Expansion & Prosperity

Ambitious Vision Revenue Growth Sustainable Development Vibrant Community

Power Supply Security & Reliability

Renewable Energy Supply Chain Flexibility

Leading Customer Experience Flexibility & Transformation





Annual Report 2023

Strategic Partnerships

Social Responsibility Organization & Governance

Operational Excellence

Research & Development Institutional Excellence Transparency & Integrity Support & Empowerment Improve Efficiency

Local Content

Integrated Nationalization National Transformation





Industry At a Glance

Global Market Trends

Energy Transition and Energy Mix

In 2023, the global commitment to a sustainable future was underscored by a substantial investment of approximately USD 1,740 billion in clean energy deployment. This marked a pivotal moment in the transition towards renewable energy sources, emphasizing the crucial role of technologies such as battery storage and hydrogen. The SDG7 Global Roadmap provided a comprehensive guide on achieving net zero by 2050, outlining a roadmap for the world to transition to clean energy by 2030. The energy landscape, characterized by its dynamism, saw renewables emerge as the cornerstone for nations embarking on the challenging path of energy transition. Notably, at COP 28, 119 countries reached a consensus to triple renewable power generation and double energy efficiency by the end of the decade.

Electricity Sector Restructuring and Regulation

The global electricity sector is undergoing significant transformations shaped by evolving market trends, regulatory shifts, and restructuring initiatives. The resurgence of reregulation and nationalization stands out as a notable trend, with certain nations reassessing the role of the state in shaping energy markets. Simultaneously, a pronounced shift from commodity-based to capital-based markets is underway, emphasizing investment and asset ownership over the mere trading of electricity as a commodity. The integration of carbon markets has become a pivotal mechanism for addressing environmental concerns and incentivizing emission reductions. These intricate dynamics highlight the complexity and fluidity of the global electricity sector, where regulatory frameworks and market structures are continually adapting to address sustainability goals, economic considerations, and geopolitical influences.

Environment, Social, and Governance

Decarbonization has become a paramount objective in the energy sector, driving a fundamental shift towards cleaner and sustainable practices. Recognizing the imperative to address environmental concerns, utilities are increasingly focusing on Environmental, Social, and Governance (ESG) factors as key metrics for decision-making. In a notable collaborative effort, 18 major European power companies have committed to reducing over 300 million tons of carbon dioxide emissions by the year 2030, showcasing a collective dedication to combating climate change. This commitment aligns with a broader trend seen in the financial sector, where ESG considerations have gained substantial traction. With more than USD 300 billion in assets under management dedicated to ESG funds, investors are actively supporting businesses that prioritize environmental responsibility, social impact, and strong governance. The convergence of these efforts signifies a pivotal moment in the energy industry, where both utilities and investors are steering towards a more sustainable, lowcarbon future, acknowledging the interconnectedness of financial success and environmental stewardship.

Digital Transformation

The integration of advanced technologies plays a pivotal role in shaping the future of the energy sector, ensuring sustainability and efficiency. Smart grids and network automation, virtual power plants, and analytics-driven demand forecasting are key components of this technological revolution. The proliferation of connected devices has witnessed an astounding 23-fold increase from 2011 to 2021, emphasizing the growing reliance on interconnected systems. In line with this trajectory, IDC's predictions for the coming years underscore the transformative impact of technology across various facets of the energy landscape.

Customer Experience

In the realm of customer experience within the utility sector, the focus is shifting towards enhancing consumer satisfaction through a multi-faceted approach. The demand for a streamlined, one-click experience, and flexible payment plans has driven utility companies to reimagine their service delivery. Beyond offering traditional commodities, utility providers are diversifying their product and service portfolios to meet evolving customer expectations. Notably, the concept of customers as prosumers is gaining prominence, reflecting a shift where consumers actively engage in energy production and consumption.

Electrification and Demand Management

Electric vehicles (EVs) currently represent approximately 15% of global car sales, a figure set to soar to 40% by 2030 according to the Stated Policies Scenario (STEPS). Over the past two years, the share of EVs in global car sales has more than tripled to reach 14%, with further record sales anticipated in 2023.

Simultaneously, the electricity sector faces escalating shortterm flexibility needs, met through demand response and storage, while seasonal flexibility relies on hydropower and thermal sources facilitated by modernized grids. The growing adoption of electric heat pumps, air conditioners, and EVs introduces variability in demand, presenting opportunities for demand-side response. Realizing these opportunities hinges on a supportive regulatory environment, backed by robust price signals, digital tools, and smart controls, enabling effective demand-response policies to help consumers reduce electricity bills.



The Kingdom's Trends

The Kingdom of Saudi Arabia is charting an ambitious course in the realm of renewable energy and storage, setting a target to double installed capacity annually. The private sector is taking on an increasingly significant role in KSA's generation sector, a trend poised for substantial expansion under KSA's ambitious Independent Power Producer (IPP) program.

By 2030, renewables are projected to contribute to approximately 50% of the total installed generation capacity.

The Kingdom is actively working towards minimizing its reliance on liquid fuels for power generation through a comprehensive liquid displacement program. The surge in power demand in KSA, propelled by population growth, economic expansion, and electrification initiatives, necessitates a modernization and expansion of the Saudi Electricity Company's (SEC) transmission network. With the population expected to reach 50-60 million by 2030, including a significant influx into Riyadh, the liquid displacement program aligns with the goal of integrating industrial and agricultural applications into the grid.

Furthermore, the Kingdom is witnessing a notable rise in Electric Vehicle (EV) penetration, with the government targeting a 30% EV penetration rate in Riyadh city by 2030. This translates to a projected 25 million EVs in KSA by the same year. These initiatives collectively underscore Saudi Arabia's commitment to a sustainable and diversified energy future.

Source: International Energy Agency (IEA), Ministry of Energy - Liquid Fuel Displacement & 2030 Energy Mix.

Industry At a Glance

Regulatory and Financial Reforms in The Kingdom of Saudi Arabia

In Saudi Arabia, a collaborative effort between the government and the private sector has led to significant strides in improving the quality of electricity services. A pivotal moment occurred in November 2020 when a Royal Decree ushered in a comprehensive set of regulatory and financial reforms for the electricity sector. Spearheaded by His Royal Highness the Crown Prince, the Supreme Committee for Energy Mix Affairs for Electricity Production and Enabling Renewable Energy oversees the implementation of these reforms. Under His Royal Highness's guidance, the Ministerial Committee for the Restructuring of the Electricity Sector, comprising key figures from various ministries and institutions, works diligently towards realizing the Kingdom's vision and objectives for the electricity sector.

These reforms directly address historical regulatory and financial challenges within the electricity sector, establishing a sustainable financial structure that is attractive for investment. The anticipated outcomes include:

- Enhanced sector performance.
- Increased plant efficiency.
- Reduced dependence on liquid fuels.
- Improved environmental compliance.
- Reliable electricity transmission network.

Moreover, the reforms aim to streamline renewable energy production, aligning with optimal energy mix targets, and introducing automation to distribution networks for improved service reliability.

Aligned with the Kingdom's electric power sector strategy, these reforms focus on ensuring a safe, efficient, and highquality electricity supply for all consumers. They also strive to:

- Enhance efficiency.
- Improve service quality.
- Prioritize consumer satisfaction.
- Create an investment-friendly environment in alignment with Vision 2030 for economic development.
- Demonstrate environmental commitment for sustainable development goals.
- Enhance and develop local content.

The positive effects of these financial and regulatory reforms on the company's position include the enhancement of its financial and operational sustainability. The Mudaraba agreement, specifically addressing government financial obligations, has supported the financial position and improved capital structure sustainability. Additionally, improved credit records have augmented the company's financing



The most prominent stages of financial and regulatory reforms in the Saudi electricity sector

2000

The establishment of Saudi Electricity Company

2001

The establishment of Electricity and Cogeneration Regulatory Authority

2007

The establishment of the private sector contribution program in electric power generation projects

2012

The establishment of National Grid SA as a wholly owned by Saudi Electricity

2017

The establishment of Saudi Power Procurement Company (Principal Buyer) as a wholly owned by Saudi Electricity Company

2022

The signing of a share and purchase agreement to transfer full ownership of Saudi Electricity Company in Saudi Power Procurement Company to the government.

2021

- Issuance of the Council of Ministers' decision approving the carve-out of Saudi Power Procurement Company (Principal Buyer) and transfer its ownership to the kingdom.
- Cancellation of the government fee mandated by Royal Decree No. (14006) dated 23/3/1439H, effective from 1/1/2021.
- Implementing a Regulatory Asset-Based Model to regulate the Saudi Electricity Company's revenue from the fiscal year 2021 onwards.

2020

- Establishment of the Higher Committee for Energy Mix Affairs to oversee electricity production and promote the renewable energy sector.
- Implementation of a sustainable mechanism for government dues payment.
- Revision of the revenue formula based on the regulatory asset base.
- Activation of the balancing account and corresponding revenue equation.
- Assumption of responsibility for the company's net financial obligations to the government.
- Adopting the Minimum Operating Cost Model to regulate SEC's revenue to determine SEC's revenue for the fiscal year 2020.
- The Company signed a Mudaraba Agreement with the government, represented by the Ministry of Finance, to convert the net financial obligations owed to the government by the Company, amounting to SR 167.9 billion, into an equity classified financial instrument.
- The General Assembly meeting held on 27/12/2020 approved the establishment of a contractual reserve for the purpose of paying the profits of the Mudaraba instrument.





