



# Cross-Subsidization in the Gas Sector & Way Forward

## Recommendations

### End Cross-Subsidization and Set Tariffs Based on Actual Gas Costs

- Natural gas costs Rs 1,466.5/MMBTU (USD 5.23/MMBTU), but govt. charges industries Rs 2,150 to 2,750 per MMBTU (USD 7.67 to 9.82 per MMBTU).
- Govt. should charge only the full cost of gas and provide subsidies through budget, not through cross-subsidization. Billing should be based on residential space, not consumption.

### Revisit the Priorities

- The govt. should balance safeguarding domestic consumers' energy needs with the requirements of industrial, power, and commercial sectors.
- A consultative approach involving all stakeholders is essential to ensure a holistic allocation strategy.

### Redirect Protected Customers towards Subsidies via BISP

- The combined customer base of SSGC & SNGPL comprises 60% residential consumers, with 57% falling under the protected category.
- Direct cash subsidies should be provided to vulnerable customers to cover utility costs, administered through the Benazir Income Support Programme (BISP).

### Unbundle the Gas Monopoly

- Restructure gas utilities to enhance operational and managerial efficiency.
- Unbundling the 'pipeline' and 'retail' sectors by splitting SNGPL and SSGC into smaller units will encourage private sector participation and improve governance.

### Control UFGs

- Despite 40% private ownership in both utility companies, they lack a proper business model and a regulatory mechanism linking financial returns to efficiency.
- UFGs are seven times the world average. In Turkey, Russia, and Bangladesh, UFGs are 4.2-5% (KPMG, 2017). Despite OGRA's 4.5% allowance, gas losses remained high, leading to increased allowances of 7% for SNGPL and 8.5% for SSGC after 2017.

### Promote Gas Conservation

- The government should incentivize energy-efficient practices across all sectors through tax benefits, subsidies on energy-efficient technologies, and awareness campaigns promoting responsible energy use. Additionally, encouraging the import of solar geysers could help households reduce natural gas consumption by up to 62% annually.

## 1. Introduction

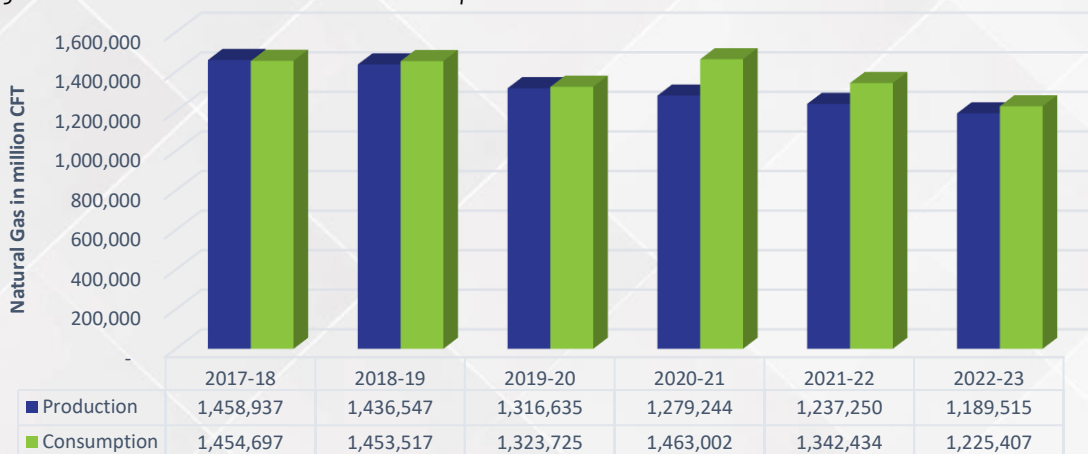
The allocation and pricing of natural gas in Pakistan have been highly contentious, with the government historically prioritizing domestic consumers over other economically critical sectors such as industry, power, and commerce. While the intention has been to provide affordable energy to households, this approach has led to a cross-subsidization mechanism where industrial consumers bear the cost burden of subsidizing domestic consumption. The imprudent policy of supplying piped natural gas to domestic consumers, often to uneconomical locations, leads to high losses and lower recoveries. This inefficient prioritization has resulted in the preferential allocation of natural gas resources to households, often leaving the industrial, power, and commercial sectors with inadequate supplies. Although ensuring energy security for households is crucial, the disproportionate emphasis on domestic consumers has constrained the growth of other vital sectors. The industrial sector, which is essential for economic development, job creation, and export revenues, is particularly affected. In addition to that, the gas pricing policy had unreasonably impacted the competitiveness of the industry. The burden of cross-subsidization, amounting to Rs 129 billion, significantly hampers the industrial sector's potential, thereby negatively impacting the country's overall economic growth.

### 1.1. Gas Production & Consumption

Over the past six years, indigenous gas production has declined at a compound annual growth rate (CAGR) of -3.35%, dropping from 1.458 million cubic feet (CFT) in FY18 to 1.189 million CFT in FY23. Similarly, gas consumption has also seen a significant decline, with a CAGR of 2.82%, falling from 1.454 million CFT in FY18 to 1.22 million CFT in FY23. The gap between production and consumption has been partially offset by increased imports of RLNG, whose share in the overall natural gas supply rose from 23% to 24% in the current fiscal year.

#### Natural Gas Production & Consumption

Figure 1: Natural Gas Production & Consumption



Source: Energy Year Book 23

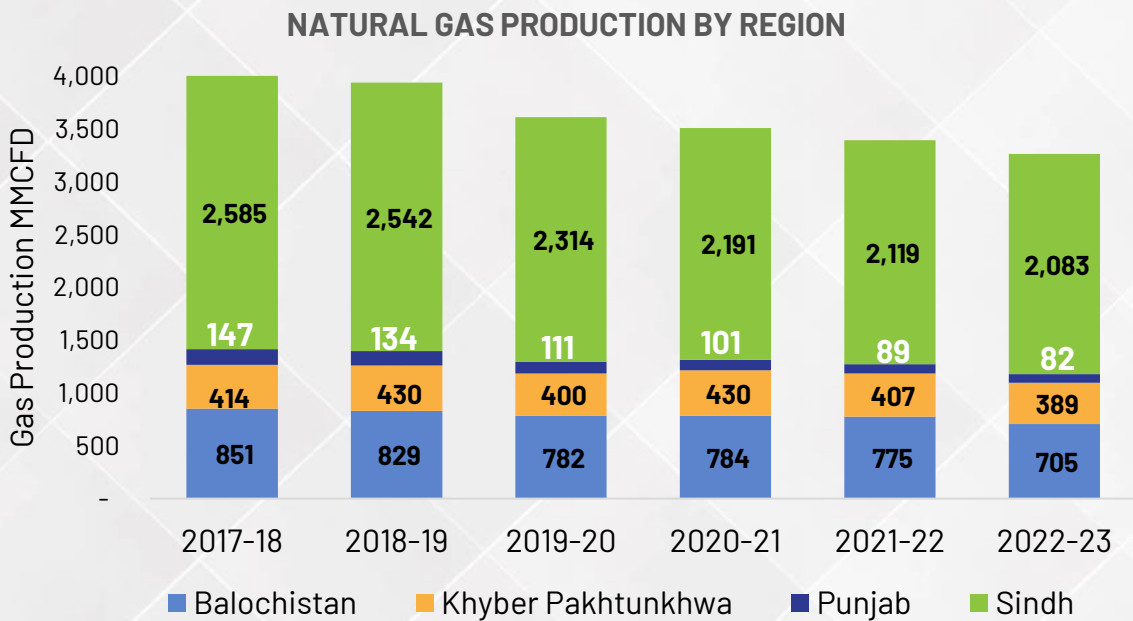
■ Production ■ Consumption

\*Natural Gas Consumption includes LNG Consumption

## 1.2 . Historical Region-Wise Natural Gas Production

In overall gas supplies, the share of Sindh, Baluchistan, K.P, and Punjab is 64, 22, 12, and 3 percent respectively during FY 23. The share of RLNG has increased from 23 to 24 percent during the same period. Sindh's total gas supply has declined by 2 percent from 2,118 MMCFD in FY 22 to 2,083 MMCFD in FY 23, Punjab's gas supply declined by over 8 percent from 89 MMCFD to 82 MMCFD and Baluchistan supply declined by 9 percent from 774 MMCFD to 704 MMCFD and the gas supply of KP declined by 4 percent from 406 MMCFD to 389 MMCFD during the same period.

Figure 2: Gas Production by Region



Source: Energy Year Book 23

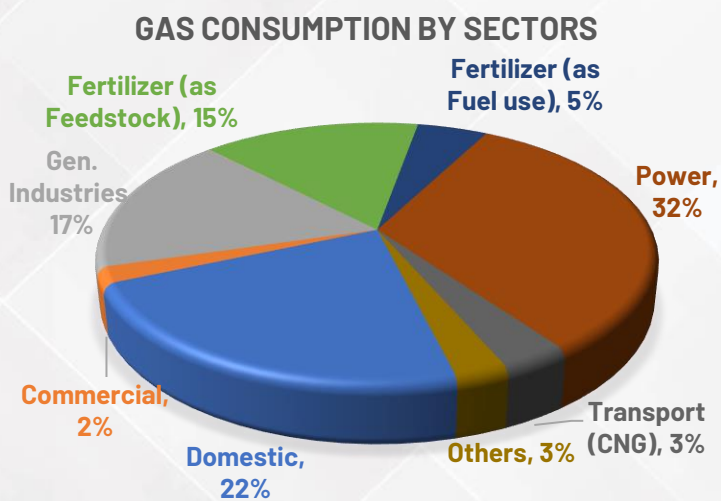
As per OGRA's annual report FY 22, the share of RLNG has also declined by 2 percent from 969 MMCFD to 951 MMCFD. The gap between demand and supply (Indigenous + LNG) was around 447 MMCFD during FY 2021-22. This gap is expected to increase to around 968 MMCFD by FY 2024-25 and 2,220 MMCFD by the end of FY 2029-23. The demand is expected to increase from 4,436 MMCFD in FY 2021-22 to 5,551 MMCFD in FY 2029-30, whereas supplies (indigenous + LNG) are forecasted to decline from 3,989 MMCFD to 3,331 MMCFD during the same period.



### 1.3 Gas Consumption by Sectors

The main consumer of natural gas is the power sector, consuming over 32 percent (1,227.5 MMCFD), followed by domestic 22 percent (847 MMCFD) and fertilizer 20 percent (753 MMCFD) respectively. Other categories such as General Industry consume 17 percent (653 MMCFD) and commercial 2 percent (74 MMCFD) of the total gas consumed during FY 23.

Figure 3: Gas Consumption by Sectors

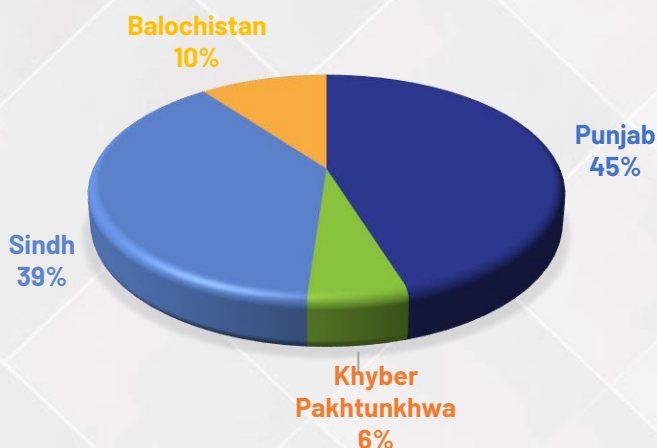


Source: Energy Year Book 23

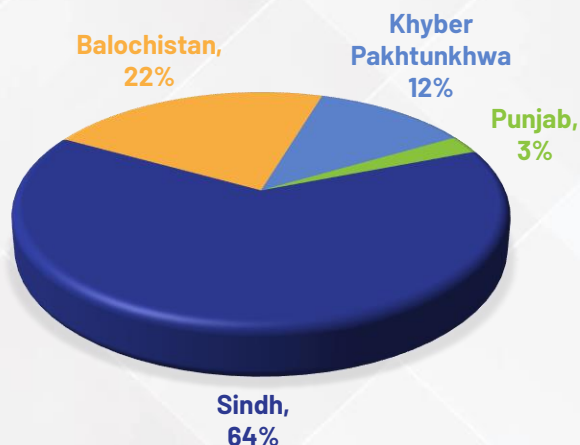
The province-wise gas consumption data for FY 23 shows that Punjab accounts for 45 percent (1,514 MMCFD) of the total consumption, followed by Sindh at 39 percent (1,298 MMCFD), Balochistan at 10 percent (341 MMCFD), and Khyber Pakhtunkhwa (KP) at 6 percent (202 MMCFD). In contrast, gas production by province reveals that Sindh contributes the most, with a 64 percent share, followed by Balochistan at 22 percent, KP at 12 percent, and Punjab at only 3 percent.

Figure 4: Gas Consumption & Production by Province

GAS CONSUMPTION BY PROVINCES  
FY 23



GAS PRODUCTION BY PROVINCES  
FY 23



Source: Energy Year Book 23

## 2. Prices & Cross-Subsidy

- The government has historically provided substantial subsidies to the residential and fertilizer sectors, given their direct impact on the population. Despite the recent price adjustments, gas prices for residential users, both in the protected and non-protected categories, remained relatively low, with only modest increases across the different consumption slabs. Residential consumers, divided into eight volume-based slabs, experienced price hikes ranging from 5% to 67%, with the protected categories maintaining the lowest prices, between 72 cents/MMBtu and \$1.26/MMBtu.
- The most significant price increase was for fertilizer companies, which saw rates surge by approximately 175% to PKR 1,597 (\$5.75)/MMBtu from around \$2/MMBtu previously, as per OGRA's notification. In contrast, most other categories saw minimal price increases, with the exception of captive gas-fired power plants, where prices rose by 10% to 15%, reaching PKR 2,750 (\$9.87)/MMBtu.
- Despite the price increases across all categories, the rise for protected consumers remained significantly lower than for others. Following the proposed increase, tariffs for various consumer categories will adjust accordingly: the 0.25 hm<sup>3</sup> category will pay Rs242, the 0.5 hm<sup>3</sup> category Rs300, the 0.6 hm<sup>3</sup> category Rs400, and the 0.9 hm<sup>3</sup> category Rs500 per MMBtu. Protected consumers constitute 57 percent of the total nationwide consumers.
- The priority given to domestic consumers has resulted in the preferential allocation of natural gas to households, often leaving the industrial, power, and commercial sectors with insufficient supply. While ensuring energy security for households is crucial, overemphasizing domestic consumers has stunted the growth of other key sectors.
- The industrial sector, vital for economic growth, employment, and export revenues, is particularly affected. Neglecting its energy needs undermines its potential and negatively impacts the nation's economic progress. The industrial sector faces a burden of Rs 129 billion due to the cross-subsidy provided to the residential sector.

### 3. Conclusion

- The current cost of natural gas is approximately Rs 1,466.5 per MMBTU (USD 5.23 per MMBTU), yet the government charges industries between Rs 2,150 and Rs 2,750 per MMBTU (USD 7.67 to 9.82 per MMBTU) to cross-subsidize other sectors. The government should ensure that industries are charged only the actual cost of gas, without imposing additional surcharges. Any necessary subsidies should be provided through the national budget rather than through cross-subsidization
- The existing billing methodology, which is based on consumption, is fundamentally flawed. High-income households can qualify for protected status during periods of low consumption, distorting the intended subsidy benefits. The billing methodology should be revised to reflect residential space rather than consumption. Currently, SSGC and SNGP serve approximately 10.7 million customers, with 60% being residential, and 57% of these residential customers fall under the protected category.
- Direct subsidies should be provided to these customers to ensure utility cash coverage. The government should either provide alternative fuel options or reduce gas prices. APTMA has requested concessions on power tariffs, not on gas tariffs, primarily because they use 90-95% biomass to produce steam.
- The cost of steam via biomass is Rs 2,500-3,000 per MMBTU, whereas it is Rs 7,000-7,500 per MMBTU via natural gas. The high cost of natural gas has severely impacted the competitiveness of Karachi's industry, which contributes 54% to total exports, 52% to textile exports, and 48% to the national GDP.

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