

GAS UTILITIES

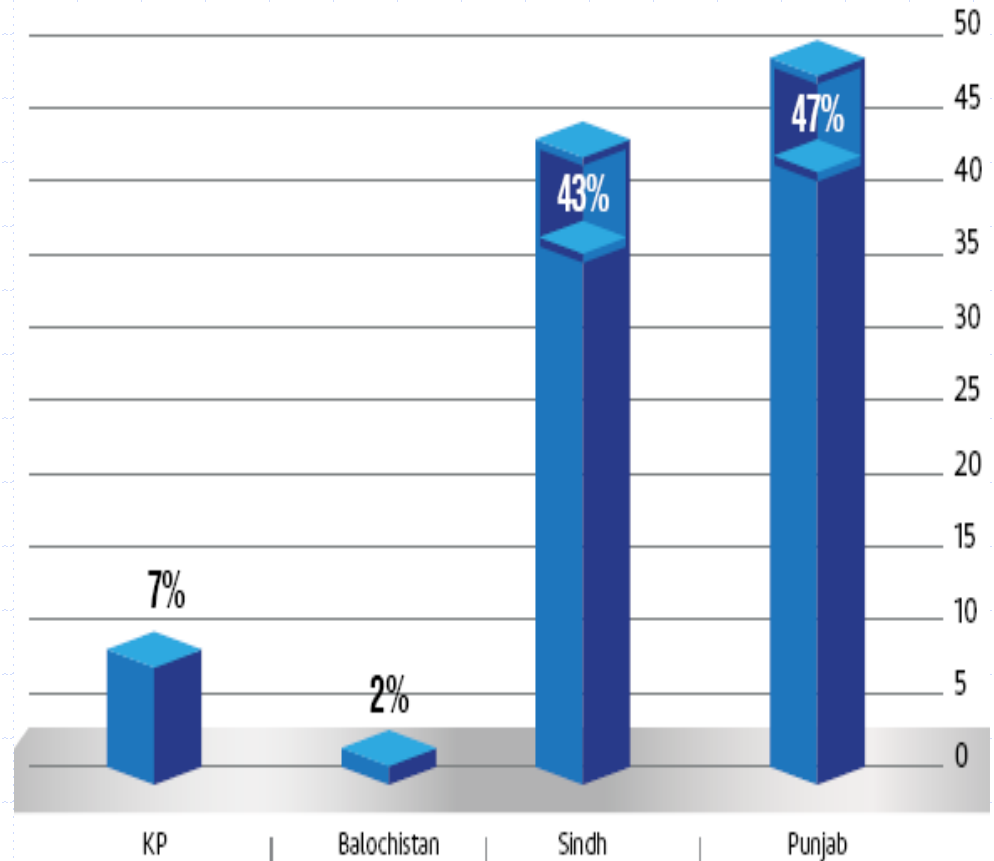
SECTOR OVERVIEW

Gas Utilities | Sector Snapshot

- During the FY 2016-17, total supply of natural gas in the country, including imported RLNG, has reached 4,131MMcfd.
- Currently, there exists a supply gap which is presently managed through load shedding and load management by gas utilities companies. Meanwhile, Government of Pakistan (GoP) is working on various projects; importing indigenous gas, addition of RLNG through regasification terminals and respective enhancement of pipeline capacities to meet the supply deficiency.
- Two gas distribution companies [SNGPL & SSGC] operate in Pakistan with a cumulative transmission and distribution network of 168,686KMs (end-Jun17) and serve ~8.6mln customers.
- Gas Distribution – a regulated sector | OGRA – the regulator – determines annual tariff.
- Guaranteed annual return on average operating assets | All costs and CAPEX are subject to approval.

Utilities Production & Consumption for FY17 | Province wise

Provinces	Consumption (mmcf/d)	
	FY 2015-16	FY2016-17
Punjab	1,154	1,372
Sindh	1,256	1,262
Baluchistan	51	69
KP	266	212
Total	2,727	2,915*

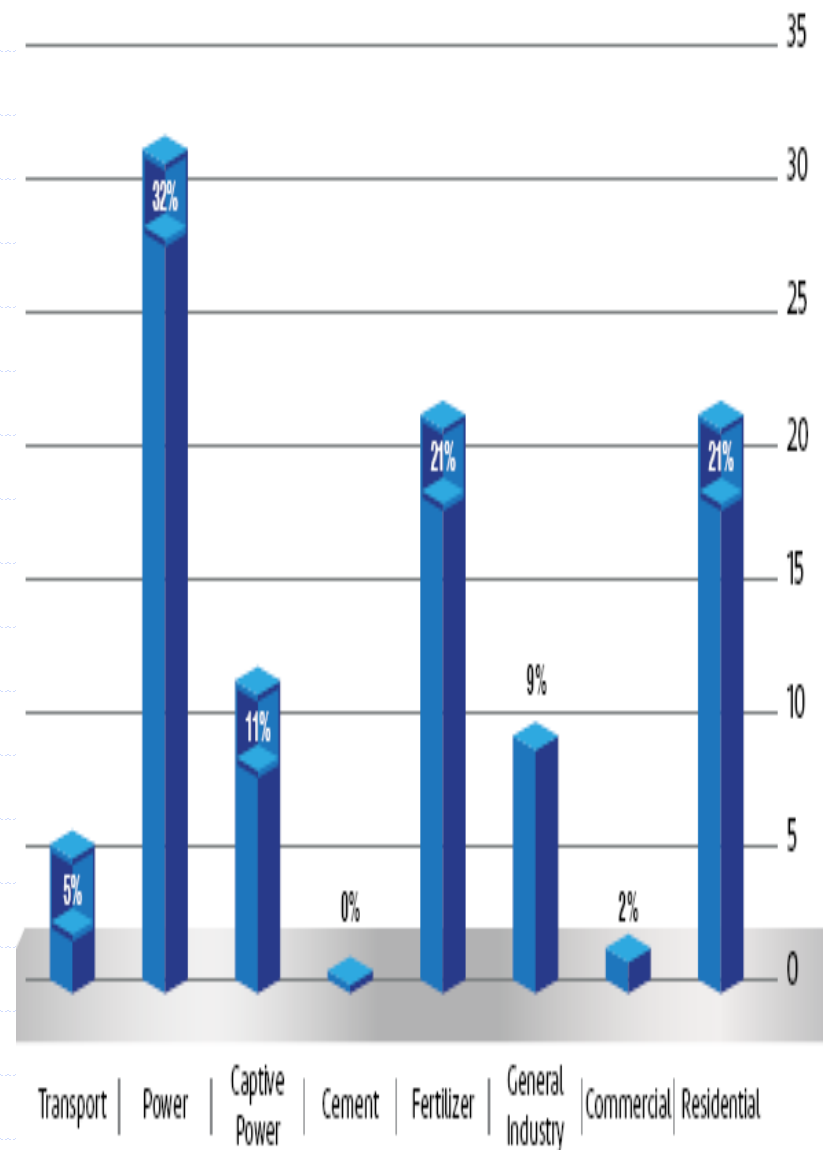


- Sindh and Punjab are major consumers of SSGC and SNGPL System’s supply; 47% and 43% respectively

**It excludes gas supplied by Mari Petroleum and Pakistan Petroleum Limited of 667mmcf/d and 615mmcf/d respectively.*

Gas | Production & Consumption for FY17 | Sector wise

Sr. #	Sector	SNGPL System	SSGC System	Independent System	Total	% age Share
1.	Residential	527	269	0	796	21
2.	Commercial	62	28	0	90	2
3.	General Industry	172	154	0	326	9
4.	Fertilizer	181	59	531	771	21
5.	Cement	1	1	0	2	0
6.	Captive Power	204	189	0	393	11
7.	Power	424	222	534	1,180	32
8.	Transport	114	70	0	184	5
	Sub-Total	1,684	992	1,065	3,741	100
9.	Own use	11	5	0	16	-
10	UFG, T&D and other losses	170	204	0	374	-
	Grand Total	1,865	1,201	1,065	4,131	-



Gas Utilities | Number of Consumers

	Sector	SNGPL				SSGCL			
		Punjab	KPK	AJK	Total	Karachi	Sindh Interior	Baluchistan	Total
1	Domestic	4,938,525	725,797	6,993	5,671,315	1,760,001	793,123	259,087	2,812,211
2	Commercial	49,202	9,268	115	58,585	15,898	4,206	2,660	22,794
3	Industrial	5,867	820	2	6,689	3,497	640	59	4,196
	Grand Total	4,993,594	735,885	7,110	5,736,589	1,779,396	797,969	261,806	2,839,171

- SNGPL is almost double of SSGC in number of consumers.
- Larger chunk is secured by domestic consumers.

Gas Utilities | Transmission & Distribution Network

Kilometers

	end-Jun17	end-Jun16	end-Jun15	end-Jun12
Punjab	100,752	93,965	87,544	70,990
Transmission	6,971	5,960	5,947	6,373
Distribution & Services	93,781	88,005	81,597	64,617
Sindh	38,274	37,622	38,519	32,740
* Transmission	593	546	2,798	2,645
Distribution & Services	37,681	37,076	35,721	30,095
KPK	17,699	16,773	15,331	12,248
Transmission	1,263	1,261	1,252	1,212
Distribution & Services	16,436	15,512	14,079	11,036
Balochistan	7,966	7,805	8,122	7,365
*Transmission	126	120	753	675
Distribution & Services	7,840	7,685	7,369	6,690
Total	164,691	156,166	149,516	123,343
Transmission	8,953	7,888	10,750	10,905
Distribution & Services	155,738	148,278	138,766	112,438
Growth in total network	5.5%	4.4%		

- Massive growth on YoY in network – transmission largely stagnant while growth witnessed in distribution and services
- Growth is tilted towards Punjab followed by Sindh and KPK

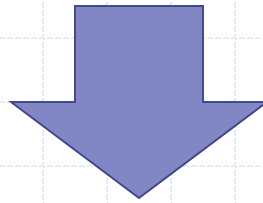
Gas Utilities | UFG | Trend

SNGPL						
	FY17	FY16	FY15	FY14	FY13	FY12
Gas Purchased (MMCF)	680,712	609,753	526,905	587,116	646,156	682,689
Sales Volume (MMCF)	615,003	535,061	463,393	506,355	552,272	597,272
UFG Volume – Actual (MMCF)	39,547	46,652	57,229	61,510	71,252	68,842
UFG – OGRA Benchmark	4.5%	4.5%	4.5%	4.5%	4.5%	7.0%
UFG – Actual	8.1%	9.2%	11.0%	10.6%	11.2%	10.2%
UFG Disallowance (PKR in mln)	5,448	7,518	11,639	12,262	13,917	6,269
SSGC						
Gas Purchased (MMCF)	436,509	468,299	434,613	423,665	419,275	406,551
Sales Volume (MMCF)	362,313	404,020	362,510	356,628	373,645	364,409
UFG Volume (MMCF)	58,010	64,279	59,063	58,417	35,254	43,821
UFG - OGRA Benchmark	4.5%	4.5%	7.0%	7.0%	7.0%	7.0%
UFG – Actual	13.29%	13.7%	13.6%	13.8%	8.4%	10.8%
UFG Disallowance (PKR in mln)	38,367	14,100	10,282	9,944	1,920	4,469
Total						
Gas Purchased (MMCF)	1,117,221	1,078,052	961,518	1,010,781	1,065,431	1,089,240
Sales Volume (MMCF)	977,316	939,081	825,903	862,983	925,917	961,681
Internal Consumption & Others (MMCF)	58,010	28,040	19,323	27,871	33,008	14,896
UFG Volume (MMCF)	97,558	110,931	116,292	119,927	106,506	112,663
UFG Disallowance (PKR in mln)	43,815	21,618	21,921	22,206	15,837	10,738

- The calculation of UFG benchmark is revised by the regulatory authority from July 1st, 2017.
- Among both utilities, the actual UFG remains high for SSGCL.

Gas Utilities | UFG Benchmark Calculation

$$\text{UFG Allowance} = \text{Volume} \times (\text{Rate1} + \text{Rate2} \times \text{Beta})$$



Total UFG Allowance in volume for a financial year

Volume of gas available for sale in a year

Rate 1 = Benchmark Rate based on international practices for technical losses usually inherent to a gas supply

Rate 2 = The study recognizes that Sui Companies have to operate under challenging conditions as compared to the world at large. Accordingly, additional allowance factor is suggested to cover impact of gas losses due to shift in the sales mix from bulk towards retail consumers expanding the network and making it prone to theft, leakages and data/meter errors. Similarly, impact of factors like non-recovery of gas bills from law and order affected areas is included.

Beta denotes the cumulative efficiency score as determined by OGRA of Key Monitoring Indicators based on a mutually agreed UFG control program for a financial year.

Key Risks | Sector

Key Risks:

- Indigenous gas production going down
- Gas Utilities become part of circular debt – large payables and receivables standing on balance sheet of both utilities
- Large Amount of GDS receivable from government due to low consumer prices
- Unaccounted for Gas (UFG) Volume | Theft and Leakage
- Poor Law and Order & Pilfered Volume by Non-Consumer
- Regulatory and legal delays in decisions
- Old distribution Infrastructure | Heavy capex requirement for replacement

Bibliography

- SNGPL Financial Statements
- Ministry of Petroleum and Natural Resources
<http://www.mpnr.gov.pk/mpnr/userfiles1/file/MPNR%20Monitoring%20Report%20Final%2027042017.pdf>
- Petroleum Industry Report 2016-17
<http://ogra.org.pk/images/data/downloads/1489734488.pdf>

Analysts	<i>Sehar Fatima</i> <i>Senior Financial Analyst</i> Sehar.fatima@pacra.com	Jhangeer Haneef <i>Unit Head – Ratings</i> jhangeer@pacra.com
Contact Number: +92 42 3586 9504		

DISCLAIMER

PACRA has used due care in preparation of this document. Our information has been obtained from sources we consider to be reliable but its accuracy or completeness is not guaranteed. The information in this document may be copied or otherwise reproduced, in whole or in part, provided the source is duly acknowledged. The presentation should not be relied upon as professional advice