

Pakistan Power Sector

Share of Coal in power mix has reached 32%

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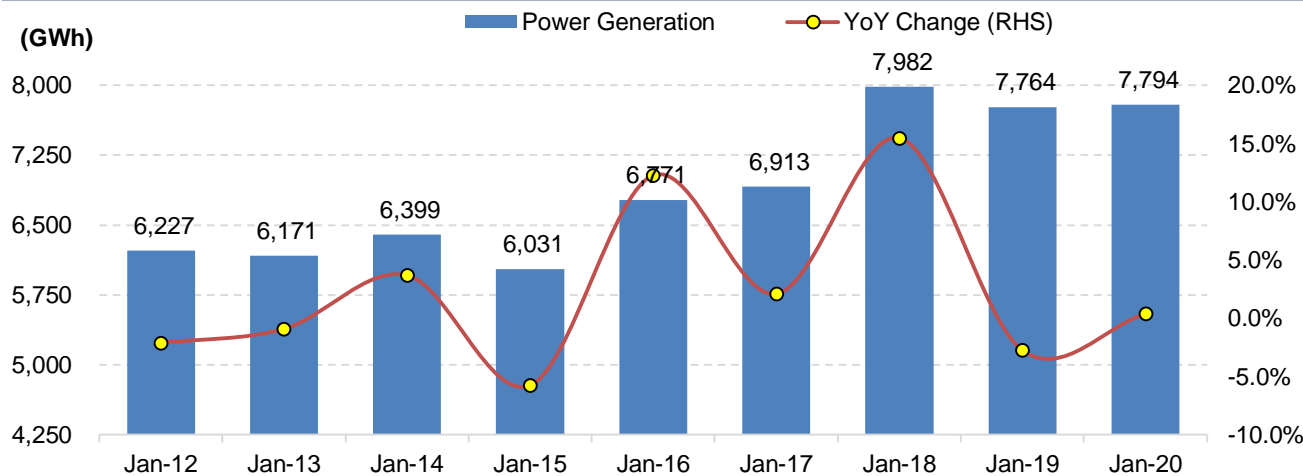
Best Equity Research
Analyst: 2017

Pakistan Power Sector

Power Generation up by 1.8% During 7MFY20

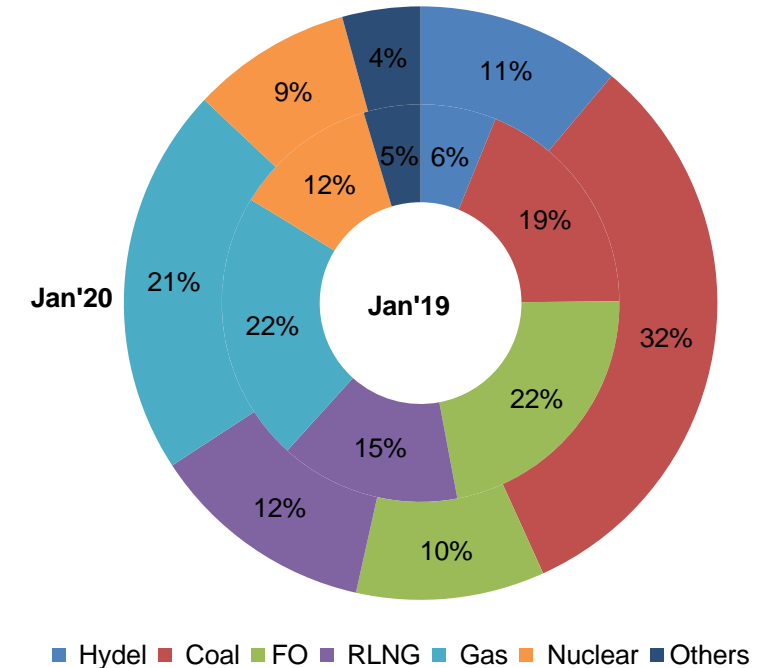
- Power generation remained 7,794 GWh (10,475 MW) during Jan'20, compared to 7,764 GWh (10,435 MW) during Jan'19.
- Major contributors during Jan'20 remained Coal, Gas, RLNG, Hydel, FO and Nuclear. Hydel based power generation went up by 82% YoY followed by 72% YoY rise in coal based generation. However, FO, Nuclear, RLNG and Gas based generation went down by 54% YoY, 25% YoY, 16% YoY and 3% YoY, respectively.
- Fuel cost for power generation went down by 18% YoY to PKR 5.99/KWh on the back of higher generation on hydel and coal. During 7MFY20, power generation went up by 1.8% YoY to settle at 74,261 GWh. Given higher generation on hydel and coal, fuel costs have shrunk by 8.5% YoY to average at PKR 4.99/KWh during 7MFY20.

Exhibit: Historical Power Generation during the month of January



Source (s): NEPRA, AHL Research

Exhibit: Power Mix During Jan'20 and Jan'19



Source (s): NEPRA, AHL Research

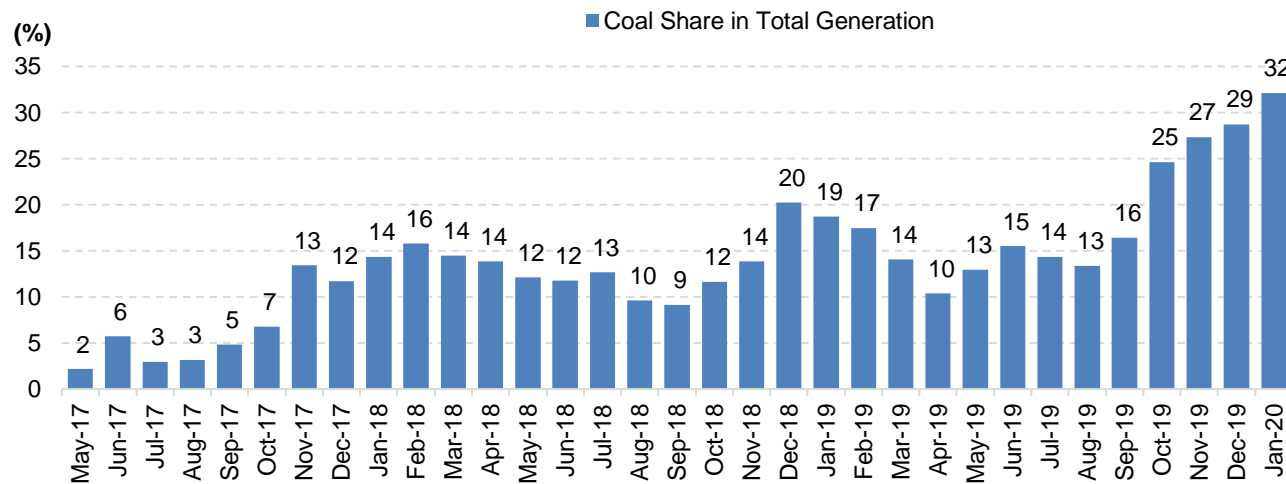
Pakistan Power Sector

Share of coal in power mix has reached 32%

Coal based Power generation up by 72% YoY during Jan'20

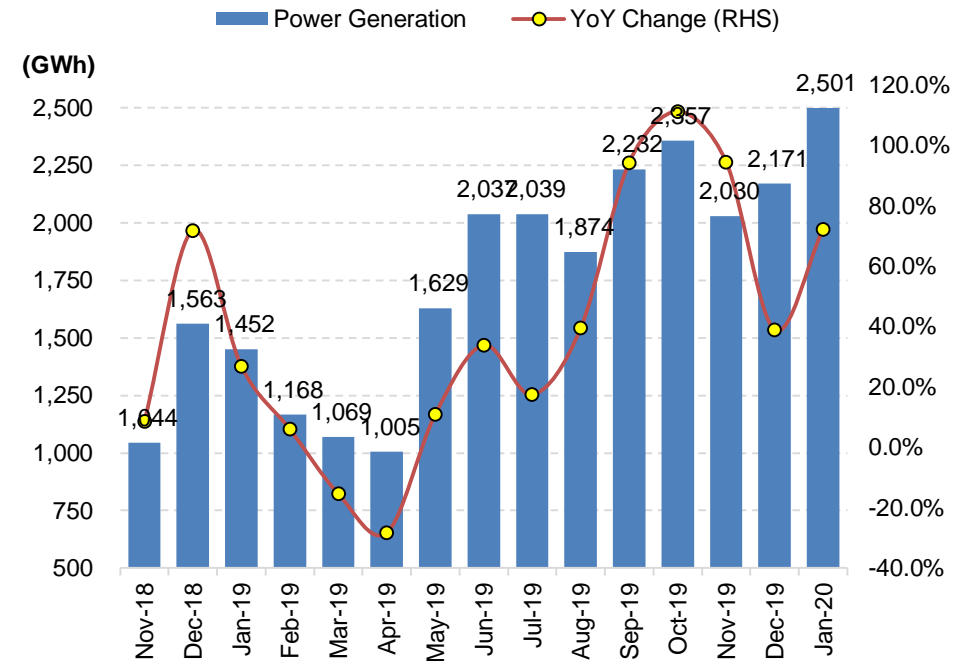
- Coal-based generation was witnessed at 2,501GWh during Jan'20.
- Induction of China Power Hub Generation and Engro Powergen Thar in the system was the primary reason behind this surge.

Exhibit: Historical Share of Coal in Total Generation



Source (s): NEPRA, AHL Research

Exhibit: Historical Coal based Power Generation



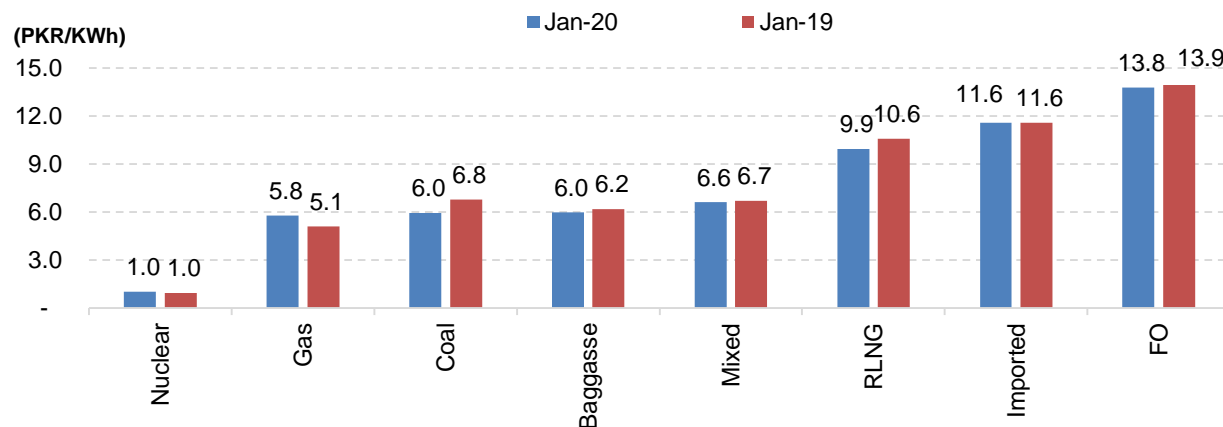
Source (s): NEPRA, AHL Research

Pakistan Power Sector

Fuel cost down by 18.1% YoY during Jan'20

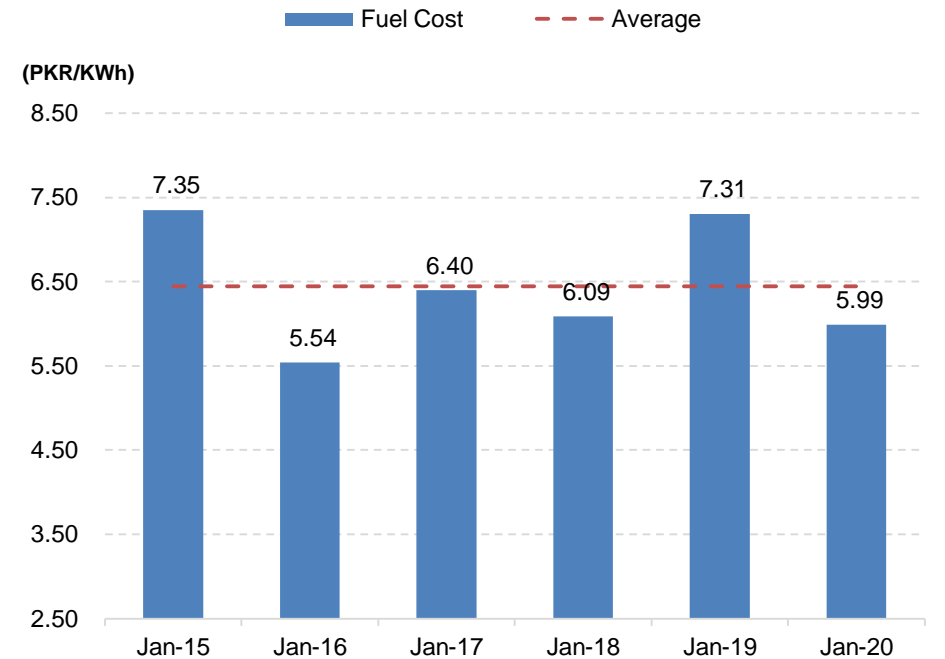
- The decline in fuel cost was led by the following reasons:
 - Coal-based generation cost witnessed a decline of 12.4% YoY attributable to 6.3% YoY decline in international coal prices.
 - FO-based generation cost witnessed a decline of 1.1% YoY, while FO-based generation also went down by 54% to 801 GWh. FO is relatively expensive source of power generation compared with coal.
 - Hydel-based (no fuel cost) power generation witnessed an increase of 82% YoY to 868 GWh.
 - Bagasse-based cost of generation went down by 3.3% YoY to PKR 6.0/KWh.
 - Wind-based power generation went up by 0.8% YoY to 158 GWh.
 - Solar-based power generation also went up by 3.8% YoY to 45 GWh.

Exhibit: Source wise fuel cost during Jan'20 and Jan'19



Source (s): NEPRA, AHL Research

Exhibit: Historical Fuel Cost during January



Source (s): NEPRA, AHL Research

Pakistan Power Sector

Coal and Hydel generation have replaced FO and Gas

Exhibit: Power Generation

GWh	Jan-20	Jan-19	YoY	Dec-19	MoM	7MFY20	7MFY19	YoY
Coal	2,501	1,452	72.3%	2,171	15.2%	15,204	9,404	61.7%
Gas	1,654	1,709	-3.3%	1,146	44.3%	9,623	12,879	-25.3%
RLNG	958	1,138	-15.9%	1,135	-15.6%	14,811	14,998	-1.3%
Hydel	868	478	81.7%	1,723	-49.6%	23,280	19,415	19.9%
FO	801	1,722	-53.5%	367	118.4%	3,291	7,365	-55.3%
Nuclear	681	906	-24.8%	700	-2.7%	5,353	5,557	-3.7%
Other	332	359	-7.5%	315	5.3%	2,698	3,303	-18.3%
Total	7,794	7,764	0.4%	7,557	3.1%	74,261	72,922	1.8%
<i>Fuel Cost*</i>	5.99	7.31	-18.1%	5.01	19.5%	4.99	5.45	-8.5%

Source (s): NEPRA, AHL Research, * PKR/KWh

Pakistan Power Sector

Load Factor of Major Power Plants

Exhibit: Load Factor of Major Power Plants

	Capacity (MW)	Jan-20		Dec-19		Jan-19	
		Generation*	Load Factor	Generation*	Load Factor	Generation*	Load Factor
RLNG Power Plants							
Bhikki	1,180	-	-	98	11.2%	244	27.8%
Haveli Bahadur Shah	1,230	781	85.3%	765	83.6%	440	48.1%
Balloki	1,322	148	15.0%	282	28.7%	407	41.4%
Total	3,732	929	33.4%	1,145	41.2%	1,090	39.3%
Coal Power Plants							
Sahiwal Power Plant	1,320	818	83.3%	622	63.3%	711	72.4%
Port Qasim Power Plant	1,320	862	87.7%	769	78.3%	741	75.5%
China Power Hub Gen	1,320	393	40.0%	417	42.5%	-	-
Engro PowerGen Thar	660	428	87.2%	363	73.9%	-	-
Total	4,620	2,501	72.8%	2,171	63.2%	1,452	42.2%
Major Listed IPPs							
KAPCO	1,336	329	33.1%	145	14.6%	344	34.7%
HUBC (Hub Plant)	1,281	-	-	-	-	172	18.1%
HUBC (Narowal Plant)	214	67	42.0%	27	17.2%	80	50.2%
NPL	195	16	11.2%	23	15.9%	67	46.1%
NCPL	196	45	30.7%	25	17.4%	66	45.6%
KOHE	124	45	48.8%	25	26.8%	60	65.1%
LPL	350	21	13.8%	6	1.8%	147	53.9%
PKGP	345	35	13.8%	5	1.8%	138	53.9%
EPQL	213	91	57.6%	44	27.7%	111	70.0%

Source (s): NEPRA, AHL Research, *GWh

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