greener and smarter energy ecosystem.

In the Saudi Smart Meter Market realm, short-term load forecasting is accomplished through predictive models. These sophisticated models harness advanced data analysis and machine learning techniques to anticipate forthcoming electricity demand. By capitalizing on data from smart meters, utility companies can fine-tune grid operations, ensuring the streamlined energy distribution to cater to consumer requirements effectively. For instance, the Saudi Smart Grids (SGs), aligned with the vision in Saudi Vision 2030, are conceived as cutting-edge electrical grids facilitating bidirectional power and data flow. To realize this vision, data analysis and predictive models, powered by artificial intelligence (AI), assume a pivotal role in optimizing the planning

and management of the Saudi SGs. It is worth noting that diverse AI methodologies, encompassing deep learning (DL) algorithms tailored for SG applications, have exhibited impressive prowess in time series prediction, outperforming traditional predictive models.

Rise in Installation of Smart Meters

The Saudi Arabia Smart Meter Market has witnessed a substantial surge in smart meter installations, driven by the nation's strategic focus on enhancing energy efficiency, integrating renewable energy sources, efficiently managing peak demand, reducing operational expenses, providing consumers with real-time data, ensuring precise billing, and aligning with environmental sustainability objectives. This escalating adoption of smart meters signifies a significant stride towards fostering an intelligent and environmentally conscious energy landscape within the country.

The Saudi Electricity Company (SEC) has achieved a remarkable feat by successfully deploying approximately 10 million smart electricity meters by the end of 2022. Especially remarkable is the fabrication of 4 million of these meters directly within Saudi Arabia. This local production initiative harmonizes perfectly with the country's aspiration to decrease its dependency on imported technology and foster domestic employment prospects. This commitment to homegrown manufacturing is expected to empower the workforce with essential proficiencies, strategically positioning them for forthcoming business opportunities and technological progress. Ultimately, this endeavor holds the potential to make a substantial contribution to the nation's enduring economic expansion and innovation goals.

The advent of smart meter projects in the Saudi Arabia Smart Meter Market

The Smart Meter Market in Saudi Arabia has observed the initiation of several diverse smart meter projects. These initiatives are geared towards elevating energy efficiency, effective peak demand management, seamless integration of renewable energy resources, provision of real-time data to consumers, precise billing, enhanced grid management, and the reduction of operational expenses. The implementation of these smart meter projects signifies a momentous stride towards a more sustainable and technologically advanced energy landscape within the nation.

One standout example is the Saudi Smart Meter Project (SMP), a pivotal undertaking championed by the Saudi government to realize the energy conservation and emission reduction goals outlined in 'Vision 2030'. Distinguished as the world's largest smart

meter project, SMP impressively deployed approximately 10 million smart meters in an astonishing 14-month timeframe. Moreover, SMP has set an innovative precedent by incorporating two state-of-the-art communication solutions, NB-IoT and Hybrid (RF&G3), positioning it as a trailblazer in the region and fundamentally shaping the trajectory of smart metering in Saudi Arabia.

Government Regulations

The Smart Meter Market in Saudi Arabia operates within the framework of government regulations strategically aimed at bolstering energy efficiency, curtailing carbon emissions, and propelling technological innovation. These regulations encompass compulsory smart meter installations and the active encouragement of renewable energy adoption. Furthermore, endeavors to ramp up indigenous smart meter production align cohesively with the nation's agenda of diminishing technology imports, stimulating employment opportunities, and nurturing skill acquisition for forthcoming business and technological ventures in the country.

The Saudi Standards, Metrology, and Quality Organization's 'Taqyees' National Legal Calibration Program ensures the accuracy and functionality of smart electric meters. The program involves rigorous model approvals, local conditions suitability, and stringent reliability and performance criteria. 'Taqyees' specialists and approved bodies supervise a preliminary verification phase. This phase comprised meticulous tests to corroborate accurate readings and seamless operations. The overarching goals of this legal calibration initiative encompass ensuring precision in commercial transactions, augmenting transparency, safeguarding both consumer and trader rights, and championing equitable principles in trade practices.

Impact of COVID-19

The Saudi Arabia Smart Meter Market underwent significant transformations due to the COVID-19 pandemic, altering its pre- and post-COVID landscapes. Pre-pandemic, the market exhibited steady growth driven by energy-saving initiatives and technological progress. However, the pandemic introduced supply chain disruptions, manufacturing delays, reduced consumer spending, and economic uncertainties impacted smart meter demand. Post-pandemic, the market refocused on digitalization and remote management, leading to heightened smart meter adoption opportunities. Amid increased sustainability focus and remote work trends, smart meters gained relevance for efficient energy tracking. The pandemic acted as an innovation catalyst, underscoring smart meters' role in fostering a resilient and sustainable Saudi Arabian

energy ecosystem.

Key Players Landscape and Outlook

The smart meter market in Saudi Arabia is experiencing significant growth, with prominent enterprises focusing on rapidly advancing smart meter technologies to enhance their services. These companies are investing considerably in developing state-of-the-art smart meters, explicitly focusing on safety and improved electricity monitoring in residential, commercial, and industrial areas. Furthermore, they are actively involved in noteworthy mergers, acquisitions, and collaborations, aligning their strategies to achieve their objectives in the dynamic smart meter industry.

In January 2023, ABB Ltd achieved a remarkable milestone by producing the DN3000 flowmeter, the company's most extensive electromagnetic flowmeter ever. The specific requirements of the Yanbu project, an ambitious seawater desalination endeavor in Saudi Arabia, drove this significant achievement. The project's primary objective is to supply fresh water to the city of Medina and its neighboring areas, positively impacting the lives of over 1.5 million residents. The DN3000 flowmeter, alongside other ABB devices employed for the initiative, played a pivotal role in the comprehensive strategy to address water scarcity in the region. Notably, this electromagnetic flowmeter played a significant role in sourcing over 60 percent of Saudi Arabia's drinking water from desalination efforts, underscoring its immense importance and contribution to sustainable water supply.

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*Companies mentioned above DO NOT hold any order as per market share and can be changed as per information available during research work

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