Power Shortages and Rising Production Costs in Pakistan:

Role of CMAs in Business Sustainability

Pakistan's industrial and commercial sectors have long faced the problem of power outages. Persistent, unscheduled power outages are now threatening the survival of businesses. These blackouts of electricity and gas across the country—especially in key cities and industrial zones—have not only disrupted operations but also increased production costs due to alternative arrangements made with limited resources. The profit margins of industrial and commercial sectors have been squeezed further in recent years, pushing many companies toward closure or relocation outside Pakistan.

The objective of this article is to analyze the impact of power shortages on rising production costs and business sustainability risks, and to suggest how professional accountants—particularly Chartered Management Accountants (CMAs)—can help mitigate these risks through strategic planning, cost minimization, and energy risk management.

Understanding Business Sustainability in the Pakistani Context

Business sustainability is not just about profitability; it means that a company operates in a way that ensures long-term economic performance, environmental accountability, and social fairness. However, in Pakistan, sustainability programs are frequently undermined by external factors such as economic volatility, governance issues, infrastructural deficiencies, and energy crises. Regular load-shedding, gas shortages during winters, and rising tariffs have created an unstable business environment. This instability leads to higher operating expenses, disrupted production cycles, missed export targets, and reduced foreign direct investment (FDI) compared to other countries in the region.

Challenges in the Energy Sector

Pakistan's power sector is the backbone of its economy and provides a critical service. However, it has hindered economic growth due to outdated infrastructure, poor governance, inadequate long-term planning, fuel supply shortages, and limited access to financing. These challenges have led to frequent and prolonged power outages and load-shedding across the country.

In the gas sector, distributing indigenous gas to commercial, industrial, and residential consumers remains a major challenge for SNGPL and SSGC. During winter, when demand spikes, gas supply to industries is typically curtailed, placing a strain on business operations. Additionally, the rising cost of gas has become a critical issue. The shift from domestic natural gas to expensive imported RLNG has nearly doubled gas prices for both businesses and consumers.

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Due to governance-related issues and the scarcity of indigenous energy reserves, Pakistan's dependence on imported, expensive LNG and oil is increasing, putting pressure on foreign exchange reserves. This reliance can lead to supply chain disruptions and higher energy costs.

Lacking a comprehensive subsidy framework or energy efficiency incentives, it is nearly impossible for most businesses to maintain healthy profit margins.

Percentage Share of Pakistan's Energy Mix

Energy Source	Installed (MW)	Percentage (%) Share
Hydel*	10,251	24.7
RLNG**	9,884	23.8
RFO	5,958	14.3
Coal	5,332	12.8
Gas	3,536	8.5
Nuclear***	3,647	8.8
Wind****	1,985	4.8
Solar	600	1.4
Bagasse	364	0.9
Total	**41,557**	**100.0%**

[Source: Ministry of Energy (Power Division)

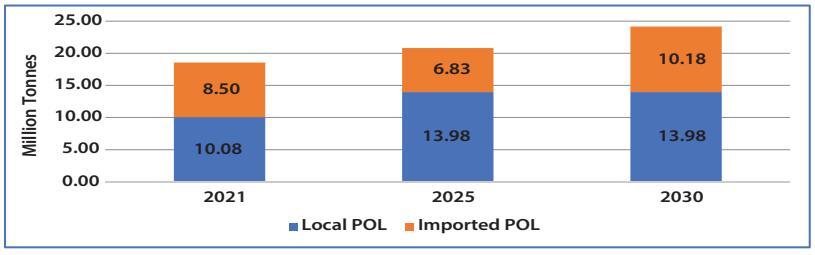
**Karot Hydel Power 2 Units of 360 MW Capacity are running on Commissioning test and are included in Installed Capacity.*

***All KE power plants are operated on Indigenous gas and RLNG as the same is supplied by SSGC on co-mingled basis.*

****Supply from KANUPP was discontinued from August 2021.*

*****Two Wind Power Plants 100 MW Capacity are running on Commissioning test and are included in Installed Capacity.*

Local vs Imported POL Products



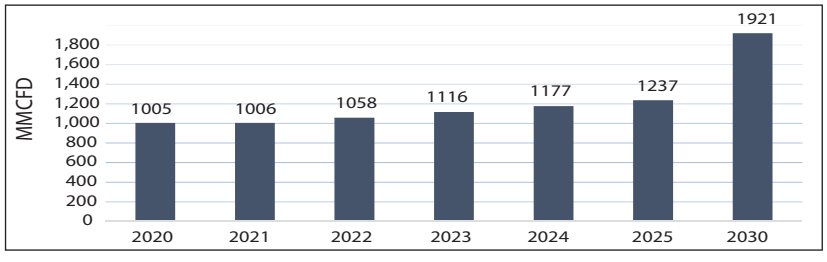
(Source: IEP Database [2006–2020] and the author's calculations)

Future Primary Energy Supply for Gas (Million CFt)

Supply	2020	2021	2025	2030
Net Supply	982,089	942,156	767,392	593,793
Imported LNG	318,241	477,776	669,670	952,680
Primary supply	**1,300,330**	**1,419,931**	**1,437,062**	**1,546,473**

(Source: EYB 2020 and author's calculations)

LNG Import 2020–2030



(Source: EYB, 2020 and the author's calculations based on the peak demand for natural gas)

Role of Power Shortages in Increasing Production Costs

The power shortage in Pakistan is not just an inconvenience for companies—it is a structural barrier to growth. Additionally, transmission and distribution (T&D) losses and the accumulation of circular debt have further aggravated the situation, leading to increased power tariffs.

From an **industrial perspective**, the impact of power shortages includes the following:

a) **Increased reliance on alternative energy sources:** Most industries depend on costly and environmentally harmful diesel or furnace oil generators.

b) **Inefficiency and downtime:** Load-shedding leads to production delays, reducing overall output and efficiency.

c) **Wage inefficiencies:** Labor costs are incurred even during non-productive hours caused by outages, resulting in lower productivity per wage unit.

d) **Equipment wear and tear:** Frequent disruptions and voltage fluctuations pose risks to sensitive machinery and equipment.

e) **Disruption of the supply chain:** Energy shortages lead to inconsistent production schedules, causing shipment delays and declining customer satisfaction.

f) **Higher energy costs:** Increased costs of goods sold (COGS) due to energy expenses reduce gross profit margins. When these costs cannot be passed on to customers, net profits decline further.

g) **Strain on cash flows:** Higher utility bills, fuel expenses, and generator maintenance lead to increased cash outflows from operating activities. For industries already operating on thin margins, this can result in liquidity stress.

h) **Diversion of capital investment:** Companies are compelled to invest in capital assets such as solar panels, batteries, or diesel generators. These investments, while necessary, divert funds that could have been used for innovation or business expansion—resources that would otherwise be available if affordable energy were accessible.

Regional Comparisons and Lessons Learned

Bangladesh, Vietnam, and Malaysia offer strong examples of how energy efficiency and targeted subsidies can drive industrial development. Bangladesh's success in expanding its natural gas grid—with support from foreign donors and strict regulatory oversight—demonstrates the impact of political will and effective planning. Similarly, Malaysia has emerged as a regional leader in sustainable production by promoting solar energy adoption through financial incentives and tax credits.

Pakistan can draw valuable lessons from these experiences by:

- Establishing an independent energy efficiency agency
- Promoting domestic production of energy-efficient appliances
- Collaborating with international financial institutions to secure low-interest green energy loans

The Case for Policy Reform and Public-Private Partnerships

Sustainable energy solutions require collective action. While businesses must streamline internal operations, the government needs to implement reforms in pricing structures, subsidy frameworks, and infrastructure investments.

Public-Private Partnerships (PPPs) can play a critical role in advancing renewable energy projects, LNG terminals, and grid modernization. Similarly, targeted subsidies or financing schemes for energy-efficient equipment can be transformative—especially for SMEs struggling with high operating costs.

CMA Viewpoint: The Strategic Contribution in Alleviating the Energy Crisis

Chartered Management Accountants (CMAs) occupy key roles across various industries and are well-positioned to promote environmentally responsible business practices and efficient energy cost management.

By combining financial expertise with operational insight, CMAs offer a strategic perspective to guide informed energy and investment decisions. Their contributions can include:

- Identifying areas of excessive energy consumption and recommending cost-saving alternatives
- Developing scenario-based budgeting models that factor in variables like price volatility and energy outages
- Assessing the feasibility and ROI of investments in alternative energy sources such as solar, wind, and biogas
- Integrating energy-related KPIs into performance dashboards, aligning operational efficiency with sustainability goals
- Formulating risk mitigation plans to ensure energy supply security and business continuity
- Leading ESG (Environmental, Social, and Governance) disclosure initiatives to enhance transparency and investor confidence
- Applying green costing and environmental costing models to evaluate the long-term impact of energy-related decisions

Recommendations for Stakeholders

For the Government and Regulators:

- Invest in transmission and distribution (T&D) infrastructure to reduce technical losses.
- Rationalize gas pricing to promote conservation and efficient usage.
- Promote net metering and incentivize private sector investment in renewable energy.
- Strengthen regulatory frameworks to attract greater investment in the energy sector.
- Decentralize energy planning to the provincial level to encourage localized and context-specific solutions.
- Secure affordable gas imports from neighboring countries such as Tajikistan, Iran, and Russia.
- Construct a north-south pipeline to transport LNG from southern terminals to northern regions.
- Upgrade and expand oil refineries to reduce reliance on imported petroleum products.

For Businesses:

- Conduct regular energy audits to identify inefficiencies and opportunities for savings.
- Invest in fuel-efficient backup power systems, such as solar energy solutions or gas-powered generators.
- Promote energy conservation practices through employee awareness and training programs.
- Engage CMAs to assess operational efficiency and optimize energy cost structures.
- Leverage digital tools for real-time energy monitoring, forecasting, and planning.

For CMAs and Professional Bodies:

- Develop certification programs in sustainability reporting and energy management.
- Advocate for data-driven policymaking by engaging with government and industry stakeholders.
- Create industry-specific frameworks for energy benchmarking and performance evaluation.
- Publish research papers and host roundtable discussions on industrial energy challenges.
- Facilitate the development of case studies showcasing successful energy optimization strategies.

Conclusion

Pakistan's path to long-term business sustainability is complex and fraught with challenges—especially in the energy sector. However, these challenges also present opportunities for innovation, strategic planning, and collaborative action.

While persistent power shortages continue to drive up production costs, professionals like Chartered Management Accountants (CMAs) can play a pivotal role in helping businesses navigate these pressures through informed decision-making, sound financial planning, and efficient resource management. The gas sector, too, must shift its focus toward conservation, technological upgrades, and demand rationalization.

CMAs must embrace dual responsibilities—as cost managers and stewards of sustainability. Their unique blend of financial acumen and operational insight enables them to translate data into meaningful strategies. Their expertise will be essential in building a resilient, competitive, and future-ready business environment in Pakistan.

It is time to move away from reactive approaches and adopt proactive, energy-integrated business planning. CMAs possess the tools, knowledge, and foresight to lead this transformation—and their role has never been more critical than it is today.

Sources:

- *Pakistan Energy Outlook Report (2021-2030): Integrated Energy Planning for Sustainable Development*
- *Pakistan Economic Survey 2021-22*

***About the Author: Jawad Ahmed** is an Associate Member of ICMA Pakistan and an ISO-certified Risk Manager currently serving as Senior Risk Officer at Sui Northern Gas Pipelines Limited (SNGPL). A Master of Commerce (M. Com) Gold Medalist with over 12 years of experience, he specializes in developing risk management frameworks, conducting internal audits, and ensuring regulatory compliance for Pakistan's energy sector.*