

SUI SOUTHERN GAS COMPANY LIM
STATEMENT OF GAS SALES
ERR Petition For FY 2020-21

Table # C-6

	January/21						February/21						March/21					
	MMCFD	MMCF	MMMBTU	Sales Rs Million	GDS Rs Million		MMCFD	MMCF	MMMBTU	Sales Rs Million	GDS Rs Million		MMCFD	MMCF	MMMBTU	Sales Rs Million	GDS Rs Million	
KARACHI (UNIT - A)																		
POWER - KESC	24.4	756	728	600.200	21.539		7.9	221	213	175.628	6.303		22.1	684	660	543.595	19.507	
POWER - BINQASIM	42.1	1,304	1,257	1,035.530	37.161		54.2	1,517	1,463	1,205.183	43.249		69.7	2,159	2,082	1,715.194	61.551	
CEMENT	0.4	12	12	14.772	0.527		0.4	12	11	14.526	0.518		0.6	18	17	22.106	0.789	
FERTILIZER - Feedstock	8.0	249	240	72.011	(110.234)		33.3	933	899	269.737	(412.913)		46.4	1,439	1,387	416.124	(637.003)	
FERTILIZER - Power	0.9	28	27	27.559	0.968		3.9	110	106	107.775	3.785		0.9	28	27	27.894	0.980	
PAK STEEL	2.1	65	63	63.976	2.247		2.1	60	58	58.759	2.064		2.1	65	62	63.602	2.234	
CNG STATIONS	36.3	1,124	1,084	1,390.203	49.042		35.0	979	944	1,210.589	42.706		35.7	1,106	1,067	1,368.501	48.276	
CAPTIVE POWER	72.2	2,237	2,157	2,202.089	77.343		73.7	2,063	1,989	2,030.591	71.319		74.4	2,307	2,224	2,270.692	79.752	
CAPTIVE POWER (TEXTILE)	76.7	2,377	2,291	1,800.764	64.608		74.1	2,076	2,001	1,572.723	56.426		75.8	2,351	2,267	1,781.496	63.916	
ZERO-RATED INDUSTRIES	54.2	1,679	1,619	1,272.447	45.653		56.2	1,574	1,518	1,192.924	42.800		54.4	1,685	1,624	1,276.706	45.805	
GENERAL INDUSTRIES	102.9	3,190	3,076	3,140.149	110.290		99.8	2,795	2,695	2,751.125	96.626		99.1	3,073	2,963	3,024.766	106.237	
COMMERCIAL	22.2	687	662	825.762	25.519		21.9	612	590	735.389	22.726		20.5	635	612	763.075	23.582	
DOMESTIC	189.4	5,870	5,659	2,327.182	(566.784)		222.8	6,238	6,013	2,472.815	(602.253)		200.2	6,206	5,983	2,460.454	(599.242)	
SUB TOTAL 'A'	631.6	19,578	18,873	14,772.643	(242.123)		685.3	19,189	18,498	13,797.765	(626.644)		701.9	21,758	20,974	15,734.204	(783.615)	
SINDH (UNIT - B)																		
POWER - WAPDA	1.7	52	50	41.305	1.482		-	-	-	-	-		6.9	213	206	169.380	6.078	
NOORABAD POWER PLANT	17.3	537	518	426.558	15.307		17.0	477	460	379.057	13.603		19.2	596	575	473.581	16.995	
CEMENT	0.0	1	1	1.231	0.044		0.0	1	1	1.477	0.053		0.0	1	1	1.604	0.057	
CNG STATIONS	24.8	770	742	952.609	33.605		22.8	639	616	790.259	27.878		24.1	748	721	925.436	32.646	
CAPTIVE POWER	35.9	1,114	1,074	1,096.633	38.516		35.9	1,004	968	988.340	34.713		38.8	1,204	1,161	1,184.922	41.617	
CAPTIVE POWER (TEXTILE)	30.8	954	919	722.485	25.921		30.6	856	826	648.846	23.279		32.2	997	961	755.695	27.113	
ZERO-RATED INDUSTRIES	0.9	27	26	20.091	0.721		0.8	23	22	17.279	0.620		0.9	27	26	20.594	0.739	
GENERAL INDUSTRIES	15.4	477	459	469.047	16.474		13.8	386	372	379.544	13.331		13.1	405	390	398.375	13.992	
COMMERCIAL	4.9	153	147	183.371	5.667		4.8	135	130	162.618	5.026		4.5	139	134	167.429	5.174	
DOMESTIC	97.7	3,029	2,920	1,198.489	(297.535)		115.2	3,226	3,110	1,276.349	(316.864)		83.7	2,593	2,500	1,026.197	(254.762)	
SUB TOTAL 'B'	229.4	7,113	6,856	5,111.820	(159.797)		241.0	6,747	6,504	4,643.771	(198.363)		223.4	6,925	6,676	5,123.212	(110.350)	
QUETTA (ONGDP)																		
POWER - WAPDA	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	
HABIBULLAH COASTAL POWER	19.6	608	586	482.956	17.331		16.6	465	449	369.605	13.264		15.6	483	466	383.577	13.765	
CNG STATIONS	2.7	83	80	102.986	3.633		2.6	74	71	91.117	3.214		2.5	77	75	95.721	3.377	
CAPTIVE POWER	0.1	4	3	3.473	0.122		0.1	2	2	2.084	0.073		0.1	2	2	2.084	0.073	
GENERAL INDUSTRIES	1.6	51	49	50.271	1.766		1.8	51	49	50.404	1.770		1.7	53	51	52.162	1.832	
COMMERCIAL	3.7	115	111	138.584	4.283		3.9	110	106	132.598	4.098		3.5	107	103	128.577	3.974	
DOMESTIC	65.9	2,043	1,969	927.515	(142.301)		82.0	2,297	2,214	1,042.914	(160.006)		63.6	1,972	1,901	895.435	(137.379)	
SUB TOTAL 'C'	93.7	2,904	2,799	1,705.786	(115.167)		107.1	2,999	2,891	1,688.720	(137.587)		86.9	2,694	2,597	1,557.556	(114.359)	
Decrease in Sales Value and GDS due to Customers in Litigation																		
TOTAL																		
TOTAL RUNG	954.7	29,595	28,529	21,590.250	(517.086)		1,033.4	28,935	27,894	20,130.256	(962.594)		1,012.2	31,377	30,247	22,414.972	(1,008.324)	
GRAND TOTAL	72.6	2,250	2,325	4,151.933	-		73.2	2,049	2,117	3,780.238	-		73.8	2,286	2,362	4,218.595	-	
	1,027.2	31,844	30,854	25,742.183	(517.086)		1,106.6	30,984	30,010	23,910.494	(962.594)		1,085.9	33,663	32,610	26,633.567	(1,008.324)	

SUI SOUTHERN GAS COMPANY LIM
STATEMENT OF GAS SALES
ERR Petition For FY 2020-21

Table # C-6

	April/21					May/21					June/21				
	MMCFD	MMCF	MMMBTU	Sales Rs Million	GDS Rs Million	MMCFD	MMCF	MMMBTU	Sales Rs Million	GDS Rs Million	MMCFD	MMCF	MMMBTU	Sales Rs Million	GDS Rs Million
KARACHI (UNIT - A)															
POWER - KESC	54.0	1,621	1,562	1,287,359	46,198	65.0	2,016	1,944	1,601,499	57,471	67.4	2,021	1,948	1,605,184	57,604
POWER - BINQASIM	87.3	2,620	2,525	2,080,867	74,674	83.4	2,586	2,493	2,053,839	73,704	79.2	2,376	2,291	1,887,473	67,734
CEMENT	0.5	14	13	16,842	0.601	0.6	18	17	21,624	0.772	0.6	17	17	21,177	0.756
FERTILIZER - Feedstock	59.3	1,779	1,715	514,394	(787,434)	60.4	1,873	1,805	541,560	(829,020)	57.9	1,736	1,673	501,919	(768,338)
FERTILIZER - Power	0.8	24	23	23,564	0.828	0.6	19	19	18,935	0.665	0.8	23	22	22,764	0.800
PAK STEEL	2.1	62	60	61,156	2,148	2.1	64	62	63,281	2,223	2.1	62	60	60,843	2,137
CNG STATIONS	40.0	1,200	1,156	1,483,576	52,336	36.4	1,127	1,086	1,393,787	49,168	36.7	1,100	1,060	1,359,885	47,972
CAPTIVE POWER	84.1	2,524	2,433	2,484,463	87,260	84.5	2,619	2,524	2,577,507	90,528	78.5	2,355	2,270	2,317,852	81,409
CAPTIVE POWER (TEXTILE)	84.0	2,519	2,428	1,908,639	68,478	82.8	2,566	2,474	1,944,281	69,757	78.8	2,365	2,280	1,792,231	64,301
ZERO-RATED INDUSTRIES	58.8	1,763	1,700	1,335,846	47,927	56.8	1,760	1,697	1,333,649	47,848	49.4	1,482	1,428	1,122,765	40,282
GENERAL INDUSTRIES	106.2	3,186	3,071	3,135,845	110,139	99.2	3,076	2,966	3,027,978	106,350	84.2	2,525	2,434	2,485,184	87,286
COMMERCIAL	22.2	665	641	798,903	24,689	16.7	518	500	623,024	19,254	19.8	593	572	712,832	22,029
DOMESTIC	170.7	5,122	4,938	2,030,629	(494,559)	164.9	5,113	4,929	2,026,974	(493,669)	155.1	4,653	4,485	1,844,513	(449,230)
SUB TOTAL 'A'	769.9	23,097	22,266	17,162,083	(766,715)	753.4	23,355	22,514	17,227,937	(804,948)	710.2	21,307	20,540	15,734,621	(745,259)
SINDH (UNIT - B)															
POWER - WAPDA	16.9	508	490	403,566	14,482	47.3	1,465	1,413	1,164,014	41,772	37.2	1,115	1,074	885,378	31,773
NOORIABAD POWER PLANT	20.0	600	579	476,898	17,114	19.6	607	585	482,039	17,298	19.5	585	564	464,660	16,675
CEMENT	0.0	1	1	1,381	0.049	0.0	1	1	1,144	0.041	0.0	1	1	1,016	0.036
CNG STATIONS	27.5	826	796	1,021,428	36,033	25.4	786	758	971,986	34,288	28.4	853	822	1,055,008	37,217
CAPTIVE POWER	43.5	1,305	1,258	1,284,162	45,103	37.7	1,169	1,127	1,150,236	40,399	36.2	1,087	1,048	1,069,504	37,564
CAPTIVE POWER (TEXTILE)	35.0	1,049	1,011	794,636	28,510	34.2	1,061	1,022	803,568	28,830	31.9	956	921	723,987	25,975
ZERO-RATED INDUSTRIES	1.0	30	28	22,356	0.802	0.9	26	26	20,059	0.720	0.7	20	19	15,219	0.546
GENERAL INDUSTRIES	14.6	439	423	432,188	15,180	14.1	439	423	431,655	15,161	10.0	300	289	295,240	10,370
COMMERCIAL	4.8	143	137	171,348	5,295	3.9	122	118	147,133	4,547	4.5	135	130	161,704	4,997
DOMESTIC	71.9	2,158	2,080	853,712	(211,941)	66.1	2,049	1,975	810,661	(201,253)	65.7	1,971	1,900	779,831	(193,599)
SUB TOTAL 'B'	235.3	7,058	6,804	5,461,675	(49,373)	249.2	7,724	7,446	5,982,495	(18,197)	234.0	7,021	6,768	5,451,547	(28,447)
QUETTA (ONGDP)															
POWER - WAPDA	-	-	287	236,810	8,498	-	-	394	324,771	11,655	-	-	367	302,397	10,852
HABIBULLAH COASTAL POWER	9.9	298	80	98,647	3,480	13.2	409	71	91,131	3,215	12.7	381	78	100,067	3,530
CNG STATIONS	2.7	80	77	2,073	0.073	2.4	74	2	1,740	0.061	2.7	81	2	2,318	0.081
CAPTIVE POWER	0.1	2	2	51,014	1,792	0.1	2	2	48,235	1,694	0.1	2	2	31,594	1,110
GENERAL INDUSTRIES	1.7	52	50	119,559	3,695	1.6	49	47	89,864	2,777	1.1	32	31	104,127	3,218
COMMERCIAL	3.3	99	96	773,323	(118,645)	2.4	75	72	710,522	(109,010)	2.9	87	84	561,792	(86,191)
DOMESTIC	56.8	1,703	1,642	1,281,425	(101,107)	50.5	1,565	1,508	1,266,262	(89,608)	41.2	1,237	1,193	1,102,295	(67,401)
SUB TOTAL 'C'	74.5	2,234	2,154	1,281,425	(101,107)	70.1	2,173	2,095	1,266,262	(89,608)	60.7	1,820	1,754	1,102,295	(67,401)
Decrease in Sales Value and GDS due to Customers in Litigation															
TOTAL	1,079.6	32,389	31,223	23,905,183	(917,196)	1,072.7	33,252	32,055	24,476,694	(912,753)	1,004.9	30,148	29,063	22,288,463	(841,107)
TOTAL RLNG	74.3	2,230	2,304	4,114,767	-	74.9	2,323	2,400	4,285,257	-	75.1	2,253	2,328	4,156,593	-
GRAND TOTAL	1,154.0	34,620	33,528	28,019,950	(917,196)	1,147.6	35,575	34,455	28,761,951	(912,753)	1,080.0	32,401	31,390	26,445,056	(841,107)

SUI SOUTHERN GAS COMPANY LIM
STATEMENT OF GAS SALES
ERR Petition For FY 2020-21

Table # C-6

	July - December 2020						January - June 2021						TOTAL					
	MMCFD	MMCF	MMMBTU	Sales Rs Million	GDS Rs Million		MMCFD	MMCF	MMMBTU	Sales Rs Million	GDS Rs Million		MMCFD	MMCF	MMMBTU	Sales Rs Million	GDS Rs Million	
KARACHI (UNIT - A)																		
POWER - KESC	49.7	9,138	8,809	7,258,642	260,483		40.4	7,319	7,055	5,813,465	208,622		45.1	16,457	15,864	13,072,107	469,105	
POWER - BINQASIM	72.4	13,327	12,847	10,585,771	379,880		69.4	12,562	12,109	9,978,086	358,073		70.9	25,888	24,956	20,563,857	737,953	
CEMENT	0.8	144	139	177,268	6,326		0.5	90	87	111,047	3,963		0.6	234	226	288,315	10,289	
FERTILIZER - Feedstock	54.4	10,018	9,657	2,897,206	(4,435,042)		44.2	8,007	7,719	2,315,744	(3,544,942)		49.4	18,025	17,377	5,212,950	(7,979,984)	
FERTILIZER - Power	1.9	341	329	335,627	11,788		1.3	232	224	228,490	8,025		1.6	573	553	564,117	19,813	
PAK STEEL	2.0	371	358	365,155	12,825		2.1	378	364	371,617	13,052		2.1	749	722	736,772	25,877	
CNG STATIONS	40.6	7,472	7,203	9,241,552	326,011		36.7	6,635	6,396	8,206,541	289,500		38.7	14,107	13,599	17,448,094	615,511	
CAPTIVE POWER	92.3	16,979	16,368	16,711,551	586,950		77.9	14,105	13,598	13,883,195	487,612		85.2	31,085	29,965	30,594,745	1,074,562	
CAPTIVE POWER (TEXTILE)	78.8	14,506	13,984	10,991,343	394,346		78.8	14,254	13,741	10,800,133	387,486		78.8	28,760	27,725	21,791,476	781,832	
ZERO-RATED INDUSTRIES	50.4	9,265	8,931	7,019,769	251,854		54.9	9,944	9,586	7,534,338	270,316		52.6	19,208	18,517	14,554,106	522,170	
GENERAL INDUSTRIES	106.1	19,529	18,826	19,221,004	675,088		98.6	17,846	17,204	17,565,047	616,927		102.4	37,375	36,029	36,786,051	1,292,015	
COMMERCIAL	21.6	3,971	3,828	4,772,256	147,480		20.5	3,710	3,577	4,458,985	137,799		21.0	7,682	7,405	9,231,241	285,280	
DOMESTIC	156.3	28,763	27,728	11,402,874	(2,777,165)		183.4	33,202	32,007	13,162,566	(3,205,737)		169.8	61,965	59,734	24,565,440	(5,982,901)	
SUB TOTAL 'A'	727.3	133,823	129,006	100,980,016	(4,159,174)		708.8	128,284	123,666	94,429,254	(3,969,305)		718.1	262,107	252,672	195,409,270	(8,128,479)	
SINDHI (UNIT - B)																		
POWER - WAPDA	20.0	3,672	3,540	2,916,802	104,672		18.5	3,353	3,233	2,663,644	95,587		19.2	7,025	6,772	5,580,446	200,259	
NOORIABAD POWER PLANT	18.0	3,305	3,186	2,625,280	94,211		18.8	3,403	3,280	2,702,793	96,992		18.4	6,708	6,466	5,328,073	191,203	
CEMENT	0.0	1	1	1,231	0,044		0.0	6	6	7,853	0,280		0.0	7	7	9,084	0,324	
CNG STATIONS	28.5	5,246	5,057	6,488,259	228,884		25.5	4,622	4,456	5,716,726	201,667		27.0	9,868	9,513	12,204,985	430,552	
CAPTIVE POWER	44.7	8,223	7,927	8,093,616	284,267		38.0	6,882	6,634	6,773,796	237,912		41.4	15,105	14,562	14,867,411	522,180	
CAPTIVE POWER (TEXTILE)	36.2	6,660	6,420	5,045,936	181,037		32.4	5,872	5,661	4,449,218	159,628		34.3	12,531	12,080	9,495,153	340,666	
ZERO-RATED INDUSTRIES	0.7	126	121	95,100	3,412		0.8	153	147	115,599	4,147		0.8	278	268	210,698	7,559	
GENERAL INDUSTRIES	13.9	2,566	2,473	2,525,220	88,692		13.5	2,445	2,357	2,406,049	84,506		13.7	5,010	4,830	4,931,269	173,198	
COMMERCIAL	4.6	845	814	1,015,054	31,369		4.6	827	797	993,604	30,706		4.6	1,671	1,611	2,008,658	62,075	
DOMESTIC	64.2	11,814	11,389	4,674,637	(1,160,517)		83.0	15,025	14,484	5,945,239	(1,475,954)		73.5	26,839	25,873	10,619,876	(2,636,471)	
SUB TOTAL 'B'	230.7	42,457	40,928	33,481,134	(143,928)		235.3	42,588	41,055	31,774,520	(564,527)		233.0	85,044	81,983	65,255,654	(708,455)	
QUETTA (ONGDP)																		
POWER - WAPDA	20.9	3,837	3,699	3,047,867	109,376		14.6	2,644	2,549	2,100,115	75,365		17.8	6,481	6,248	5,147,982	184,740	
HABIBULLAH COASTAL POWER	3.6	661	637	816,975	28,820		2.6	469	452	579,669	20,449		3.1	1,129	1,089	1,396,644	49,269	
CNG STATIONS	0.1	21	20	20,836	0,732		0.1	14	13	13,771	0,484		0.1	35	34	34,607	1,215	
CAPTIVE POWER	1.4	255	246	251,266	8,825		1.6	288	278	283,680	9,964		1.5	544	524	534,945	18,789	
GENERAL INDUSTRIES	3.0	553	533	664,924	20,549		3.3	594	572	713,308	22,044		3.1	1,147	1,106	1,378,233	42,593	
COMMERCIAL	32.3	5,945	5,731	2,699,347	(414,139)		59.8	10,816	10,427	4,911,502	(753,533)		45.9	16,761	16,158	7,610,849	(1,167,672)	
DOMESTIC	61.3	11,272	10,866	7,501,216	(245,838)		81.9	14,825	14,291	8,602,044	(625,228)		71.5	26,097	25,157	16,103,260	(871,066)	
SUB TOTAL 'C'																		
Decrease in Sales Value and GDS due to Customers in Litigation																		
TOTAL																		
TOTAL RING	1,019.3	187,552	180,800	141,962,366	(4,548,940)		1,025.9	185,697	179,012	134,805,818	(5,159,060)		1,022.6	373,249	359,812	276,245,897	(10,230,287)	
GRAND TOTAL	70.5	12,972	13,411	23,224,466	-		74.0	13,391	13,835	24,707,383	-		72.2	26,363	27,246	47,931,849	(10,230,287)	
	1,089.8	200,524	194,211	165,186,832	(4,548,940)		1,099.9	199,088	192,847	159,513,201	(5,159,060)		1,094.8	399,611	387,058	324,177,746	(10,230,287)	

SUI SOUTHERN GAS COMPANY LIMITED

Table # C-7

BASIS / ASSUMPTIONSERR FOR FY 2020-21**Exchange Parity Rs per US\$****Crude oil US\$ per Barrel**

Average FOB Prices

Frieght

Average C&F Prices

MMBTU/BBL

HSFO US\$ per M.Ton.

Average FOB Prices

Frieght

Average C&F Prices

MMBTU per M.Ton.

Rs per MMBTU

SSGCL Average Cost of Gas

SNGPL Average Cost of Gas

Weighted Average Cost of Gas

Rs per MCF

Petition			Determination		
Jul.-Dec.20	Jan.-Jun.21	Averages	Jul.-Dec.19	Jan.-Jun.20	Averages
160.00	165.00	162.50	158.39	159.00	158.70
63.4813	63.4813	63.4813	65.8672	63.7713	64.8193
0.5187	0.5187	0.5187	0.5187	0.5187	0.5187
64.0000	64.0000	64.0000	66.3859	64.2900	65.3380
5.6098	5.6098		5.6098	5.6098	
355.6299	355.6299	355.6299	392.9990	337.2093	365.1042
4.3701	4.3701	4.3701	4.3701	4.3701	4.3701
360.0000	360.0000	360.0000	397.3691	341.5794	369.4743
40.7920	40.7920		40.7920	40.7920	
		581.04			602.84
		476.95			486.10
		532.37			541.80
		509.54			525.15

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Table # C-8

SUI SOUTHERN GAS COMPANY LIMITED
STATEMENT OF FIELD WISE INDIGENOUS
GAS PURCHASES
FOR ERR FY 2020-21

S.No.	GAS FIELD	MMCFD	MMCF	MMMBTU	Rs per MMBTU	Rupees Million
1	Sui	110.00	40,150	38,335	461.08	17,675.818
2	Kandhkot	1.49	544	446	257.98	114.986
3	Mazarani	3.00	1,095	1,111	280.00	311.080
4	Gambat Block - Wafiq/Shahdad-(XI)	69.58	25,396	24,222	396.94	9,614.825
6	Adam X-1 / Hala	12.90	4,709	4,903	423.54	2,076.442
7	Hadaf X-1 & Badeel X-1	0.72	264	264	423.54	111.816
8	Badin Block	50.00	18,250	20,777	414.10	8,603.805
9	Khipro Block - Naimat Basal	274.59	100,225	88,354	787.08	69,541.549
10	Mirpurkhas Block - Kausar	20.00	7,300	8,092	778.55	6,300.287
11	Mitha	8.19	2,989	2,994	778.55	2,330.847
12	Kotri	3.42	1,248	1,248	778.55	971.841
13	ALIYABAD	10.00	3,650	3,650	778.55	2,841.699
14	Kadanwari	33.37	12,180	12,196	1,341.44	16,360.576
15	Bhit	118.37	43,205	41,023	570.72	23,412.211
16	Miano	30.85	11,260	11,263	531.36	5,984.785
17	Sawan	10.00	3,650	3,673	531.36	1,951.420
18	Maher / Mubarak Block	23.00	8,395	9,047	396.94	3,591.143
19	Sofia	12.00	4,380	4,719	396.94	1,873.141
20	Latif	10.50	3,834	3,856	423.54	1,633.065
21	Zamzama	8.17	2,982	2,378	516.96	1,229.285
22	Kirther (Rehman)-EWT	19.54	7,130	5,978	809.19	4,837.620
23	Rizq - EWT	15.46	5,645	5,258	809.19	4,254.564
24	Zargoan	13.00	4,745	4,509	552.96	2,493.358
25	Mari	0.92	337	246	257.98	63.478
26	Sujawal / Sujjal	2.40	877	925	501.13	463.395
27	Sujjal	12.10	4,415	4,415	501.13	2,212.607
28	Aqeeq-1	1.92	700	738	501.13	369.859
29	SNGPL Towns-(Ghotki, Rustam, SherAli, Ubaro, etc.)	4.10	1,497	1,300	780.00	1,013.869
30	Sari / Hundi	2.00	730	655	792.16	518.958
31	Sinjhoro	33.00	12,045	12,209	396.94	4,846.471
32	Bobi	3.00	1,095	1,215	559.17	679.401
33	Pasaki Deep & Kunhar Deep	144.10	52,598	53,941	418.34	22,565.292
34	Tay/Dars	55.90	20,402	21,095	396.94	8,373.491
35	Pakhro / Noorai Jagir/ Daru	9.00	3,285	3,794	367.33	1,393.543
36	Nur Bagla fields	3.00	1,095	1,181	367.33	433.874
37	Dachrapur / Jakhro / Gopang	1.59	579	652	367.33	239.437
38	Jakhro	0.96	351	395	367.33	145.009
39	Chutto-01	6.81	2,485	2,907	367.33	1,067.725
40	Bitrism	4.60	1,678	1,716	367.33	630.468
41	Thal	5.22	1,904	1,904	367.33	699.255
42	Suleman	2.05	747	747	367.33	274.394
43	Mangrio	0.62	228	228	367.33	83.751
44	Ayesha / Aminah / Ayesha (North)	14.80	5,402	5,402	414.10	2,236.977
45	Zainab	0.47	171	171	414.10	70.811
51	Gas Purchases	1,166.71	425,848	414,131	571.07	236,498.228
52	Excise duty				10.00	4,128.310
53	SSGCL Average input Cost of Gas	1,166.71	425,848	414,131	581.04	240,626.539
54						
55	SNGPL Average input Cost of Gas	1,060.03	386,911	363,777	476.95	173,504.698
56	Weighted Average Cost of Gas (WACOG)	2,226.74	812,759	777,908		414,131.237
	Rs per MMBTU				532.37	
57	Rs per MCF				509.54	

SUI SOUTHERN GAS COMPANY LIMITED
STATEMENT OF FIELD WISE INDIGENOUS
GAS PURCHASES
FOR ERR FY 2020-21

S.No.	GAS FIELD	Jul-20				Aug-20			
		MMCFD	MMCF	MMMBTU	Rupees Million	MMCFD	MMCF	MMMBTU	Rupees Million
1	Sui	110.00	3,410	3,256	1,501.234	110.00	3,410	3,256	1,501.234
2	Kandhkot	1.49	46	38	9.766	1.49	46	38	9.766
3	Mazarani	3.00	93	94	26.421	3.00	93	94	26.421
4	Gambat Block - Wafiq/Shahdad-(XI)	65.00	2,015	1,922	762.871	65.00	2,015	1,922	762.871
6	Adam X-1 / Hala	12.90	400	416	176.355	12.90	400	416	176.355
7	Hadaf X-1 & Badeel X-1	-	-	-	-	-	-	-	-
8	Badin Block	50.00	1,550	1,765	730.734	50.00	1,550	1,765	730.734
9	Khipro Block - Naimat Basal	280.00	8,680	7,652	6,022.655	280.00	8,680	7,652	6,022.655
10	Mirpurkhas Block - Kausar	20.00	620	687	535.093	20.00	620	687	535.093
11	Mitha	8.19	254	254	197.962	8.19	254	254	197.962
12	Kotri	3.42	106	106	82.540	3.42	106	106	82.540
13	ALIYABAD	10.00	310	310	241.350	10.00	310	310	241.350
	Kadanwari	40.00	1,240	1,242	1,665.609	40.00	1,240	1,242	1,665.609
15	Bhit	125.00	3,875	3,679	2,099.811	125.00	3,875	3,679	2,099.811
16	Miano	35.00	1,085	1,085	576.687	35.00	1,085	1,085	576.687
17	Sawan	10.00	310	312	165.737	10.00	310	312	165.737
18	Maher / Mubarak Block	23.00	713	768	305.001	23.00	713	768	305.001
19	Sofia	12.00	372	401	159.089	12.00	372	401	159.089
20	Latif	11.00	341	343	145.247	11.00	341	343	145.247
21	Zamzama	10.00	310	247	127.793	10.00	310	247	127.793
22	Kirther (Rehman)-EWT	19.54	606	508	410.866	19.54	606	508	410.866
23	Rizq - EWT	15.46	479	447	361.347	15.46	479	447	361.347
24	Zargoan	13.00	403	383	211.765	13.00	403	383	211.765
25	Mari	0.92	29	21	5.391	0.92	29	21	5.391
26	Sujawal / Sujjal	2.49	77	81	40.749	2.49	77	81	40.749
27	Sujjal	12.52	388	388	194.568	12.52	388	388	194.568
28	Aqeeq-1	1.99	62	65	32.524	1.99	62	65	32.524
29	SNGPL Towns-(Ghotki, Rustam, SherAli, Ubaro, etc.)	4.10	127	110	86.109	4.10	127	110	86.109
30	Sari / Hundi	2.00	62	56	44.076	2.00	62	56	44.076
31	Sinjhoro	33.00	1,023	1,037	411.618	33.00	1,023	1,037	411.618
32	Bobli	3.00	93	103	57.703	3.00	93	103	57.703
33	Pasaki Deep & Kunnar Deep	144.10	4,467	4,581	1,916.504	144.10	4,467	4,581	1,916.504
	Tay/Dars	55.90	1,733	1,792	711.173	55.90	1,733	1,792	711.173
	Pakhro / Noorai Jagir/ Daru	9.00	279	322	118.356	9.00	279	322	118.356
36	Nur Bagla fields	3.00	93	100	36.850	3.00	93	100	36.850
37	Dachrapur / Jakhro / Gopang	1.59	49	55	20.336	1.59	49	55	20.336
38	Jakhro	0.96	30	34	12.316	0.96	30	34	12.316
39	Chutto-01	6.81	211	247	90.683	6.81	211	247	90.683
40	Bitrism	4.60	143	146	53.547	4.60	143	146	53.547
41	Thal	5.22	162	162	59.389	5.22	162	162	59.389
42	Suleman	-	-	-	-	-	-	-	-
43	Mangrio	-	-	-	-	-	-	-	-
44	Ayesha / Aminah / Ayesha (North)	14.80	459	459	189.990	14.80	459	459	189.990
45	Zainab	-	-	-	-	-	-	-	-
51	Gas Purchases	1,183.99	36,704	35,674	20,597.812	1,183.99	36,704	35,674	20,597.812
52	Excise duty	-	-	-	355.638	-	-	-	355.638
53	SSGCL Average input Cost of Gas	1,183.99	36,704	35,674	20,953.449	1,183.99	36,704	35,674	20,953.449
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SUI SOUTHERN GAS COMPANY LIMITED
STATEMENT OF FIELD WISE INDIGENOUS
GAS PURCHASES
FOR ERR FY 2020-21

S.No.	GAS FIELD	Sep-20				Oct-20			
		MMCFD	MMCF	MMMBTU	Rupees Million	MMCFD	MMCF	MMMBTU	Rupees Million
1	Sui	110.00	3,300	3,151	1,452.807	110.00	3,410	3,256	1,501.234
2	Kandhkot	1.49	45	37	9.451	1.49	46	38	9.766
3	Mazarani	3.00	90	91	25.568	3.00	93	94	26.421
4	Gambat Block - Wafiq/Shahdad-(XI)	65.00	1,950	1,860	738.262	67.00	2,077	1,981	786.344
6	Adam X-1 / Hala	12.90	387	403	170.666	12.90	400	416	176.355
7	Hadaf X-1 & Badeel X-1	-	-	-	-	-	-	-	-
8	Badin Block	50.00	1,500	1,708	707.162	50.00	1,550	1,765	730.734
9	Khipro Block - Naimat Basal	280.00	8,400	7,405	5,828.376	275.00	8,525	7,515	5,915.108
10	Mirpurkhas Block - Kausar	20.00	600	665	517.832	20.00	620	687	535.093
11	Mitha	8.19	246	246	191.576	8.19	254	254	197.962
12	Kotri	3.42	103	103	79.877	3.42	106	106	82.540
13	ALIYABAD	10.00	300	300	233.564	10.00	310	310	241.350
14	Kadanwari	35.00	1,050	1,051	1,410.395	35.00	1,085	1,086	1,457.408
15	Bhit	120.00	3,600	3,418	1,950.792	120.00	3,720	3,532	2,015.818
16	Miano	30.00	900	900	478.358	30.00	930	930	494.303
17	Sawan	10.00	300	302	160.391	10.00	310	312	165.737
18	Maher / Mubarak Block	23.00	690	744	295.162	23.00	713	768	305.001
19	Sofia	12.00	360	388	153.957	12.00	372	401	159.089
20	Latif	11.00	330	332	140.561	11.00	341	343	145.247
21	Zamzama	10.00	300	239	123.671	8.00	248	198	102.234
22	Kirther (Rehman)-EWT	19.54	586	491	397.613	19.54	606	508	410.866
23	Rizq - EWT	15.46	464	432	349.690	15.46	479	447	361.347
24	Zargoan	13.00	390	371	204.933	13.00	403	383	211.765
25	Mari	0.92	28	20	5.217	0.92	29	21	5.391
26	Sujawal / Sujjal	2.49	75	79	39.435	2.49	77	81	40.749
27	Sujjal	12.52	376	376	188.291	12.52	388	388	194.568
28	Aqeeq-1	1.99	60	63	31.475	1.99	62	65	32.524
29	SNGPL Towns-(Ghotki, Rustam, SherAli, Ubaro, etc.)	4.10	123	107	83.332	4.10	127	110	86.109
30	Sari / Hundi	2.00	60	54	42.654	2.00	62	56	44.076
31	Sinjhoro	33.00	990	1,004	398.340	33.00	1,023	1,037	411.618
32	Bobli	3.00	90	100	55.841	3.00	93	103	57.703
	Pasaki Deep & Kunrar Deep	144.10	4,323	4,433	1,854.682	144.10	4,467	4,581	1,916.504
	Tay/Dars	55.90	1,677	1,734	688.232	55.90	1,733	1,792	711.173
35	Pakhro / Noorai Jagir/ Daru	9.00	270	312	114.538	9.00	279	322	118.356
36	Nur Bagla fields	3.00	90	97	35.661	3.00	93	100	36.850
37	Dachrapur / Jakhro / Gopang	1.59	48	54	19.680	1.59	49	55	20.336
38	Jakhro	0.96	29	32	11.919	0.96	30	34	12.316
39	Chutto-01	6.81	204	239	87.758	6.81	211	247	90.683
40	Bitrism	4.60	138	141	51.819	4.60	143	146	53.547
41	Thal	5.22	156	156	57.473	5.22	162	162	59.389
42	Suleman	-	-	-	-	-	-	-	-
43	Mangrio	-	-	-	-	-	-	-	-
44	Ayesha / Aminah / Ayesha (North)	14.80	444	444	183.861	14.80	459	459	189.990
45	Zainab	-	-	-	-	-	-	-	-
51	Gas Purchases	1,168.99	35,070	34,081	19,570.872	1,163.99	36,084	35,090	20,113.601
52	Excise duty				339.739				349.794
53	SSGCL Average input Cost of Gas	1,168.99	35,070	34,081	19,910.611	1,163.99	36,084	35,090	20,463.395

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Table # C-8

SUI SOUTHERN GAS COMPANY LIMITED
STATEMENT OF FIELD WISE INDIGENOUS
GAS PURCHASES
FOR ERR FY 2020-21

S.No.	GAS FIELD	Nov-20				Dec-20			
		MMCFD	MMCF	MMMBTU	Rupees Million	MMCFD	MMCF	MMMBTU	Rupees Million
1	Sui	110.00	3,300	3,151	1,452.807	110.00	3,410	3,256	1,501.234
2	Kandhkot	1.49	45	37	9.451	1.49	46	38	9.766
3	Mazarani	3.00	90	91	25.568	3.00	93	94	26.421
4	Gambat Block - Wafiq/Shahdad-(XI)	67.00	2,010	1,917	760.978	68.00	2,108	2,011	798.080
6	Adam X-1 / Hala	12.90	387	403	170.666	12.90	400	416	176.355
7	Hadaf X-1 & Badeel X-1	-	-	-	-	-	-	-	-
8	Badin Block	50.00	1,500	1,708	707.162	50.00	1,550	1,765	730.734
9	Khipro Block - Naimat Basal	275.00	8,250	7,273	5,724.298	275.00	8,525	7,515	5,915.108
10	Mirpurkhas Block - Kausar	20.00	600	665	517.832	20.00	620	687	535.093
11	Mitha	8.19	246	246	191.576	8.19	254	254	197.962
12	Kotri	3.42	103	103	79.877	3.42	106	106	82.540
13	ALIYABAD	10.00	300	300	233.564	10.00	310	310	241.350
	Kadanwari	35.00	1,050	1,051	1,410.395	35.00	1,085	1,086	1,457.408
15	Bhit	120.00	3,600	3,418	1,950.792	120.00	3,720	3,532	2,015.818
16	Miano	30.00	900	900	478.358	30.00	930	930	494.303
17	Sawan	10.00	300	302	160.391	10.00	310	312	165.737
18	Maher / Mubarak Block	23.00	690	744	295.162	23.00	713	768	305.001
19	Sofia	12.00	360	388	153.957	12.00	372	401	159.089
20	Latif	11.00	330	332	140.561	11.00	341	343	145.247
21	Zamzama	8.00	240	191	98.936	8.00	248	198	102.234
22	Kirther (Rehman)-EWT	19.54	586	491	397.613	19.54	606	508	410.866
23	Rizq - EWT	15.46	464	432	349.690	15.46	479	447	361.347
24	Zargoan	13.00	390	371	204.933	13.00	403	383	211.765
25	Mari	0.92	28	20	5.217	0.92	29	21	5.391
26	Sujawal / Sujjal	2.49	75	79	39.435	2.34	73	77	38.352
27	Sujjal	12.52	376	376	188.291	11.79	365	365	183.122
28	Aqeeq-1	1.99	60	63	31.475	1.87	58	61	30.611
29	SNGPL Towns-(Ghotki, Rustam, SherAli, Ubaro, etc.)	4.10	123	107	83.332	4.10	127	110	86.109
30	Sari / Hundi	2.00	60	54	42.654	2.00	62	56	44.076
31	Sinjhero	33.00	990	1,004	398.340	33.00	1,023	1,037	411.618
32	Bobi	3.00	90	100	55.841	3.00	93	103	57.703
33	Pasaki Deep & Kunnar Deep	144.10	4,323	4,433	1,854.682	144.10	4,467	4,581	1,916.504
	Tay/Dars	55.90	1,677	1,734	688.232	55.90	1,733	1,792	711.173
35	Pakhro / Noorai Jagir/ Daru	9.00	270	312	114.538	9.00	279	322	118.356
36	Nur Bagla fields	3.00	90	97	35.661	3.00	93	100	36.850
37	Dachrapur / Jakhro / Gopang	1.59	48	54	19.680	1.59	49	55	20.336
38	Jakhro	0.96	29	32	11.919	0.96	30	34	12.316
39	Chutto-01	6.81	204	239	87.758	6.81	211	247	90.683
40	Bitrism	4.60	138	141	51.819	4.60	143	146	53.547
41	Thal	5.22	156	156	57.473	5.22	162	162	59.389
42	Suleman	-	-	-	-	-	-	-	-
43	Mangrio	-	-	-	-	-	-	-	-
44	Ayesha / Aminah / Ayesha (North)	14.80	444	444	183.861	14.80	459	459	189.990
45	Zainab	-	-	-	-	-	-	-	-
51	Gas Purchases	1,163.99	34,920	33,958	19,464.776	1,163.99	36,084	35,088	20,109.583
52	Excise duty				338.510				349.775
53	SSGCL Average input Cost of Gas	1,163.99	34,920	33,958	19,803.286	1,163.99	36,084	35,088	20,459.358

Table # C-8.

SUI SOUTHERN GAS COMPANY LIMITED
STATEMENT OF FIELD WISE INDIGENOUS
GAS PURCHASES
FOR ERR FY 2020-21

S.No.	GAS FIELD	Jan-21				Feb-21			
		MMCFD	MMCF	MMMBTU	Rupees Million	MMCFD	MMCF	MMMBTU	Rupees Million
1	Sui	110.00	3,410	3,256	1,501.234	110.00	3,080	2,941	1,355.953
2	Kandhkot	1.49	46	38	9.766	1.49	42	34	8.821
3	Mazarani	3.00	93	94	26.421	3.00	84	85	23.864
4	Gambat Block - Wafiq/Shahdad-(XI)	69.00	2,139	2,040	809.817	69.00	1,932	1,843	731.448
6	Adam X-1 / Hala	12.90	400	416	176.355	12.90	361	376	159.289
7	Hadaf X-1 & Badeel X-1	-	-	-	-	-	-	-	-
8	Badin Block	50.00	1,550	1,765	730.734	50.00	1,400	1,594	660.018
9	Khipro Block - Naimat Basal	275.00	8,525	7,515	5,915.108	275.00	7,700	6,788	5,342.678
10	Mirpurkhas Block - Kausar	20.00	620	687	535.093	20.00	560	621	483.310
11	Mitha	8.19	254	254	197.962	8.19	229	230	178.805
12	Kotri	3.42	106	106	82.540	3.42	96	96	74.552
13	ALIYABAD	10.00	310	310	241.350	10.00	280	280	217.993
14	Kadanwari	30.00	930	931	1,249.207	30.00	840	841	1,128.316
15	Bhit	115.00	3,565	3,385	1,931.826	115.00	3,220	3,057	1,744.875
16	Miano	30.00	930	930	494.303	30.00	840	840	446.467
17	Sawan	10.00	310	312	165.737	10.00	280	282	149.698
18	Maher / Mubarak Block	23.00	713	768	305.001	23.00	644	694	275.485
19	Sofia	12.00	372	401	159.089	12.00	336	362	143.693
20	Latif	10.00	310	312	132.042	10.00	280	282	119.264
21	Zamzama	8.00	248	198	102.234	8.00	224	179	92.341
22	Kirther (Rehman)-EWT	19.54	606	508	410.866	19.54	547	459	371.105
23	Rizq - EWT	15.46	479	447	361.347	15.46	433	403	326.378
24	Zargoan	13.00	403	383	211.765	13.00	364	346	191.271
25	Mari	0.92	29	21	5.391	0.92	26	19	4.870
26	Sujawal / Sujjal	2.34	73	77	38.352	2.34	66	69	34.641
27	Sujjal	11.79	365	365	183.122	11.79	330	330	165.401
28	Aqeeq-1	1.87	58	61	30.611	1.87	52	55	27.648
29	SNGPL Towns-(Ghotki, Rustam, SherAli, Ubaro, etc.)	4.10	127	110	86.109	4.10	115	100	77.776
30	Sari / Hundi	2.00	62	56	44.076	2.00	56	50	39.810
31	Sinjhero	33.00	1,023	1,037	411.618	33.00	924	937	371.784
32	Bobi	3.00	93	103	57.703	3.00	84	93	52.118
	Pasaki Deep & Kunnar Deep	144.10	4,467	4,581	1,916.504	144.10	4,035	4,138	1,731.036
	Tay/Dars	55.90	1,733	1,792	711.173	55.90	1,565	1,618	642.350
35	Pakhro / Noorai Jagir/ Daru	9.00	279	322	118.356	9.00	252	291	106.902
36	Nur Bagla fields	3.00	93	100	36.850	3.00	84	91	33.283
37	Dachrapur / Jakhro / Gopang	1.59	49	55	20.336	1.59	44	50	18.368
38	Jakhro	0.96	30	34	12.316	0.96	27	30	11.124
39	Chutto-01	6.81	211	247	90.683	6.81	191	223	81.908
40	Bitrism	4.60	143	146	53.547	4.60	129	132	48.365
41	Thal	5.22	162	162	59.389	5.22	146	146	53.641
42	Suleman	-	-	-	-	-	-	-	-
43	Mangrio	-	-	-	-	-	-	-	-
44	Ayesha / Aminah / Ayesha (North)	14.80	459	459	189.990	14.80	414	414	171.604
45	Zainab	-	-	-	-	-	-	-	-
51	Gas Purchases	1,153.99	35,774	34,784	19,815.921	1,153.99	32,312	31,418	17,898.252
52	Excise duty				346.735				313.180
53	SSGCL Average input Cost of Gas	1,153.99	35,774	34,784	20,162.657	1,153.99	32,312	31,418	18,211.432

SUI SOUTHERN GAS COMPANY LIMITED
STATEMENT OF FIELD WISE INDIGENOUS
GAS PURCHASES
FOR ERR FY 2020-21

S.No.	GAS FIELD	Mar-21				Apr-21			
		MMCFD	MMCF	MMMBTU	Rupees Million	MMCFD	MMCF	MMMBTU	Rupees Million
1	Sui	110.00	3,410	3,256	1,501.234	110.00	3,300	3,151	1,452.807
2	Kandhkot	1.49	46	38	9.766	1.49	45	37	9.451
3	Mazarani	3.00	93	94	26.421	3.00	90	91	25.568
4	Gambat Block - Wafiq/Shahdad-(XI)	75.00	2,325	2,218	880.236	75.00	2,250	2,146	851.841
6	Adam X-1 / Hala	12.90	400	416	176.355	12.90	387	403	170.666
7	Hadaf X-1 & Badeel X-1	-	-	-	-	-	-	-	-
8	Badin Block	50.00	1,550	1,765	730.734	50.00	1,500	1,708	707.162
9	Khipro Block - Naimat Basal	270.00	8,370	7,379	5,807.561	270.00	8,100	7,141	5,620.220
10	Mirpurkhas Block - Kausar	20.00	620	687	535.093	20.00	600	665	517.832
11	Mitha	8.19	254	254	197.962	8.19	246	246	191.576
12	Kotri	3.42	106	106	82.540	3.42	103	103	79.877
13	ALIYABAD	10.00	310	310	241.350	10.00	300	300	233.564
14	Kadanwari	30.00	930	931	1,249.207	30.00	900	901	1,208.910
15	Bhit	115.00	3,565	3,385	1,931.826	115.00	3,450	3,276	1,869.509
16	Miano	30.00	930	930	494.303	30.00	900	900	478.358
17	Sawan	10.00	310	312	165.737	10.00	300	302	160.391
18	Maher / Mubarak Block	23.00	713	768	305.001	23.00	690	744	295.162
19	Sofia	12.00	372	401	159.089	12.00	360	388	153.957
20	Latif	10.00	310	312	132.042	10.00	300	302	127.783
21	Zamzama	7.00	217	173	89.455	7.00	210	167	86.569
22	Kirther (Rehman)-EWT	19.54	606	508	410.866	19.54	586	491	397.613
23	Rizq - EWT	15.46	479	447	361.347	15.46	464	432	349.690
24	Zargoan	13.00	403	383	211.765	13.00	390	371	204.933
25	Mari	0.92	29	21	5.391	0.92	28	20	5.217
26	Sujawal / Sujjal	2.34	73	77	38.352	2.34	70	74	37.115
27	Sujjal	11.79	365	365	183.122	11.79	354	354	177.215
28	Aqeeq-1	1.87	58	61	30.611	1.87	56	59	29.623
29	SNGPL Towns-(Ghotki, Rustam, SherAli, Ubaro, etc.)	4.10	127	110	86.109	4.10	123	107	83.332
30	Sari / Hundi	2.00	62	56	44.076	2.00	60	54	42.654
31	Sinjhoro	33.00	1,023	1,037	411.618	33.00	990	1,004	398.340
32	Bobli	3.00	93	103	57.703	3.00	90	100	55.841
33	Pasaki Deep & Kunnar Deep	144.10	4,467	4,581	1,916.504	144.10	4,323	4,433	1,854.682
	Tay/Dars	55.90	1,733	1,792	711.173	55.90	1,677	1,734	688.232
	Pakhro / Noorai Jagir/ Daru	9.00	279	322	118.356	9.00	270	312	114.538
36	Nur Bagla fields	3.00	93	100	36.850	3.00	90	97	35.661
37	Dachrapur / Jakhro / Gopang	1.59	49	55	20.336	1.59	48	54	19.680
38	Jakhro	0.96	30	34	12.316	0.96	29	32	11.919
39	Chutto-01	6.81	211	247	90.683	6.81	204	239	87.758
40	Bitrism	4.60	143	146	53.547	4.60	138	141	51.819
41	Thal	5.22	162	162	59.389	5.22	156	156	57.473
42	Suleman	-	-	-	-	-	-	-	-
43	Mangrio	-	-	-	-	-	-	-	-
44	Ayesha / Aminah / Ayesha (North)	14.80	459	459	189.990	14.80	444	444	183.861
45	Zainab	-	-	-	-	-	-	-	-
51	Gas Purchases	1,153.99	35,774	34,800	19,766.013	1,153.99	34,620	33,677	19,128.400
52	Excise duty				346.896				335.705
53	SSGCL Average input Cost of Gas	1,153.99	35,774	34,800	20,112.909	1,153.99	34,620	33,677	19,464.106

Table # C-8

SUI SOUTHERN GAS COMPANY LIMITED
STATEMENT OF FIELD WISE INDIGENOUS
GAS PURCHASES
FOR ERR FY 2020-21

S.No.	GAS FIELD	May-21				Jun-21			
		MMCFD	MMCF	MMMBTU	Rupees Million	MMCFD	MMCF	MMMBTU	Rupees Million
1	Sui	110.00	3,410	3,256	1,501.234	110.00	3,300	3,151	1,452.807
2	Kandhkot	1.49	46	38	9.766	1.49	45	37	9.451
3	Mazarani	3.00	93	94	26.421	3.00	90	91	25.568
4	Gambat Block - Wafiq/Shahdad-(XI)	75.00	2,325	2,218	880.236	75.00	2,250	2,146	851.841
6	Adam X-1 / Hala	12.90	400	416	176.355	12.90	387	403	170.666
7	Hadaif X-1 & Badeel X-1	-	-	-	-	8.80	264	264	111.816
8	Badin Block	50.00	1,550	1,765	730.734	50.00	1,500	1,708	707.162
9	Khipro Block - Naimat Basal	270.00	8,370	7,379	5,807.561	270.00	8,100	7,141	5,620.220
10	Mirpurkhas Block - Kausar	20.00	620	687	535.093	20.00	600	665	517.832
11	Mitha	8.19	254	254	197.962	8.19	246	246	191.576
12	Kotri	3.42	106	106	82.540	3.42	103	103	79.877
13	ALIYABAD	10.00	310	310	241.350	10.00	300	300	233.564
14	Kadanwari	30.00	930	931	1,249.207	30.00	900	901	1,208.910
15	Bhit	115.00	3,565	3,385	1,931.826	115.00	3,450	3,276	1,869.509
16	Miano	30.00	930	930	494.303	30.00	900	900	478.358
17	Sawan	10.00	310	312	165.737	10.00	300	302	160.391
18	Maher / Mubarak Block	23.00	713	768	305.001	23.00	690	744	295.162
19	Sofia	12.00	372	401	159.089	12.00	360	388	153.957
20	Latif	10.00	310	312	132.042	10.00	300	302	127.783
21	Zamzama	7.00	217	173	89.455	7.00	210	167	86.569
22	Kirther (Rehman)-EWT	19.54	606	508	410.866	19.54	586	491	397.613
23	Rizq - EWT	15.46	479	447	361.347	15.46	464	432	349.690
24	Zargoan	13.00	403	383	211.765	13.00	390	371	204.933
25	Mari	0.92	29	21	5.391	0.92	28	20	5.217
26	Sujawal / Sujjal	2.34	73	77	38.352	2.34	70	74	37.115
27	Sujjal	11.79	365	365	183.122	11.79	354	354	177.215
28	Aqeeq-I	1.87	58	61	30.611	1.87	56	59	29.623
29	SNGPL Towns-(Ghotki, Rustam, SherAli, Ubaro, etc.)	4.10	127	110	86.109	4.10	123	107	83.332
30	Sari / Hundi	2.00	62	56	44.076	2.00	60	54	42.654
31	Sinjhero	33.00	1,023	1,037	411.618	33.00	990	1,004	398.340
32	Bobi	3.00	93	103	57.703	3.00	90	100	55.841
33	Pasaki Deep & Kunrar Deep	144.10	4,467	4,581	1,916.504	144.10	4,323	4,433	1,854.682
34	Tay/Dars	55.90	1,733	1,792	711.173	55.90	1,677	1,734	688.232
35	Pakhro / Noorai Jagir/ Daru	9.00	279	322	118.356	9.00	270	312	114.538
36	Nur Bagla fields	3.00	93	100	36.850	3.00	90	97	35.661
37	Dachrapur / Jakhro / Gopang	1.59	49	55	20.336	1.59	48	54	19.680
38	Jakhro	0.96	30	34	12.316	0.96	29	32	11.919
39	Chutto-01	6.81	211	247	90.683	6.81	204	239	87.758
40	Bitrism	4.60	143	146	53.547	4.60	138	141	51.819
41	Thal	5.22	162	162	59.389	5.22	156	156	57.473
42	Suleman	-	-	-	-	24.90	747	747	274.394
43	Mangrio	-	-	-	-	7.60	228	228	83.751
44	Ayesha / Aminah / Ayesha (North)	14.80	459	459	189.990	14.80	444	444	183.861
45	Zainab	-	-	-	-	5.70	171	171	70.811
51	Gas Purchases	1,153.99	35,774	34,800	19,766.013	1,200.99	36,030	35,087	19,669.173
52	Excise duty				346.896				349.805
53	SSGCL Average input Cost of Gas	1,153.99	35,774	34,800	20,112.909	1,200.99	36,030	35,087	20,018.978

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Table # C-8.1

SUI SOUTHERN GAS COMPANY LIMITED
STATEMENT OF FIELD WISE INDIGENOUS
GAS PURCHASES
FOR ERR FY 2020-21

S.No.	GAS FIELD	Jul. - Dec.'20				Jan. - Jun.'21			
		MMCFD	MMCF	MMMBTU	Rupees Million	MMCFD	MMCF	MMMBTU	Rupees Million
1	Sui	110.00	20,240	19,325	8,910.549	110.00	19,910	19,010	8,765.269
2	Kandhkot	1.49	274	225	57.965	1.49	270	221	57.020
3	Mazarani	3.00	552	560	156.818	3.00	543	551	154.262
4	Gambat Block - Wafiq/Shahdad-(XI)	66.17	12,175	11,612	4,609.407	73.04	13,221	12,610	5,005.418
6	Adam X-1 / Hala	12.90	2,374	2,471	1,046.754	12.90	2,335	2,431	1,029.688
7	Hadaf X-1 & Badeel X-1	-	-	-	-	1.46	264	264	111.816
8	Badin Block	50.00	9,200	10,474	4,337.261	50.00	9,050	10,303	4,266.544
9	Khipro Block - Naimat Basal	277.50	51,060	45,012	35,428.201	271.63	49,165	43,342	34,113.347
10	Mirpurkhas Block - Kausar	20.00	3,680	4,079	3,176.035	20.00	3,620	4,013	3,124.252
11	Mitha	8.19	1,507	1,509	1,175.002	8.19	1,482	1,485	1,155.844
12	Kotri	3.42	629	629	489.914	3.42	619	619	481.927
13	ALIYABAD	10.00	1,840	1,840	1,432.528	10.00	1,810	1,810	1,409.171
14	Kadanwari	36.68	6,750	6,759	9,066.822	30.00	5,430	5,437	7,293.754
15	Bhit	121.68	22,390	21,259	12,132.841	115.00	20,815	19,764	11,279.370
16	Miano	31.68	5,830	5,832	3,098.694	30.00	5,430	5,432	2,886.091
17	Sawan	10.00	1,840	1,851	983.730	10.00	1,810	1,821	967.691
18	Maher / Mubarak Block	23.00	4,232	4,561	1,810.330	23.00	4,163	4,486	1,780.813
19	Sofia	12.00	2,208	2,379	944.268	12.00	2,172	2,340	928.873
20	Latif	11.00	2,024	2,035	862.108	10.00	1,810	1,820	770.957
21	Zamzama	9.00	1,656	1,321	682.661	7.33	1,326	1,057	546.624
22	Kirther (Rehman)-EWT	19.54	3,595	3,014	2,438.691	19.54	3,536	2,965	2,398.929
23	Rizq - EWT	15.46	2,845	2,651	2,144.767	15.46	2,799	2,607	2,109.798
24	Zargoan	13.00	2,392	2,273	1,256.925	13.00	2,353	2,236	1,236.432
25	Mari	0.92	170	124	32.000	0.92	167	122	31.478
26	Sujawal / Sujjal	2.46	453	478	239.468	2.34	424	447	223.927
27	Sujjal	12.40	2,282	2,282	1,143.408	11.79	2,134	2,134	1,069.199
28	Aqeeq-1	1.97	362	381	191.132	1.87	338	357	178.727
29	SNGPL Towns-(Ghotki, Rustam, SherAli, Ubaro, etc.)	4.10	755	655	511.101	4.10	742	645	502.768
30	Sari / Hundi	2.00	368	330	261.612	2.00	362	325	257.346
31	Sinjhero	33.00	6,072	6,155	2,443.152	33.00	5,973	6,055	2,403.318
32	Bobi	3.00	552	613	342.492	3.00	543	603	336.908
33	Pasaki Deep & Kunrar Deep	144.10	26,515	27,192	11,375.380	144.10	26,083	26,749	11,189.912
34	Tay/Dars	55.90	10,285	10,634	4,221.157	55.90	10,117	10,461	4,152.334
35	Pakhro / Noorai Jagir/ Daru	9.00	1,656	1,912	702.498	9.00	1,629	1,881	691.044
36	Nur Bagla fields	3.00	552	595	218.720	3.00	543	586	215.154
37	Dachrapur / Jakhro / Gopang	1.59	292	329	120.702	1.59	287	323	118.734
38	Jakhro	0.96	177	199	73.100	0.96	174	196	71.909
39	Chutto-01	6.81	1,253	1,465	538.250	6.81	1,232	1,441	529.474
40	Bitrism	4.60	846	865	317.825	4.60	832	851	312.643
41	Thal	5.22	960	960	352.501	5.22	944	944	346.754
42	Suleman	-	-	-	-	4.13	747	747	274.394
43	Mangrio	-	-	-	-	1.26	228	228	83.751
44	Ayesha / Aminah / Ayesha (North)	14.80	2,723	2,723	1,127.682	14.80	2,679	2,679	1,109.296
45	Zainab	-	-	-	-	0.94	171	171	70.811
51	Gas Purchases	1,171.55	215,565	209,565	120,454.455	1,161.78	210,283	204,566	116,043.773
52	Excise duty				2,089.093				2,039.218
53	SSGCL Average input Cost of Gas	1,171.55	215,565	209,565	122,543.548	1,161.78	210,283	204,566	118,082.990
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SUI SOUTHERN GAS COMPANY LIMITED
STATEMENT OF GAS UN-ACCOUNTED FOR

MMCF

CATEGORY		Determination RERR FY 2019-20 dt:-11-12-2019	ERR Petition FY 2020-21
CONSOLIDATED			
<u>1-Transmission System</u>			
Gas handled in transmission system		408,332	456,205
Gas used in Transmission System		(709)	(2,933)
Gas available in transmission system		407,623	453,273
Gas Consumed Internally - unmetered		-	(25)
Gas available (net) in transmission system	"A"	407,623	453,248
Gas passed to Distribution System through SMS (B)		407,419	453,020
Loss/(Gain) in Transmission System	(A-B)	205	228
Percentage	(A-B)/A x 100	0.05%	0.05%
<u>2- Distribution System</u>			
Gas received in Distribution Network		407,419	453,020
Damage by third party - unmetered		-	(364)
Gas available for sale (net)	"C"	407,419	452,655
Gas SOLD		355,363	399,611
Add: Gas Shrinkage		23	2,783
	"D"	355,386	402,394
Loss in Distribution System	E = C-D	52,032	50,261
Percentage	(E/Cx100)	12.77%	11.10%
3- Total UFG	A=(1C+2E)	52,237	50,489
As %age of gas available for sale	3A/(1A+2B)x100	12.82%	11.15%
<u>WORKING FOR UFG AS PER OGRA FORMAT</u>			
GAS AVAILABLE (NET) IN TRANSMISSION SYSTEM	"	407,623	453,248
Damage by third party - unmetered		-	(364)
Gas available for sale		407,623	452,883
GAS SOLD		355,386	402,394
UFG Volumes		52,237	50,489
UFG %		12.82	11.15

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SUI SOUTHERN GAS COMPANY LIMITED
PETITION FOR ESTIMATED REVENUE REQUIREMENT
FY 2020-21

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SUI SOUTHERN GAS COMPANY LIMITED

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STATUS OF MAJOR PROJECTS FY 2019-20 & FY 2020-21(ERR)

SSGC embarks upon execution of transmission projects with a core objective to increase transmission network capacity for receiving additional gas volumes available from new as well as developing gas fields namely Rehman-Rizq, Ayesha-Aminah, and Gambat South, etc. in order to meet country energy demands.

By commissioning of planned transmission projects in FY 2019-20 & FY 2020-21, SSGC's gas transmission network is expected to increase by 247 Km.

SSGC also envisages developing the infrastructure for RLNG-3 which is required to receive, transmit and distribute RLNG volume to meet the continuously increasing demand of natural gas in the country.

RLNG-3 project is subject to the availability of requested approvals, arrangements and directives from Ministry of Energy – Petroleum Division.

Based on gas allocation by Federal Government, the indigenous natural gas from new fields would also be shared with SNGPL; the gas from nearby fields will be delivered to SNGPL through Swap arrangement to the extent of available volumes and Transmission capacity at the potential delivery points namely Sawan / Sui.

A. TRANSMISSION PROJECTS (Brief, Need Analysis & Cost Benefit Analysis):

Brief on proposed major transmission projects estimated to cater escalating gas demand in the country; along with projected investment during the year under review and future projects are as follows:

SUI SOUTHERN GAS COMPANY LIMITED
STATUS OF MAJOR PROJECTS FY 2019-20 & FY 2020-21(ERR)

A.1 NEW PROJECTS/ACTIVITIES

A.1.1 12" diameter x 46Km Loopline from Rehman Gas Field to MVA Naing:

This project involves laying of 12" dia. x 46 Km transmission pipeline from Rehman Gas field to MVA Naing, the proposed pipeline will be integrated with 24" dia. Bajara Karachi pipeline to receive projected gas supply up to 90 MMSCFD.

Currently SSGC is receiving gas under existing EWT arrangements through producer's 8" dia. pipeline; the maximum flow capacity of existing pipeline is only 40 MMscfd, whereas the supply of gas is expected to increase up to 90 MMscfd therefore the proposed pipeline is required.

Pipeline construction activities are in progress and expected to be completed by January 2020 with an estimated capitalization amount of Rs 1,369 million. However left over civil job would be completed in FY 2020-21 with an estimated amount of Rs 56 million.

A.1.2 30" DIAMETER x 125 KMs Pipeline from SMS Sindh University to SMS Pakland

Increasing trend in gas supply volume from Naimat Basal, Kausar, Gambat South, and KPD gas fields and after discontinuation of swapping arrangement in lieu of RLNG; gas volumes from Kadanwari, Miano, Latif & Sawan fields have to be transported through ILBP Transmission system.

Limited existing pipeline capacity in left bank transmission system from Hyderabad to Karachi is a bottleneck for additional gas volume, and cause the curtailment of the indigenous gas supply, hence laying of 30" diameter x 125 Km transmission pipeline between Sindh University to Pakland is required. This proposed pipeline will increase the transmission system capacity up to 247 MMSCFD.

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The project has been divided into following two segments:

- (i) 30" diameter x 50 Km Pipeline from SMS Sindh University to MVA RS-4
- (ii) 30" diameter x 66 Km Pipeline from MVA RS-4 to MVA Pakland

Land Acquisition activities are under process, whereas pipeline construction activities will be commenced after completion of land acquisition process.

30" dia. x 50 Km segment is expected to be commissioned by June 2020 with an estimated capitalization amount Rs 3,350 million subject to availability of land for ROW, whereas the remaining second segment of 66 Km would be commissioned in FY 2020-21, the estimated capitalization amount in FY 2020-21 would be Rs 5,017 million.

A.1.3. 8" DIAMETER x 28 KM PIPELINE FROM AYESHA GAS FIELD

This project involves laying of 8" dia. x 28 Km transmission pipeline to integrate Ayesha Gas field with Badin Gas Pipeline at MVA Golarchi for receiving projected gas supply of 22 MMscfd.

Pipeline construction activities will be commenced after completion of land acquisition process. The proposed project is expected to be completed in June 2020, with an estimated capitalization amount of Rs. 541 million subject to availability of land for ROW. However leftover mechanical and civil job would be completed in FY 2020-21 with an estimated amount of Rs 93 million.

A.1.4. 24" DIAMETER X 31 KM PIPELINE FROM SMS KATHORE TO SMS SURJANI

24" diameter x 31 Km Transmission pipeline from SMS Kathore to SMS Surjani has been proposed to improve operational efficiency as

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STATUS OF MAJOR PROJECTS FY 2019-20 & FY 2020-21(ERR)

well as enhancing the gas distribution capacity of western region of Karachi namely Northern By-Pass Hub Town, Coastal Area of Hawks Bay, Kannup and other Industrial, Commercial and Domestic customers.

This pipeline will help in overcoming low pressure problems in SITE Industrial area and also enhance over-all system flow capacity up to 100 MMSCFD to cater future gas demand.

This pipeline will also be beneficial for transporting imported LNG gas to Karachi western region for meeting the future gas demand. The said project enhances the capacity of Transmission network which will further increase the efficiency of distribution of gas to Domestic, Industrial / Power Generation & CNG customers.

OGRA earlier allowed Rs 1,139 million in its determination on ERR FY 2012-13 for laying of 24" dia. x 31KM medium pressure pipeline that has been converted into high pressure Transmission Pipeline.

This project is now planned to be commissioned by June 2021 with estimated capitalization of Rs 1,903 million.

A.1.5. QUETTA PIPELINE CAPACITY ENHANCEMENT PROJECT:

The natural gas to Quetta region and surrounding areas is being supplied through 12" x 344 km pipeline with loop-lines arrangement of different nominal size from 18" to 24" diameter pipeline.

Supply of gas to Quetta is arranged from Bhit, Sui and other gas fields. The gas demand of Quetta city during summer is approximately 70-90 MMSCFD. However, gas demand increases drastically up to 190-200 MMSCFD during winter season.

In order to remove bottlenecks in gas supply infrastructure, 24" diameter x 34 Km loopline from Shikarpur to Jacobabad have been constructed and commissioned in December, 2017 and Rerouting of

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STATUS OF MAJOR PROJECTS FY 2019-20 & FY 2020-21(ERR)

existing QPL 12" diameter x 9Km (KM56 to KM65) and 12" diameter x 14Km (KM84 to KM96) completed in January, 2018. Whereas leftover civil work and up-gradation of metering, regulation setup at Shikarpur with 24" x 34 Km loopline is in progress, expected capitalization amount in FY 2019-20 is Rs 8 million and Rs 87 million in FY 2020-21.

Whereas compressor 01 Unit for Shikarpur is under procurement and expected to be installed and commission in September, 2020, with an estimated capitalization amount of Rs 1,969 million.

A.1.6. CHECK METERING FACILITY AT SHAHDADPUR FOR GAMBAT SOUTH FIELD GAS MEASUREMENT:

Check Metering Facility is required to be installed at RS-3 (Shahdadpur) for reconciliation of sale gas up to 150 MMSCFD supplied from PPL "Gambat South" and "Halla" Blocks field.

Frontend engineering design has been completed, procurement of required material is under process.

The installation of check metering arrangement is expected to be completed with an estimated amount of Rs 275 Million by December, 2020.

A.1.7. RE-ROUTING OF OLD PIPELINES FROM KOTRI / SUKKUR BARRAGE

S. No.	Project Description	Estimated Cost	Expected Completion Date	Remarks
1	16" diameter x 9 Km Re-route of Kotri Barrage	Rs. 708 Million	FY 2020-21	HDD
2	18" dia. x 9 km Re-route of Kotri Barrage	Rs. 750 Million	FY 2021-22	HDD
3	16" dia. x 9 km Re-route of Sukkur Barrage	Rs. 700 Million	FY 2021-22	HDD

The re-routing of above pipeline are needed since these pipeline segments are passing on the barrage structures and due to law & order

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situation pipelines are exposed and potential security risk to pipeline. Furthermore it is a direct threat to the integrity of barrage. The overhead pipelines have to be shifted to another suitable location through HDD.

Based on successful completion and commissioning of 42" dia. pipeline Indus River Crossing through HDD, the proposed re-routing schemes for the above mentioned rerouting transmission pipelines will be conducted through HDD.

Re-routing of 16" x 9 Km pipeline is required to remove the existing 16" pipeline from Kotri Barrage; which also include approximately 16" dia x 2 Km HDD across Indus River.

This project at Sr. #1 is expected to be commission in FY 2020-21 with estimated project cost of Rs 708 million.

The projects at Serial 2 & 3 are expected to be commissioned in FY 2021-22.

A.1.8. 12" DIAMETER x 344 KM QPL REHABILITATION AND INTELLIGENT PIGGING

The 12" diameter x 344 Km Quetta Pipeline (QPL) was constructed and commissioned in 1983-84 for supply of gas to Quetta and en-route towns.

The proposed Rehabilitation of 12" diameter x 344 Km QPL involves modification work on 11 number piping set-ups, replacement of reduced bore valve with full bore valves, fabrication and modification of main valve assemblies, fabrication and installation of pig launching and receiving assemblies, removal of MPL drip and installation of scrubbers, filters and controllers etc. The intelligent pigging is proposed to be carried out with the objective of establishing reliability/ integrity of the pipeline and enhance its useful life.

Table D-1

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Finalization of design for rehabilitation job is in process. The construction activities are expected to be started in June, 2020.

Rehabilitation job is expected to be completed by December 2020. Whereas, intelligent pigging of Quetta pipeline will be carried out after completion of rehabilitation job in FY 2020-21, with the total estimated capitalization amount of Rs 396 Million.

A.1.9. CONSTRUCTION OF SUBMERGED CROSSINGS IN PLACE OF EXISTING OVERHEAD PIPELINE CROSSINGS DUE TO SECURITY / SAFETY:

As per phase wise security plan agreed at Security Review Conference held in 2004 and keeping in view the current incidents and soft / exposed targets such as overhead pipeline crossings on canals near the sensitive area of Baluchistan and at Sindh. It was agreed to replace such existing overhead pipelines with submerged pipeline crossings under the canal beds and water channels to enhance pipeline security.

Out of seventeen (17) number of crossing fourteen (14) have been completed including 05 nos., commissioned. Whereas remaining 02 Nos. is expected to be completed in FY 2020-21 with an estimated amount of Rs 166 million.

The status of submerged crossing projects are as follows:

Sr. No.	Crossing	Chain age	Method of Construction	Status
1	16" dia. KP West (ILBP)	Km 122+500	HDD/T.D.	Hold
2	20" dia. Hameer Wah (IRBP)	Km 155+000	HDD	To be done in FY 2020-2021
3	20" dia. Rice Canal (IRBP)	Km 210+000	HDD	To be done in FY 2020-2021
4	18" dia. Sem Nala (QPL)	Km 48+000	T.D.*	Completed except Tie-in
5	18" dia. Patfeeder (QPL)	Km 81+000	HDD**	Completed except Tie-in
6	20" dia. Bakshoo Canal (IRBP)	Km 112+000	HDD	Completed except Tie-in
7	20" dia. Warah Canal (IRBP)	Km 135+000	HDD	Completed except Tie-in
8	18" dia. Warah Canal	Km 135+000	HDD	Completed except Tie-in

Table D-1

SUI SOUTHERN GAS COMPANY LIMITED**STATUS OF MAJOR PROJECTS FY 2019-20 & FY 2020-21(ERR)**

	(IRBP)			
9	20" dia. Ghar Canal (IRBP)	Km.160+000	T.D/HDD	Completed except Tie-in
10	20" dia. Badah Canal (IRBP)	Km 190+000	T.D.	Completed except Tie-in
11	20" dia. Damrah Canal (IRBP)	Km 198+000	T.D.	Completed except Tie-in
12	20" dia. Sehar Wah (IRBP)	Km 204+000	T.D.	Completed except Tie-in
13	18" dia. Patfeeder Canal (IRBP)	Km 20+000	HDD	Completed and Commissioned
14	20" dia. Naseer Canal (Kadanwari)	Km 227+000	HDD	Completed and Commissioned
15	16" dia. Naseer Canal (ILBP)	Km 227+000	HDD	Completed and Commissioned
16	20" dia. Rohri Canal (Kadanwari)	Km 233+00	HDD	Completed and Commissioned
17	16" dia. Rohri Canal (ILBP)	Km 233+000	HDD	Completed and Commissioned

* T.D: Trench Ditch

** HDD: Horizontal Directional Drilling

A.1.10. New Compressor Unit at Sibi Station:

The increasing gas demands and the peak consumption trends of Quetta city and en-routed areas, make it imperative for SSGC to enhance the capacity of its pipeline. This project is also linked with the SSGC's sequential efforts (QPL capacity enhancement project) to increase the capacity of gas infrastructure in the region. Moreover, due to gas shortfalls experienced in the region during winter season, SSGC is under Balochistan High Court's order to make the required gas volumes available for the city as well as meet the contractual obligations with Habibullah Coastal Power Plant.

Installation of 01 New Compressor having 200 MMscfd flow capacity has been opted on the basis of technical and financial analysis, the option for revamping of existing 60 MMcfd capacity compressors has now been dropped.

Consultancy service will be acquired for the preparation of technical specification, technical proposals evaluation, and supervision during installation, commissioning activities.

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This proposed project, installation of 01 no. compressor unit at HQ-Sibi is expected to be completed by June 2021 with an estimated cost of Rs 2,094 million.

A.1.11 UP-GRADATION OF SMS THATTA

Existing SMS set-up at Thatta is 30 years old, running on maximum capacity and will not be able to fulfil future load demands as Equipments installed like valves, regulators, safety valves and pipe/ pipe fittings have deteriorated with the passage of time. Moreover, this SMS does not have Scrubbers which are required to be installed to provide quality gas (i.e. free of dust and debris) to the customers. Therefore, up-gradation of SMS at Thatta is needed.

The required up-gradation job has been planned to be completed and commissioned in FY 2020-21 with an estimated amount of Rs. 154 million.

A.1.12 CHECK METERING FACILITY AT DARU:

In compliance of Director Audit Committee decision to carry out reconciliation of gas at POD, Check Metering facility is proposed at POD Daru. Currently 7 to 8 MMSCFD gas volume being received in SSGC System from Pakhro.

The Installation of check metering job is expected to be completed in February 2020 with an estimated amount of Rs. 63 million furthermore leftover civil jobs would be completed in FY 2020-21 with an estimated amount of Rs. 22 million.

A.2.1 METERING FOR RLNG-1 AND ARRANGEMENT FOR TIE-IN (2ND TERMINAL) AT CTS BIN QASIM (CUSTODY TRANSFER STATION) INTEGRATION ARRANGEMENT AT PAKLAND.

Check Metering skid (Ultrasonic) installation for RLNG-1 at Tie-in (CTS) Bin Qasim, Valves and Fittings for off take at CTS and inlet Headers for SSGC LNG terminal.

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Necessary integration arrangement for RLNG-1 at existing Transmission Pipeline network at Pakland with 42" dia x 17 Km.

The required Tie in and Integration arrangement for receiving RLNG from Terminal -1 as well as terminal 2 have been completed.

Metering arrangement for reconciliation of RLNG receiving from terminal 1 has been installed and commissioned with the capitalization amount of Rs. 580 million in FY 2019-20.

Furthermore Rs. 833 million has been proposed against installation of check metering arrangement with 2nd Terminal in FY 2020-21.

A.2.2 42" DIA X 342 Km FROM PAKLAND TO NARA

42"dia x 342 Km RLNG-II pipeline has been completed and now this pipeline is in full operation, keeping in view the operational need in case of low flow and high pressure scenario and to maintain the recommended safe limit of compressor's suction pressure i.e. max. 850 psig at HQ-2 compressors station, pressure regulation station on main pipeline at HQ-2, Nawabshah upstream of compressor station has been proposed.

The estimated cost of pressure regulation station, including others leftover jobs is Rs 255 million and the proposed job is expected to be completed in FY 2020-21.

UNDER PLANNING PROJECTS

A.3.1 PIPELINE PROJECTS – RLNG-III:

The RLNG-III pipeline project is aimed at developing infrastructure for receipt and transportation of 1.5 BCFD RLNG from upcoming LNG re-gasification terminal(s), discussed in a meeting chaired by the Minister for Petroleum & Natural Resources on 6 Jan 2017. It was decided that considering the diminishing domestic gas supply sources, increasing demand of gas/RLNG and upcoming LNG terminals for import of LNG, there is an immediate need for development of 1.5 BCFD pipeline

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capacity from Karachi (tie-in-point) to Lahore which was directed to be completed before 1 October, 2018 vide letter No. NGII-16(3)/16RLNG-IPP dated 30 January, 2017.

In the light of the above, both gas utility companies i.e. SNGPL & SSGC were advised to coordinate and initiate immediate necessary action in the subject matter. Accordingly, SSGC initiated the project planning and budgeting, preliminary route survey, Front End Engineering Design (FEED), and tendering process for procurement of material and services. As per preliminary design, in order to handle total 1.5 BSCFD RLNG i.e. 300 MMSCFD offload at Pakland for SSGC and 1200 MMSCFD to be transported to SNGPL at Sawan; following project components would be required.

1. 48" dia. x 17 Km Pipeline from CTS Bin Qasim to SMS Pakland
2. 42" dia. x 336.5 Km Pipeline from SMS Pakland to MVA Nara
3. 42" dia. x 2.5 Km Indus River Crossing Pipeline
4. 48" dia. x 14 Km Pipeline from MVA Nara to CTS Sawan
5. Installation of 8 x 6000 HP Turbo-Compressors at HQ-2 (Daur, Nawabshah)
6. Metering Arrangement at CTS Bin Qasim and CTS Sawan
7. Regulation setup at Pakland for segregation of SSGC and SNGPL volumes

The development cost of 370 KM aforesaid infrastructure is estimated to be 65 billion. However, SSGC did not undertake the project as the necessary approvals, arrangements and directives requested from Ministry of Energy – Petroleum Division were not available.

The project is therefore on-hold and will be offered for determination to the Authority separately, subject to the availability of requested approvals, arrangements and directives from Ministry of Energy – Petroleum Division.

A.1.3.2 30" dia x 17 Km Pipeline from CTS Bin Qasim to MVA Pakland:

The Honourable Minister Petroleum division directed SSGC to re-initiate working on 30" dia x 17 Km pipeline. The proposed pipeline has flow

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capacity of 600 MMCFD RLNG. This proposed pipeline is expected to be commissioned in June 2020 with an estimated capitalization amount of Rs 2,169 million. The remaining leftover job will be completed in FY 2020-21 with an estimated capitalization amount of Rs 43 million.

Due to urgency, the material earlier procured against 30" x 125 Km Pipeline from Sindh University to MVA-Pakland will be utilized for commissioning the subject proposed pipeline in fiscal year 2019-20.

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B. LPG AIR-MIX PROJECTS:

The Economic Coordination Committee (ECC) of the Cabinet in its meeting held on 31st October 2016 approved the summary vide case no. ECC-122/21/2016 submitted by the Ministry of Energy (Petroleum Division) regarding the installation of thirty LPG-Air Mix Plants in the provinces of Sindh and Balochistan by SSGC.

In its Petition for ERR FY 2018-19, the company projected ten LPG Air mix plants located at various locations of Balochistan, which were Uthal, Kharan, Khuzdar, Washuk, Loralai, Keech, Killi Khinzoi, Zhob, Qilla Saifullah and Muslim Bagh.

The Authority in its DERR FY 2018-19 dated 21 June 2018 noted that since the company has not obtained the requisite licenses, therefore, the Authority, as per the previous practice does not allow the said claim against these projects at this stage.

Subsequently the company has obtained the construction licenses for seven plants at the locations of Muslim Bagh, Kharan, Khuzdar, Washuk, Killa Saifullah, Turbat and Uthal. Licenses for the remaining 3 plants are in process.

At present, SSGC has floated EPCC tender for 10 locations (FY 2019-20). Once, these aforesaid plants are commissioned, SSGCL will submit the case to SSGC BoD for initiating the EPCC tender for remaining sites.

SUI SOUTHERN GAS COMPANY LIMITED**STATUS OF MAJOR PROJECTS FY 2019-20 & FY 2020-21(ERR)****C. MAJOR DISTRIBUTION PROJECTS ERR FY 2020-21****C.1 12" DIA. X 5 KM REINFORCEMENT OF SUPPLY MAIN SYSTEM AT OLD CITY AREA.**

In order to resolve the extreme low gas pressure problem in Garden West, Lyari & Kharadar areas the subject reinforcement is being proposed to interlink the existing 12" dia. H.P main at Mazare Quaid (link of Karachi main at Hassan square) and 8" dia. H.P main existing at Dhobi Ghat (link of Karachi main at Maripur). These areas are located at the tail ends of 20" dia. South city main and 16" dia. Karachi main which are although interlinked at Maripur but does not meet the load requirement in the area.

This project having carrying capacity of 25 MMCFD will help-out to enhance the capacity of the system and maintain smooth supply of gas to the entire connected areas. The estimated cost of project is Rs. 122.1 Million and expected completion date will be June 2020.

It is also to be noted that the Authority has allowed the said project in Determination of ERR FY 2014-15.

C.2 20" Dia. x 7 KM DESALINATION PLANT TO DOLMAN MALL CLIFTON.

This project is planned to loop 20" dia. Desalination main with 12" dia. Feeder main of TBS-Dolman Mall to cope upcoming & existing increased load of DHA and Clifton. The concern areas are located at the tail end of the supply main network and facing severe low pressure situation, specially in winter season and in the Holy month of Ramadan. Moreover

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the project would also be helpful for future segregation of West & Central region of Distribution Karachi.

This project having carrying capacity of 60 MMCFD will enhance the capacity of the system and maintain smooth supply of gas to the entire connected areas. The estimated cost of project is Rs. 345.6 Million and expected completion date would be April 2020.

It is also to be noted that the Authority has allowed the said project in Determination of ERR FY 2016-17.

C.3 20" Dia x 1.5 Km INTERLINK OF SHERSHAH MAIN & SITE GAS TURBINE MAIN.

At present a major industrial network of SITE is being fed from intermingle gas of SMS-KT & SMS-ACPL-20". This project is planned to avoid the intermingling of gas and maintain balance of load in the area.

There are about 1,200 Industrial Customers in SITE area, being fed through interconnected network of SMS-KT & SMS-ACPL-20" receiving intermingled gas. After execution of the project about 700 customers would be separated from the interconnected network and would receive unmixed gas from SMS-ACPL-20". By shifting the said load, the balance capacity would then be utilized in Central region through Karachi main & South City Main.

The foremost benefit of the project is to avoid comingling of gas, correct measurement of region's Purchase, balance of load on each SMS and application of correct GCV on the customers in SITE area.

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This project having capacity of 73 MMCFD will help-out to enhance the carrying capacity of the system and maintain smooth supply of gas to the entire connected areas. The estimated cost of project is Rs. 87.86 Million and expected completion date will be November 2020.

C.4 REINFORCEMENT WORK AT QUETTA, MID CITY AREA 16" DIA LOOP LINE.

During severe frigid weather, the mid-city areas are affected by low pressure as the existing gas mains have become undersized due to increased population. Therefore, proposal has been made for the enhancement of mains to the downtown of Quetta City, which is thickly populated area and nearly 45,000 customers are facilitated with gas supply at 35 -40 PSIG as TBS are located nearly 7 km away.

The said project has been designed to lay 16" dia mains high pressure line from TBS Taj Complex - Gawalmandi Chowk - Meezan Chowk - Cafe China - TBS Ufone - CM House - Civil Hospital - Science College - Imdad Chowk - Barech Market, enabling SSGCL to provide the gas facility to the customers at 12-15 PSIG on the other hand it will provide uninterrupted gas supply to the customers thus minimizing their complaints and UFG. En-route to this pipeline four new TBSs have been designed in mid-city areas namely; Children Hospital, Science College, Lady Defferin Hospital, and Gawalmandi Police Station. Further, four (04) PRSs are also required. The said project is also designed to connect elite customers such as Governor House, CM House, Civil Secretariat, High Court, Civil Hospital etc. The estimated cost of project is Rs. 354.6 Million and expected completion date will be September 2020.

SUI SOUTHERN GAS COMPANY LIMITED**STATUS OF MAJOR PROJECTS FY 2019-20 & FY 2020-21(ERR)****C.5 REINF. WORK AT SIBI ROAD VIA MIAN GHUNDI LINK ROAD UPTO MASTUNG ROAD.**

Presently, we have connected Mastung - Kalat line at 18" Dia HCPC, to meet the requirement of gas supply this connected line is operating at high pressures and consequently HCPC supply is disturbed due the drops in pressure in winter season.

Due to high differential pressure, the system (Mastung - Kalat) is running at low pressure in comparison to the existing. The estimated cost of project is Rs. 233.1 Million and expected completion date will be March 2020.

C.6 12" Dia. x 3.3 KM EXTENSION FROM SMS-KT to AL-ASIF SQUARE

Currently we have a metering station on North City main at SMS-KT, supplying 70 - 80 MMCFD gas to Distribution West, but due to network configuration there are 7 TBS of Distribution Central which are also connected with this supply main therefore the purchase of West region from North City main is being reconciled after deduction of purchase recorded through metering facilities installed on said TBSs.

The project is planned to shift these TBSs on the proposed supply main for proper reconciliation of sale / purchase of each region. Moreover, this would also enhance the capacity of Central Region, which would be helpful to cater the existing & upcoming load of Gulzar-e-Hijri and due to off-loading the above TBSs load, the capacity of West region would also be improved, especially in F.B Area & North Karachi industrial areas.

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The foremost benefit of the project is to improve gas supply of West region, accurate region-wise Purchase through single metering facility.

This project having carrying capacity of 17 MMCFD will help-out to enhance the capacity of the system and maintain smooth supply of gas to the entire connected areas. The estimated cost of project is Rs. 126.76 Million and expected completion date will be December 2020.

Table # D-1.1

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CAPITALIZATION DETAILS FY 2020-21

TRANSMISSION PROJECTS

S. No.	DESCRIPTION OF SEGMENT	FY 2019-20 Revised		FY 2020-21 ERR	
		KMs	Gross Capitalization (Rs. Million)	KMs	Gross Capitalization (Rs. Million)
1	12" Dia x 46 KMs Pipeline from Rehman Field to Naing MVA	46	1,369.000		56.000
2	08" Dia x 28 KMs Pipeline from Ayesha Gas Field	28	541.000		93.000
3	30" Dia x 125 Km Pipeline from SMS Sindh University to SMS Pakland (1st segment)	50	3,350.000	66	5,017.000
4	Upgradation of SMS Thatta				154.000
5	Check Metering Facility at Shahdadpur for Gambat South Field Gas Measurement (RS3)				275.000
6	Check Metering arrangements at Daru		63.000		22.000
7	16" Dia. x 9 km Re Route of Kotri Barrage			9	708.000
8	12" Dia x 344 Km QPL Rehabilitation and Intelligent Pigging				396.000
9	Construction of Sub-merge Crossings		-		166.000
10	01 New Compressor Unit at Sibi				2,094.000
11	35 K Overhaul of DR-990 Gas Turbine Engine S/No. 626-201-006 Shikarpur Compressor				420.000
12	Repair of Fuel Control Valve AGV-10 at original equipment manufacture facility-sweden - Dressor Rand Compressor				10.000
13	Air Dryer-Sibi Compressor				1.500
14	Replacement of Station & Units Valves-Compressor (Shikarpur/HQ3/HQ2/Sibi)				60.000
15	24" Dia x 31 Km from SMS Kathore to SMS Surjani (ACPL Surjani)			31	1,903.000
16	24" dia x 34 Km loopline from Shikarpur to Jacobabad (leftover)		8.000		87.000
17	New Compressor at Shikarpur to Jacobabad for QPL				1,969.000
RLNG PROJECTS					
Ph-1					
18	24" dia x 21 Km interlink b/w Pakland to Khadeji (Leftover in 2019-20)		2.290		-
19	Tie-in and integration arrangement - from tie-in point 2 to Pakland & Bin Qasim		580.000		833.000
Ph-2 and Others					
20	42" dia x 342 Km (Ph-2) - from Pakland to Nara (Leftover in 2019-20 Rs 212 million, in FY 2020-21 Rs 255 million)		212.000		255.000
21	Additional 06 Compressor units & extension of facility at Nawabshah (Total 30,000 HP) - (leftover - building executive mess)				130.000
22	30 K Overhaul of Solar T-60 Gas Turbine Engine installed at RLNG HQ-2 Compressor Station				300.000
23	Refurbishment of Solar Taurus T-60 Compressor Rotor/Bundle - RLNG				60.000
24	Refurbishment of Dry gas Seal Cartridges for Solar T-60 Gas compressor installed at RLNG HQ-2 Compressor Station - RLNG				18.000
25	30" Dia x 17 KMs from CTS Bin Qasim to MVA Pakland	17	2,169.000		43.000
Sub-total RLNG		17	2,963.290	-	1,639.000
Total - Transmission		141	8,294.290	106	15,070.500

Table # D-1.1

SUI SOUTHERN GAS COMPANY LIMITED
CAPITALIZATION DETAILS FY 2020-21

DISTRIBUTION PROJECTS

S. No.	DESCRIPTION OF SEGMENT	FY 2019-20 Revised		FY 2020-21 ERR	
		KMs	Gross Capitalization (Rs. Million)	KMs	Gross Capitalization (Rs. Million)
1	20" Dia x 1.5 KMs Interlink of Shershah Main & SITE Gas Turbine Main		-	1.5	87.860
2	Reinf. Work at Quetta Mid City Area 16" dia Loop Line		-	18.0	354.555
3	Reinf. Work at Sibi Road via Mian Ghundi Link Road upto Mastung Road	-	-	6.4	233.114
4	20" Dia x 7 KMs Desalination Plant to Dolmen Mall Clifton	-	-	7.0	345.550
5	12" Dia x 5 KMs Old City Area Augmentation Main	-	-	5.0	122.120
6	12" Dia. x 3.3 KM- Extension from SMS-KT to Al-Asif Square		-	3.3	126.760
7	Normal Expansion	697.3	1,299.044	1,010.0	4,282.652
8	New Towns & Villages	231.3	757.956	302.2	1,126.958
9	Rehabilitation Mains & Services (UFG Reduction Program)	595.4	1,088.000	855.0	2,803.183
10	Meters (UFG Reduction Program)		1,887.000		3,958.027
11	UFG Reduction Program - Segmentation		-		108.500
12	Smart Metering/GCV/V3 Index		498.000		2,313.000
Total - GDS		1,523.9	5,530.000	2,208.4	15,862.279
GRAND TOTAL GTPL & GDS		1,664.9	13,824.290	2,314.4	30,932.779

Table # D-1.2

SUI SOUTHERN GAS COMPANY LIMITED
ADDITION IN NETWORK (Kilometers) FY 2020-21

(Length in Kilometers)

S. No.	DESCRIPTION OF SEGMENT	FY 2019-20 (Revised)	FY 2020-21
A	<u>TRANSMISSION SYSTEM</u>		
1	12" Dia x 46 KMs Pipeline from Rehman Field to Naing MVA	46.0	
2	08" Dia x 28 KMs Pipeline from Ayesha Gas Field	28.0	
3	30" Dia x 17 KMs from CTS Bin Qasim to MVA Pakland [RLNG]	17.0	
4	30" Dia x 125 Km Pipeline from SMS Sindh University to SMS Pakland (1st segment)	50.0	66.0
5	24" Dia x 31 Km from SMS Kathore to SMS Surjani (ACPL Surjani)		31.0
6	16" dia x 9 km Re Route of Kotri Barrage		9.0
	Sub Total - Transmission (A)	141.0	106.0
B	<u>DISTRIBUTION SYSTEM</u>		
	Major Distribution Projects:		
1	20" Dia x 1.5 KMs Interlink of Shershah Main & SITE Gas Turbine Main		1.5
2	Reinf. Work at Quetta Mid City Area 16" dia Loop Line		18.0
3	Reinf. Work at Sibi Road via Mian Ghundi Link Road upto Mastung Road		6.4
4	20" Dia x 7 KMs Desalination Plant to Dolmen Mall Clifton		7.0
5	12" Dia x 5 KMs Old City Area Augmentation Main		5.0
1	12" Dia. x 3.3 KM- Extension from SMS-KT to Al-Asif Square		3.3
B	Sub-Total	-	41.2
B I	New Towns/ Villages	231.3	302.2
B II	Normal Expansion	697.3	1,010.0
C	Sub Total - Distribution (C = B+BI+BII)	928.6	1,353.4
	Total Trans. + Distribution (A+C)	1,069.6	1,459.4

Table # D-2.1

SUI SOUTHERN GAS COMPANY LIMITED
TECHNICAL DATA
TRANSMISSION PROJECTS FY 2020-21

S. No.	DESCRIPTION OF SEGMENT	Diameter (Inch)	Wall Thickness (Inch)	Length (Km)	U/S Pressure (psig)	D/S Pressure (psig)	Pipe Grade API 5L	Proposed Capacity (MMCFD)
1	16" dia x 9 Km Re-route of Pipeline Kotri Barrage b/w HQ-3 to Sind University Project	16	0.375	9	750	730	X-52	-
2	30" dia x 125 Km SMS Sindh University to SMS Pakland	30	0.562"/.469"	125	664	542	X-70	247
3	12"dai x 46 Km Pipeline from Rehman Gas Field to MVA- Naing	12	0.281	46	1,130	660	X-60	90
4	30" dia x 17 Km CTS Bin Qasim to MVA Pakland	30	0.562"	17	1,200	1,185	X-70	600
5	8"dai x 28 Km Pipeline from Ayesha Gas Field to MVA- Golarchi	8	0.250	28	845	790	X-42	20
6	24" dia x 31 ACPL to Surjani	24	0.469	31	585	570	X-60	100

Table # D-2.1

SUI SOUTHERN GAS COMPANY LIMITED
MAJOR DISTRIBUTION PROJECTS FOR ERR FY 2020-21

GENERAL DATA

Sr No	Description of Segment	Project Cost Rs. in Million		Need Assessment	Cost Benefit Analysis	% Completion (if applicable)	Implementation Schedule	
		Total Cost	Material Cost				Starting Date	Commissioning Date
1	12" Dia x 5 Km Old City Area Augmentation Main	122.12	41.76	The project is required to resolve low pressure issue in Garden West, Liyari & Kharader area. All these areas have been facing extreme low pressure problem since long. The proposed 12" dia pipeline would interlink Karachi main at Mazar-e-Quaid & South city Main at Dhoobi gathi.	Besides resolving low pressure issue in the said areas this project will also benefit old Sultanabad & West wharf areas.	-	Feb-20	June-21
2	20" Dia x 7 Km Desalination Plant to Dolman Mall Clifton	345.55	198.42	The project is required to cope upcoming & existing load of DHA and Clifton. Moreover it would also help to enhance the capacity of Karachi main (feeding gas to SITE area) via South city main.	This project will enhance the capacity of the system and maintain smooth supply of gas at the tail ends of Karachi & South city mains i.e SITE & DHA / Clifton areas respectively.	-	Dec-19	June-21
3	20" Dia x 1.5 Km Interlink of Shershah Main & SITE Gas Turbine Main	87.86	47.30	The project is required to isolate SMSs of distribution regions of Karachi which are already segregated geographically. The isolation of feeding sources (SMSs) of each region is envisaged to avoid comingling of gas received from different sources. This project would isolate SMS-ACPL & SMS-KT (North City Main) moreover the huge load of SITE would also be divided into two segment / pockets.	The foremost benefit of the project is region-wise reconciliation of Sale & Purchase. However, it will also enhance the capacity of the system and maintain smooth supply of gas to the entire segmented area.	-	Aug-20	Nov-20
4	Reinf. Work at Quetta Mid City Area 16" dia Loop Line 16" dia X 13.000 kms 8" dia X 2.000 kms 6" dia X 1.000 kms 4" dia X 1.000 kms TBS 4 Nos. PRS 4 Nos. CP Station 1 No.	354.555	183.900	During severe frigid weather, the mid city areas are affected by low pressure as the existing gas mains have become undersized due to population explosion.	After completion of this project, we will be able to run the gas systems at lower pressures to facilitate the mid city areas, which is run at higher pressures as supplying stations for mid city are located at far distances. This will ultimately reduce UFG (reduce purchase from 6 - 8 %)	-	Jul-20	Sep-20
5	Reinf. Work at Sibi Road via Mian Ghundi Link Road upto Mastung Road 16" dia X 6.396 kms	233.114	84.142	Presently, we have connected Mastung - Kalat line at 18" dia HCPC, to meet the requirement of gas supply this connected line is run at high pressures and consequently HCPC supply is disturbed due to the drops in MPL, in winter season.	Due to high differential pressure, we can run the system (Mastung - Kalat) at low pressure in comparison to the existing.	-	Jan-21	Mar-21
6	12" Dia x 3.3 Km Supply Main from SMS-KT to Al-Asif Square	126.76	45.00	Presently 7 TBSs of Central region are connected with North City Main (fed from DMS-North City-KT) which is supplying gas to West region. The project is planned to shift the above TBSs on the proposed supply main for proper reconciliation of sale / purchase of each region.	The foremost benefit of the project is region-wise reconciliation of Sale & Purchase and would also enhance the capacity of the system.	-	July-20	Dec-20

Table # D-3.1

SUI SOUTHERN GAS COMPANY LIMITED
GENERAL DATA

TRANSMISSION PROJECTS FY 2019-20 & 2020-21

S.No.	DESCRIPTION OF SEGMENT	PROJECT COST		Need Assessment	Cost Benefit Analysis	% Completion (if applicable)	Implementation Schedule	
		Total Cost	Material				Starting Date /Status	Commissioning Date
1	12" dia x 46 Km Pipeline from Rehman Gas Field to MVA- Naing	1,425	731	To receive upto 90 MMCFD gas from Rehman Gas Field into SSGC IRBP system	This pipeline would help in increasing Company's sale and reduce energy shortage in the country.	48%	On-going	January, 2020
2	30" dia x 125 Km SMS Sindh University to SMS Pakland	8,367	5,432	This pipeline is required to transport additional gas to be received from Naimat, Gambat South & KPD field plus after completion of RLNG dedicated pipeline swapping volume would also be transported through this pipeline.	This pipeline would help in increasing Company's sale and reduce energy shortage in the country.	20%	On-going	June, 2020 & June, 2021
3	8" dia x 28 Km Pipeline from Ayesha Gas Field to MVA- Golarchi	634	303	To receive upto 20 MMCFD gas from Ayesha Gas Field & inject into SSGC BGFIP system	This pipeline would help in increasing Company's sale and reduce energy shortage in the country.	15%	On-going	June 2020
4	30" dia x 17 Km CTS Bin Qasim to MVA Pakland	2,212	1,211	Receiving additional RLNG Volume Upto 600 MMCFD	Receiving and Transportation of additional RLNG volume		under planning	June, 2020
5	24" dia x 31 Km Kathor Surjani Pipeline	1,903	1,241	This pipeline is required to transport additional gas upto 100 MMCFD to Surjani for further distribution to Hub & SITE Industrial Area.	This pipeline would help in increasing Company's sale and reduce Pressure drop problem in SITE area.	10%	On-going	June, 2021
6	16" dia x 9 Km Re route of Kotri Barrage	708	135	Due to Security concern re route is required to divert old non pigable pipeline from Barrage,	will save from sabotage activities.		Under Planning	June, 2021
7	12" dia x 344 Km QPL Rehabilitation and Intelligent pigging	396	100	Required for establishing reliability/integrity of pipeline.	will increase pipeline effective life.	15%	Ongoing	June 2021

Table # D-3.1

SUI SOUTHERN GAS COMPANY LIMITED
MAJOR DISTRIBUTION PROJECTS FOR ERR FY 2020-21

TECHNICAL DATA

Sr No	Description of Segment	Diameter (Inch)	Wall Thickness (Inch)	Length (Km)	U/S Pressure (Psig)	D/S Pressure (Psig)	Pipe Grade	Proposed Capacity (MMCFD)	Status
1	20" Dia x 7 Km Desalination Plant to Dolman Mall Clifton	20	0.312	7.0	100	80	API 5L X-42	60	Approved (Execution pending)
2	12" Dia x 5 Km Old City Area Augmentation Main	12	0.250	5.0	120	100	API 5L X-42	25	Approved (Execution pending)
3	20" Dia x 1.5 Km Interlink of Shershah Main & SITE Gas Turbine Main	20	0.312	1.5	100	95	API 5L X-42	73	Under Planning
4	Reinf. Work at Quetta Mid City Area 16" dia Loop Line	16	0.250	18.0	400	60	X-42	25	Under Planning
5	Reinf. Work at Sibi Road via Mian Ghundi Link Road upto Mastung Road	16	0.250	6.4	100	50	X-42	4	Under Planning
6	12" Dia x 3.3 Km Supply Main from SMS-KT to Al-Asif square	12	0.25	3.3	120	115	API 5L X-42	16	Under Planning

Table # D-4.1

COST BREAK-UP**30" Dia x 125 KMs Proposed Pipeline from Sindh University to Pakland****Rs. Million**

S.No.	DESCRIPTION	Total Project Cost	Upto June-20	FY 2020- 21
			Cost	Cost
1	Linepipe	4525.19	4525.19	
2	Valves & Fittings	395.26	325.26	70.00
3	Joint Coating Material	54.18	47.18	7.00
4	Welding Electrodes	36.24	30.24	6.00
5	Cathodic Protection	18.00	8.00	10.00
6	Instruments & Metering	120.00		120.00
7	Filter and Seprators	120.00	120.00	
8	Pigging equipment	42.00	42.00	
9	Regulator and control valve	70.00		70.00
10	Misc. Inventory Expenses	2.32	2.32	
11	Inland Transportation	48.98	28.98	20.00
	Sub-Total	5432.17	5129.17	303.00
12	Land Acquisition & Survey	160.02	60.02	100.00
13	Damages Compensation & Rental	94.61	34.61	60.00
14	Route & Topographic Survey	8.18	8.18	
15	Design Engg. & Project Mgt.	6.02	2.02	4.00
16	Welding Inspection	24.15	8.15	16.00
17	Mill Inspection	3.00		3.00
18	EAR Insurance	20.00		20.00
19	Pipeline Construction	1141.37	641.37	500.00
20	Civil works	88.32	28.32	60.00
21	Cold cut and integration	4.00	2.00	2.00
22	Interest on borrowing @13.71%	946.75	800.33	146.42
23	Depreciation of Construction Equipment		92.33	
24	Contingencies @5%	346.10	292.70	53.40
	GRAND TOTAL	8367.02	7099.20	1267.82

Table # D-4.2

**TRANSMISSION PROJECTS
COST BREAK-UP**

16" Dia X 9 km Re-route of Kotri Barrage Pipeline

Rs. Million

S.No.	DESCRIPTION	Total Project Cost	Upto June-20	FY 2020- 21
			Cost	Cost
	Material			
1	Linepipe	124.00		124.00
2	Valves & Fittings	4.00		4.00
3	Joint Coating Material	1.00		1.00
4	Welding Electrodes	1.50		1.50
5	Grit Blast material	0.01		0.01
6	Gas Losses	2.50		2.50
7	Inland Transportation	2.00		2.00
	Sub-Total	135.01	-	135.01
8	Land Acquisition & Survey	8.00		8.00
9	Damages Compensation & Rental	4.00		4.00
10	Route & Topographic Survey	1.50		1.50
11	Design Engg. & Project Mgt.	8.81		8.81
12	Welding Inspection	2.50		2.50
13	Mill Inspection	0.50		0.50
14	EAR Insurance	2.00		2.00
15	Pipeline Construction	65.00		65.00
16	HDD Crossing	360.00		360.00
17	Civil Works	7.00		7.00
18	Cold cut and integration	2.40		2.40
19	Interest on borrowing @13.71%	81.81		81.81
20	Contingencies @5%	29.84		29.84
	GRAND TOTAL	708.37	-	708.37

Table # D-4.3

TRANSMISSION PROJECTS

COST BREAK-UP

24" Dia X 31 KM Pipeline From ACPL - Surjani

Rs. Million

S.No.	DESCRIPTION	Total Project Cost	Upto June-20 Cost	FY 2020- 21 Cost
	Material			
1	Linepipe	980.01	0.01	980.00
2	Valves & Fittings	60.00		60.00
3	Joint Coating Material	9.00		9.00
4	Welding Electrodes	6.00		6.00
5	Cathodic Protection	10.00		10.00
6	Instruments	65.00		65.00
7	Grit Blast material	1.70		1.70
8	Filter and Seprators	50.00		50.00
9	Pigging equipment	14.00		14.00
10	Inland Transportation	45.00		45.00
	Sub-Total	1,240.71	0.01	1,240.70
11	Land Acquisition & Survey	50.00		50.00
12	Damages Compensation & Rental	22.00		22.00
13	Route & Topographic Survey	2.30	2.30	
14	Desigm Engg. & Project Mgt.	5.00	1.00	4.00
15	Welding Inspection	7.00		7.00
16	Mill Inspection	2.00		2.00
17	EAR Insurance	7.00		7.00
18	Pipeline Construction	250.04	0.04	250.00
19	Civil works	15.00		15.00
20	Cold cut and integration	2.50		2.50
21	Interest on borrowing @ 13.71%	219.72	0.33	219.39
22	Contingencies @5%	80.06	0.05	80.01
	GRAND TOTAL	1,903.33	3.73	1,899.60

D-4.4

**20" DIA x 7 KM DISTRIBUTION MAIN
DESALINATION PLANT TO DOLMAN MALL CLIFTON KARACHI.**

Sr#	Description	Approved Amount PKR (in Million)
1	Cost of Bare Pipe	105.31
2	Cost of 3-Layer PE Coating	31.59
3	Joint Coating Material	4.21
4	Grit Blast Material	0.53
5	Valves & Fittings	42.12
6	Welding Electrodes	2.11
7	Engineering Survey & Design	4.21
8	Road Reinstatement Charges	72.12
9	Inland Transportation	4.21
10	Construction Cost:	42.12
11	Allied Civil Works	2.11
12	Mill & Welding Inspection	5.27
13	Supervision / Insurance / Legal aid	10.53
14	Cathodic Protection	8.42
15	Cost of TBS	5.00
16	Contingencies (10%)	0.42
	SUB TOTAL	340.29
17	Hot Tapping Material	4.21
18	Cold cutting / Hot Tapping Operational Charges	1.05
	SUB TOTAL	5.27
	GRAND TOTAL	345.55

D-4.5

12" DIA X 5 KM
REINFORCEMENT OF SUPPLY MAIN SYSTEM AT OLD CITY AREA

S. NO:	DESCRIPTION	Approved Amount PKR (in Million)
(I)	MAINS LAYING AS PER ANNEXURE-A	
(A1)	MATERIAL COST	41.76
(A2)	CONSTRUCTION COST	6.00
(A3)	DIRECT DEPARTMENTAL COST	9.06
(A4)	ROAD RESTORATION CHARGES	60.53
	SUB TOTAL (A1 to A4)	117.35
	OTHER COST	
(A5)	CARE TAKER ON PIPE	0.16
(A6)	HIRING OF CAMP OFFICE	0.09
(A7)	CARE TAKER AT CAMP OFFICE	0.16
(A8)	THRUST BORING	2.08
(A9)	CONSTRUCTION OF VALVE PIT	0.08
(A10)	TRANSPORTATION OF PIPE	0.55
(A11)	WELDING JOINT INSPECTION (RADIOGRAPHY)	0.30
(A12)	MACINERY HIRING CHARGES(FOR LAYING OF PIPELINE)	0.75
(A13)	FIELD CONTIGENCIES-10% OF CONSTRUCTION COST	0.60
	SUB TOTAL (A5 to A13)	4.78
	TOTAL (I)	122.12

20" Dia. x 1.5 KM**Interlink of Shershah Main and SITE Gas Turbine Main**

Sr#	Description	Estimated Cost PKR (in Million)
1	Cost of Bare Pipe	19.50
2	Cost of 3-Layer PE Coating	8.78
3	Joint Coating Material	0.98
4	Grit Blast Material	0.20
5	Valves & Fittings	3.90
6	Welding Electrodes	0.39
7	Engineering Survey & Design	0.78
8	Road Reinstatement Charges	18.00
9	Inland Transportation	0.78
10	Construction Cost:	9.75
11	Allied Civil Works	1.95
12	Mill & Welding Inspection	0.98
13	Supervision / Insurance / Legal aid	0.98
14	Cathodic Protection	1.56
15	Contigencies (10%)	6.85
	SUB TOTAL	75.36
16	Hot Tapping Material	12.00
17	Cold cutting / Hot Tapping Operational Charges	0.50
	SUB TOTAL	12.50
	GRAND TOTAL	87.86

D-4.7

16" DIA x 18 KM DISTRIBUTION MAIN
Reinforcement Scheme at Quetta, Mid City 16" Dia Loop Line

Sr. No.	Description	Estimated Cost PKR (in Million)
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1	Material Cost	183.900
2	Transportation Cost	2.798
3	Construction Cost	10.683
4	Direct Departmental Cost	69.973
5	P&C Additional Cost (Camping & Misl.)	45.295
6	Service Shifting Charges	-
7	Road Cutting / Restoration Charges	17.413
8	Railway Crossing Charges	-
9	Boring Charges	0.090
10	PRS Cost	2.184
11	TBS Cost	21.177
12	SMS Cost	-
13	CP Installations	1.041

Total	354.555
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D-4.8

16" DIA x 6.396 KM DISTRIBUTION MAIN
Reinforcement Scheme for Mastung - Kalat

Sr. No.	Description	Estimated Cost PKR (in Million)
1	Material Cost	84.142
2	Transportation Cost	1.283
3	Construction Cost	4.154
4	Direct Departmental Cost	30.013
5	P&C Additional Cost (Camping & Misl.)	17.838
6	Service Shifting Charges	-
7	Road Cutting / Restoration Charges	7.718
8	Railway Crossing Charges	0.750
9	Boring Charges	0.090
10	PRS Cost	-
11	TBS Cost	5.294
12	SMS Cost	80.790
13	CP Installations	1.041
Total		233.114

D-4.9

12" Dia. x 3.3 KM- Extension from SMS-KT to Al-Asif Square

Sr#	Description	Estimated Cost PKR (in Million)
1	Cost of Bare Pipe	22.10
2	Cost of 3-Layer PE Coating	9.95
3	Joint Coating Material	1.11
4	Grit Blast Material	0.22
5	Valves & Fittings	4.42
6	Welding Electrodes	0.44
7	Engineering Survey & Design	0.88
8	Road Reinstatement Charges	53.00
9	Inland Transportation	0.88
10	Constrution Cost:	11.05
11	Allied Civil Works	2.21
12	Mill & Welding Inspection	1.11
13	Supervision / Insurance / Legal aid	1.11
14	Cathodic Protection	1.77
15	Contigencies (10% of Cost)	11.02
	SUB TOTAL	121.26
16	Hot Tapping Material	5.00
17	Cold cutting / Hot Tapping Operational Charges	0.50
	SUB TOTAL	5.50
	GRAND TOTAL	126.76

Table # D-5

SUI SOUTHERN GAS COMPANY LIMITED
GAS DISTRIBUTION SYSTEM - ADDITION
SUMMARY OF ACTIVITIES

S/No.	Description	ERR FY 2020-21	FY 2020-21 Estimated Revenue Requirement Petition				Rs. In Million
			Need Assessment	Cost Benefit Analysis	% age Completion (if applicable)	Date of Commissioning	
1	Rehabilitation Mains and Services UFG Control Program	2,803.2					
2	Segmentation	108.5					
	Sub Total: UFG Control Program (A)	2,911.7					
3	Laying of Distribution Mains including services-Existing Areas and DDC	2,561.8	-	-	-	Ongoing	Ongoing
4	Installation of New Connections (meters)	1,363.3	-	-	-	Ongoing	Ongoing
5	Replacement /Repair of Undersized Meters	3,958.0	-	-	-	Ongoing	Ongoing
6	Modems, Installation of EVC, Filter Separators, Etc	202.7	-	-	-	Ongoing	Ongoing
7	Construction of CMSs, TBSs, and TRSs, / Cathodic Protection	154.9				Ongoing	Ongoing
8	New Towns	1,127.0	-	-	-	Ongoing	Ongoing
	Sub Total: Normal (B)	9,367.6					
	Total GDS Other Than Major Projects: (A+B)	12,279.3					
9	12" Dia x 5 KMs Old City Area Augmentation Main	122.1					
10	20" Dia x 7 KMs Desalination Plant to Dolmen Mall Clifton	345.6					
11	20" Dia x 1.5 KMs Interlink of Shershah Main & SITE Gas Turbine Main	87.9					
12	Reinf. Work at Quetta Mid City Area 16" dia Loop Line	354.6					
13	Reinf. Work at Sibi Road via Mian Ghundi Link Road upto Mastung Road	233.1					
14	12" Dia x 3.3 K.M. Supply main from SMS-KT to Al-Asif Square	126.8					
	Sub Total: Major Distribution Projects	1,270.0	-	-	-	-	-
15	Smart Metering/GCV/V3 Index	2,313.0					
	Total Gas Distribution System	15,862.3					

Please refer Table: D-3.2

DISTRIBUTION LINES INCLUDING EXTENSION IN EXISTING AREAS AND REINFORCEMENT AND REHABILITATION PROGRAM

Table # D-5.1

Steel Main Diameter (inches)	FY 2017-18 (ERR)				FY 2018-19 (Petition)				FY 2019-20 (Petition)				FY 2020-21 (Petition)			
	Cost in Rs. Million		Percentage Change		Cost in Rs. Million		Percentage Change		Cost in Rs. Million		Percentage Change		Cost in Rs. Million		Percentage Change	
	Length (Km)	Material Cost	Cost per Km	Length (Km)	Material Cost	Cost per Km	Material Cost %	Cost/Km %	Length (Km)	Material Cost	Cost per Km	Material Cost %	Length (Km)	Material Cost	Cost per Km	Material Cost %
20																
16																
12	3.0	24.1	8.0	7.6	101.5	13.4			33.4	13.4	0%					0%
8	44.7	163.0	3.6	71.7	243.1	3.4	49%	-7%	18.5	9.3	0%	0%	5.0	51.95	10.4	181%
6	74.1	202.6	2.7	77.0	233.3	3.0	15%	11%	326.6	5.0	34%	47%	25.0	162.95	6.5	-50%
4	153.5	264.8	1.7	123.7	201.1	1.6	-24%	-6%	295.7	3.3	27%	8%	36.0	163.64	4.5	-45%
2	231.4	170.7	0.7	207.5	175.2	0.8	3%	14%	314.0	2.4	56%	49%	59.0	174.37	3.0	-44%
1	12.0	10.9	0.9	23.1	10.5	0.5	-4%	-50%	260.8	1.3	49%	49%	68.0	121.72	1.8	-53%
3/4	111.0	104.0	0.9	312.3	84.7	0.3	-19%	-71%	2.9	0.4	0.4	-72%	-	-	-	-
Total	629.7	940.1	1.5	822.8	1,049.4	1.3			269.1	0.6			193.0	674.6	3.5	
FY 2017-18 (ERR)																
Poly Main Diameter (mm)	Cost in Rs. Million		Percentage Change		Cost in Rs. Million		Percentage Change		Cost in Rs. Million		Percentage Change		Cost in Rs. Million		Percentage Change	
	Length (Km)	Material Cost	Cost per Km	Length (Km)	Material Cost	Cost per Km	Material Cost %	Cost/Km %	Length (Km)	Material Cost	Cost per Km	Material Cost %	Length (Km)	Material Cost	Cost per Km	Material Cost %
	Length (Km)	Material Cost	Cost per Km	Length (Km)	Material Cost	Cost per Km	Material Cost %	Cost/Km %	Length (Km)	Material Cost	Cost per Km	Material Cost %	Length (Km)	Material Cost	Cost per Km	Material Cost %
180	67.5	147.9	2.2	54.8	143.3	2.6	-3%	19%	75.9	204.0	2.7	42%	35.0	285.2	3.4	40%
125	122.1	129.1	1.1	103.5	116.2	1.1	-10%	6%	148.6	177.5	1.2	53%	148.0	350.5	2.4	97%
63	282.0	78.5	0.3	263.7	85.5	0.3	9%	17%	400.9	133.7	0.3	56%	324.0	373.5	0.7	179%
40	45.6	4.8	0.1	77.4	10.7	0.1	124%	32%	113.0	8.2	0.1	-23%	-	-	-	0%
20	335.4	197.3	0.6	220.8	179.5	0.8	-9%	38%	255.1	144.6	0.6	-19%	-	-	-	0%
Sub Total	852.6	557.5	0.7	720.2	535.2	0.7			993.4	667.9	0.7		757.0	1,009.1	1.3	
New Towns	162.8	609.6	3.7	388.6	1,177.6	3.0			231.2	758.0	3.3		202.2	1,126.96	3.7	
Total	1,645.1	2,107.2	1.3	1,931.6	2,762.2	1.4			2,195.6	2,947.0	1.3		1,252.2	2,810.7	2.2	
FY 2018-19 (Petition)																
Other Costs	Cost in Rs. Million		Percentage Change		Cost in Rs. Million		Percentage Change		Cost in Rs. Million		Percentage Change		Cost in Rs. Million		Percentage Change	
	Length (Km)	Material Cost	Cost per Km	Length (Km)	Material Cost	Cost per Km	Material Cost %	Cost/Km %	Length (Km)	Material Cost	Cost per Km	Material Cost %	Length (Km)	Material Cost	Cost per Km	Material Cost %
	Length (Km)	Material Cost	Cost per Km	Length (Km)	Material Cost	Cost per Km	Material Cost %	Cost/Km %	Length (Km)	Material Cost	Cost per Km	Material Cost %	Length (Km)	Material Cost	Cost per Km	Material Cost %
Direct Dept. Cost (DDC)		1,602.1			1,472.6					1,780.6				1,270.4		
Road Restoration Charges (RRC)																
TBS/TRS/PRS/CPS		245.8			103.4									1,509.7		
Meter Stations		1,606.8			2,509.1					194.5				154.9		
Service Cost (Additions & Replacements)										2,645.8				5,321.3		
Segmentation														901.0		
Modems, Installation of EVC, Filter Separators, Etc										-				108.5		
Total Other Cost		4,635.3			5,294.6					169.2				202.7		
Grand Total	1,645.1	6,742.4	4.1	1,931.6	8,056.8	4.2			2,195.6	8,498.1	3.9		2,107.2	12,279.3	5.7	

SUI SOUTHERN GAS COMPANY LIMITED
DISTRIBUTION DEVELOPMENT
ADDITIONAL METERS (NEW CONNECTIONS)

Table # D-5.2

SUI SOUTHERN GAS COMPANY LIMITED													Table # D-5.2		
DISTRIBUTION DEVELOPMENT															
ADDITIONAL METERS (NEW CONNECTIONS)															
Connection Category	Physical Target (Regionwise)						Physical Target (Regionwise)								
	FY 2019-20 Petition						FY 2020-21 Petition								
	Karachi		Sindh		Balochistan		Karachi		Sindh		Balochistan				
	Units	Cost/Unit in Rupees	Units	Cost/Unit in Rupees	Units	Cost/Unit in Rupees	Units	Cost/Unit in Rupees	Units	Cost/Unit in Rupees	Units	Cost/Unit in Rupees			
Industrial	145	1,240,738	18	1,243,109	4	1,203,250	142	1,144,162	40	1,258,050	2	995,500			
Commercial	700	115,270	118	115,130	260	115,308	917	56,839	128	57,164	119	57,160			
Domestic-Normal	60,000	3,711	52,000	5,433	12,000	5,433	92,770	4,680	35,170	5,595	15,083	5,595			
Total	60,845	-	52,136	-	12,264	-	93,829		35,338		15,204				
New Connections - Cost Details															
Region	FY 2018-19 Petition			FY 2019-20 Petition			FY 2019-20 Petition								
	Units	Rs. Million	Cost/Unit in Rupees	Units	Rs. Million	Cost/Unit in Rupees	Units	Rs. Million	Cost/Unit in Rupees						
Karachi	60,845	483.5		60,845	483.5		93,829	648.8							
Sindh	52,136	318.5		52,136	318.5		35,338	254.4							
Balochistan	12,264	100.0		12,264	100.0		15,204	93.2							
	Total			Total			Total								
	DDC			DDC			DDC								
	Total			Total			Total								
	1,220.5			1,220.5			1,363.3								

Table # D-5.3														
SUI SOUTHERN GAS COMPANY LIMITED														
DISTRIBUTION DEVELOPMENT														
REPLACEMENT OF INDUSTRIAL, COMMERCIAL AND DOMESTIC METERS														
Connection Category	FY 2019-20 ERR						FY 2020-21 ERR							
	Karachi		Sindh		Balochistan		Karachi			Sindh		Balochistan		
	Units	Cost/Unit in Rupees	Units	Cost/Unit in Rupees	Units	Cost/Unit in Rupees	Units	Cost/Unit in Rupees	Total Cost	Units	Cost/Unit in Rupees	Total Cost	Units	Cost/Unit in Rupees
Industrial	312.0	1,240,737	39	1,241,646	9	1,203,222	417.0	1,790,695	746,720	86	1,917,791	164,930	13	966,923
Commercial	1,670.0	115,270	282	115,130	620	115,308	805.0	87,776	70,660	207	87,778	18,170	138	87,754
Domestic	225,000	2,488	72,000	4,465	27,000	4,465	360,000	3,457	1,244,450	285,100	4,627	1,319,110	80,000	4,627
Total	226,982		72,321		27,629		361,222		2,061,830	285,393		1,502,210	80,151	
Meter Repair & Replacement Cost Details														
Region	FY 2019-20 ERR			FY 2020-21 ERR			Region		FY 2020-21 ERR		FY 2020-21 ERR			
	Units	Rs. Million		Units	Rs. Million				Units	Rs. Million				
Karachi	226,982	1,139.4		226,982	1,139.4		Karachi		361,222	2,061.8			2,061.8	
Sindh	72,321	402.4		72,321	402.4		Sindh		285,393	1,502.2			1,502.2	
Balochistan	27,629	202.9		27,629	202.9		Balochistan		80,151	394.8			394.8	
	Total	1,744.8		326,932	1,744.8		Total		726,766	3,958.9			3,958.9	
	Total Cost Including DDC			1,744.8			Total Cost Including DDC		Total Cost Including DDC		3,958.9			

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SUI SOUTHERN GAS COMPANY LIMITED
DISTRIBUTION DEVELOPMENT
TBS., TRS, PRS, AND CP STATIONS etc.

Table: D-5.4

Description	FY 2019-20 Petition										FY 2020-21 Petition									
	Karachi			Sindh			Balochistan				Karachi			Sindh			Balochistan			
	Units	Per Unit Cost	Total Cost	Units	Per Unit Cost	Total Cost	Units	Per Unit Cost	Total Cost		Units	Per Unit Cost	Total Cost	Units	Per Unit Cost	Total Cost	Units	Per Unit Cost	Total Cost	
<u>New Addition</u>																				
TB Stations	15	3.0	45.0	6	3.0	18.0	10		3.0	30.0				5	2.5	12.5	8	2.5		20.0
PR Stations	25	0.3	7.5	8	0.3	2.4	60		0.3	18.0				1	0.6	0.6	5	0.6		3.0
CP Stations	-		-	-		-	-			-				10	2.9	28.7	3	2.9		8.6
Total New Addition	40	-	52.5	14	-	20.4	70		-	48.0				16	-	42	16	-		32
<u>Modification</u>																				
TB Stations	15	2.2	33.5	14	2.2	31.2	4		2.2	8.9				8	1.3	10.6	2	1.3		2.7
TR Stations																				
Total Modification	15	-	33.5	14	-	31.2	4		-	8.9				8	-	10.6	2	-		2.7
Grand Total	55	-	86.0	28	-	51.6	74		-	56.9				24	-	52.4	18	-		34.3
	Total cost for FY 2019-20										Total cost for FY 2020-21									
	194.5										154.9									

Rs. In Million

Table: D-5.4

ERR PETITION 2020-21

Sr. No.	Name of Town / Village	No. of Villages	Total Mains (Kms)	No. of Consumers	Cost Rs. In Million			Cost Rs. In Million			Cost Rs. In Million					
					Total Cost			Total Cost			Expected to be Capitalized					
					Grant	Own	Total	Grant	Own	Total	Over & Above to be Adj against Grant	Own	Total	Over & Above to be Adj against Grant	Own	Total
					A	B	(A+B)	Over & Above to be Adj against Grant	Own	Total	Kms					
ERR 2019-20:																
1	Muhalla Pir Syed Mashooq Muhyaddin Shah	1	0.22	6	0.76	0.32	1.09	0.76	0.32	1.09	0.22	-	-			
2	Baharo Dero	1	8.46	294	10.53	15.88	26.40	10.53	15.88	26.40	8.46	-	-			
3	Razi Dero	1	8.91	327	15.09	17.66	32.75	15.09	17.66	32.75	8.91	-	-			
4	Ameer Bux Solangi, Fateh Khan Jagirani & Mohammed Chuttal Solangi	3	4.95	115	9.56	6.21	15.77	9.56	6.21	15.77	4.95	-	-			
5	Rafique Mahessar	1	6.29	94	16.59	5.08	21.67	16.59	5.08	21.67	6.29	-	-			
6	Ghulam Goth, Mochi Goth, Anal Shah & Dal Goth	4	6.78	242	11.16	13.07	24.23	11.16	13.07	24.23	6.78	-	-			
7	Dahar Goth, Motayo Chachar & Esso Tanvri	3	16.34	781	11.96	42.17	54.13	11.96	42.17	54.13	16.34	-	-			
8	Ali Bux Shahani	1	1.76	9	3.85	0.49	4.33	3.85	0.49	4.33	1.76	-	-			
9	Haji Baradi Kalhoro	1	0.67	12	1.37	0.65	2.02	1.37	0.65	2.02	0.67	-	-			
10	Ali Muhammed Soomro, Sijawal Dhandhoo & Rajib Dhandhoo	3	3.50	64	5.89	3.46	9.34	5.89	3.46	9.34	3.50	-	-			
11	Bagh Channa	1	1.85	64	0.77	3.46	4.22	0.77	3.46	4.22	1.85	-	-			
12	Hashim Charan	1	2.36	48	6.10	2.59	8.69	6.10	2.59	8.69	2.36	-	-			
13	Saleemabad	1	0.48	2	1.54	0.11	1.65	1.54	0.11	1.65	0.48	-	-			
14	Aliabad (Mian Nazar Mohammed)	1	1.49	5	3.64	0.27	3.91	3.64	0.27	3.91	1.49	-	-			
15	Allah Jawayo Bhutto	1	2.17	42	4.49	2.27	6.76	4.49	2.27	6.76	2.17	-	-			
16	Abdul Rehman Khan Chacher	1	0.20	1	1.13	0.05	1.19	1.13	0.05	1.19	0.20	-	-			
17	Meero Chachar, Mithan Mahar, Wasti Inayat Shah, Wasti Qutubdin Shah & Sakhi Muhammad Younus Chachar	5	23.06	460	49.63	24.84	74.47	49.63	24.84	74.47	23.06	-	-			
18	Sach Dino Kalwar	1	2.98	42	7.18	2.27	9.45	7.18	2.27	9.45	2.98	-	-			
19	Abbas Sanghar	1	0.80	24	0.87	1.30	2.16	0.87	1.30	2.16	0.80	-	-			
20	Suleman Charan	1	0.80	18	1.19	0.97	2.16	1.19	0.97	2.16	0.80	-	-			

NEW TOWNS AND VILLAGES

ERR PETITION 2020-21

D-5.5
SINDH

Sr. No.	Name of Town / Village	No. of Villages	Total Mains (Kms)	No. of Consumers	Cost Rs. In Million			Cost Rs. In Million			Cost Rs. In Million		
					Total Cost			Total Cost			Expected to be Capitalized		
					Grant	Own	Total	Over & Above to be Adj against Grant	Own	Total	Over & Above to be Adj against Grant	Own	Total
					A	B	(A+B)	Over & Above to be Adj against Grant	Own	Total	Kms	Own	Total
21	Rais Yar Mohammed Sawand	1	0.90	1	2.35	0.05	2.40	2.35	0.05	2.40	0.90	-	-
22	Saleh Baghel, Mukhtiar Arain, Muhammad Bux Behram & Gello Noonari	4	15.10	632	29.36	34.13	63.49	29.36	34.13	63.49	15.10	-	-
23	Khair Muhammad Babar	1	3.60	42	9.83	2.27	12.10	9.83	2.27	12.10	3.60	-	-
24	Manthar Shoro	1	8.23	932	0.00	19.67	19.66	0.00	19.67	19.66	8.23	-	-
25	Ameer Bakhsh Khand	1	1.30	12	2.71	0.65	3.35	2.71	0.65	3.35	1.30	-	-
26	Rahim Balal	1	0.39	1	1.57	0.05	1.63	1.57	0.05	1.63	0.39	-	-
27	Sabzal Khan Mari	1	1.10	66	0.00	3.14	3.14	0.00	3.14	3.14	1.10	-	-
28	Choudhry Nazir Ahmed Gill	1	0.60	6	1.45	0.32	1.78	1.45	0.32	1.78	0.60	-	-
29	Arif Qadir / Waqar Qadir	1	0.61	6	1.48	0.32	1.80	1.48	0.32	1.80	0.61	-	-
30	Khalid Junejo	1	1.00	7	2.26	0.38	2.64	2.26	0.38	2.64	1.00	-	-
31	Hazar Khan Pahore	1	1.00	24	1.71	1.30	3.01	1.71	1.30	3.01	1.00	-	-
32	Wanyal Thebo	1	6.61	157	13.95	8.48	22.43	13.95	8.48	22.43	6.61	-	-
33	Ali Muhammad Parhiyar	1	3.00	48	7.30	2.59	9.89	7.30	2.59	9.89	3.00	-	-
34	Abdul Shakoor Memon	1	0.53	18	0.87	0.97	1.85	0.87	0.97	1.85	0.53	-	-
35	Ghulam Nabi Shah & Lakhat	2	3.53	93	7.04	5.02	12.06	7.04	5.02	12.06	3.53	-	-
36	Ahmed Lashari, Soomar Tharani & Haji Khan Jiskani	3	3.15	36	8.86	1.94	10.80	8.86	1.94	10.80	3.15	-	-
37	Ali Nawaz Bagrani	1	3.55	58	10.01	3.13	13.15	10.01	3.13	13.15	3.55	-	-
38	Ali Bux Chandio	1	2.82	79	2.14	4.27	6.41	2.14	4.27	6.41	2.82	-	-
39	Khokhar	1	5.56	73	15.71	3.94	19.65	15.71	3.94	19.65	5.56	-	-
40	Rao Dilmeer Khan	1	1.45	24	3.51	1.30	4.80	3.51	1.30	4.80	1.45	-	-
41	Haji Hashim Sahito	1	3.61	76	7.33	4.10	11.43	7.33	4.10	11.43	3.61	-	-
42	Karimabad & Inayatullah Qureshi	2	3.36	256	0.00	13.82	9.55	0.00	13.82	9.55	3.36	-	-
43	Muhbat Bhurgri	1	6.20	159	12.64	8.59	21.23	12.64	8.59	21.23	6.20	-	-
44	Wangai Maheri	1	5.26	107	13.42	5.78	19.20	13.42	5.78	19.20	5.26	-	-

ERR PETITION 2020-21

ERR PETITION 2020-21													SIN	
Sr. No.	Name of Town / Village	No. of Villages	Total Mains (Kms)	No. of Consumers	Cost Rs. In Million			Cost Rs. In Million			Cost Rs. In Million			
					Total Cost			Total Cost			Expected to be Capitalized			
					Grant	Own	Total	FY 2019-20 Petition			FY 2020-21 Petition			
								A	B	(A+B)	Over & Above to be Adj against Grant	Own	Total	Kms
45	Tando Ghulam Ali Town (Distribution Mains)	1	24.33	2027	0.00	64.23	64.23	0.00	64.23	64.23	24.33	-	-	-
46	Khan Muhammad Chandio	1	0.46	6	1.45	0.32	1.77	1.45	0.32	1.77	0.46	-	-	-
47	Saeed Pur	1	2.20	48	2.63	2.59	5.22	2.63	2.59	5.22	2.20	-	-	-
48	Yousif Ji Mian	1	3.90	157	0.00	8.48	8.48	0.00	8.48	8.48	3.90	-	-	-
49	Qaim Din Sahito	1	0.70	27	0.00	1.46	1.46	0.00	1.46	1.46	0.70	-	-	-
50	Ghulam Sarwer Pirzado & Jatan Ji Kiri	2	3.77	113	0.00	6.10	6.10	0.00	6.10	6.10	3.77	-	-	-
	ERR 2020-21:													
1	Chak 25 Sameja, Chak 26 Haji Mushtaque, Juman Khoso, Haji Abdullah Rejput, Saleh Mohammad Samu, Ameer Bux Samu, H.Ismail Samu & H.Soomar Samu	8	29.55	598	56.679	54.802	111.481	-	-	-	-	56.68	54.80	111.48
2	Achiar Memon, Muhammad Hashim Samejo, Faqeer Ghulam Muhammad Rind, Abdul Sattar Cheepa & Ahmed Memon	5	11.07	160	32.165	18.273	50.438	-	-	-	-	32.17	18.27	50.44
3	Gul Muhammad Halepoto, Nasser Chandio & Murad Chulgari	3	9.54	213	17.855	13.228	31.083	-	-	-	-	17.86	13.23	31.08
4	Ahmed Halepoto & Ali Halepoto	2	5.60	24	17.030	6.915	23.945	-	-	-	-	17.03	6.92	23.95
5	Bashir Halepoto & Feroz Laghari	2	11.22	262	14.271	22.312	36.583	-	-	-	-	14.27	22.31	36.58
6	Mehmood Laghari	1	3.40	113	0.281	7.526	7.807	-	-	-	-	0.28	7.53	7.81
7	Otto Sharif	1	4.80	30	14.761	6.888	21.649	-	-	-	-	14.76	6.89	21.65
8	Haji Imam Bux Korai	1	2.80	6	8.839	3.134	11.973	-	-	-	-	8.84	3.13	11.97
9	Khalique Dino Sahito, Leemon Almani & Mir Muhammad Nizamani	3	13.16	373	14.056	29.939	43.995	-	-	-	-	14.06	29.94	43.99
														13.16

ERR PETITION 2020-21

ERR PETITION 2020-21											SIN			
Sr. No.	Name of Town / Village	No. of Villages	Total Mains (Kms)	No. of Consumers	Cost Rs. In Million			Cost Rs. In Million			Cost Rs. In Million Expected to be Capitalized			
					Total Cost			Total Cost						
					Grant	Own	Total	FY 2019-20 Petition						
					A	B	(A+B)	Over & Above to be Adj against Grant	Own	Total		Kms	Over & Above to be Adj against Grant	Own
10	Siddique Mazari	1	3.02	79	3.265	6.307	9.572	-	-	-	3.27	6.31	9.57	3.02
11	Ali Muhammad Sahito, Talib Sahito & Kaloo Shito	3	7.30	146	10.859	12.916	23.775	-	-	-	10.86	12.92	23.78	7.30
12	Peerano Samo, Ahmed Samo & Qasim Samo	3	6.60	39	17.822	7.859	25.681	-	-	-	17.82	7.86	25.68	6.60
13	Chak 5 Altaf Arain, Chak 6 Iqbal Gujar, A.Haque, Chak 20 Bashir Ahmed, Chak.21 Balach Chang, Chak.23 Lal Khan, Chak 22, Bashir Rajput & Chak 30	9	27.00	114	87.578	28.553	116.131	-	-	-	87.58	28.55	116.13	27.00
14	Gartel Village/Kot Nawab Sardar Khan Chandio Rest House, Nawab Sardar Khan Chandio, Chato Khan Chandio, A.Rahman Chandio & Ali Dost Chandio	5	13.30	69	41.140	10.427	51.567	-	-	-	41.14	10.43	51.57	13.30
15	Morio Chandio, Mahram Chandio, Sadoro Chandio & Noor Mohammed Chandio	4	5.30	15	13.937	4.520	18.457	-	-	-	3.94	4.52	18.46	5.30
16	Gaji Bux Chandio, Khadim Hussain Chandio & Shaman Chandio	3	6.20	29	18.742	7.617	26.359	-	-	-	8.74	7.62	26.36	6.20
17	Mir Khan Gadhi, Allah Bachayo Panhwar & Khameso Mallah	3	9.00	97	21.232	13.042	34.274	-	-	-	21.23	13.04	34.27	9.00
18	Dodo Panhwar, Dost Muhammad Panhwar & Dinar Panhwar	3	4.10	63	8.188	6.377	14.565	-	-	-	8.19	6.38	14.56	4.10
19	Jiando Gadahi & Bahram Gadahi	2	6.90	82	16.997	10.964	27.961	-	-	-	17.00	10.96	27.96	6.90
20	Shaman Panhwar & Chakar Dhakhani	2	10.50	130	24.213	16.618	40.831	-	-	-	24.21	16.62	40.83	10.50
21	Ali Khan Bahooto	1	3.30	6	10.643	3.749	14.392	-	-	-	10.64	3.75	14.39	3.30
22	Khan Muhammad Gadhi	1	1.70	12	3.175	1.510	4.685	-	-	-	3.18	1.51	4.69	1.70

NEW TOWNS AND VILLAGES

D-5.5
SINDH

ERR PETITION 2020-21

LRA PETITION 2020-21												SIN		
Sr. No.	Name of Town / Village	No. of Villages	Total Mains (Kms)	No. of Consumers	Cost Rs. In Million			Cost Rs. In Million			Cost Rs. In Million			
					Total Cost			Total Cost			Expected to be Capitalized			
					Grant	Own	Total	Grant	Own	Total	Grant	Own	Total	
					A	B	(A+B)	Over & Above to be Adj against Grant	Own	Total	Kms	Over & Above to be Adj against Grant	Own	Total
23	Phuli Faqir Panhwar	1	1.70	24	2.527	2.158	4.685	-	-	-	2.53	2.16	4.69	1.70
24	Ayooob Malah	1	4.80	36	12.845	6.530	19.375	-	-	-	12.85	6.53	19.38	4.80
25	Allah Bachayo Panhwar	1	3.70	67	7.004	6.768	13.772	-	-	-	7.00	6.77	13.77	3.70
26	Pir Mashaikh	1	3.60	55	7.488	6.081	13.569	-	-	-	7.49	6.08	13.57	3.60
27	Ghulam Hussain Gadhi	1	2.80	30	7.543	4.430	11.973	-	-	-	7.54	4.43	11.97	2.80
28	Ghulam Muhammad Jamal	1	1.20	12	2.132	1.226	3.358	-	-	-	2.13	1.23	3.36	1.20
29	Ali Muhammad Qambrani	1	0.95	3	2.170	0.630	2.800	-	-	-	2.17	0.63	2.80	0.95
30	Khuda Bux Jatoi	1	1.80	12	4.906	2.229	7.135	-	-	-	4.91	2.23	7.13	1.80
31	Moothri	1	2.40	18	3.938	2.079	6.017	-	-	-	3.94	2.08	6.02	2.40
32	Suhrab Khan Jamal	1	1.40	2	3.164	0.830	3.994	-	-	-	3.16	0.83	3.99	1.40
33	Phulji	1	4.60	48	11.475	6.932	18.407	-	-	-	11.48	6.93	18.41	4.60
34	Ghuhran Khan Panhwar	1	1.80	36	1.713	2.711	4.424	-	-	-	1.71	2.71	4.42	1.80
35	Usman Panhwar	1	0.91	3	2.087	0.607	2.694	-	-	-	2.09	0.61	2.69	0.91
36	Saifal Khan Panhwar	1	1.02	9	1.918	0.963	2.881	-	-	-	1.92	0.96	2.88	1.02
37	Dilawal Khan Panhwar	1	1.50	15	2.596	1.559	4.155	-	-	-	2.60	1.56	4.15	1.50
38	Jianoo Khan Gadhi	1	1.23	30	1.222	2.216	3.438	-	-	-	1.22	2.22	3.44	1.23
39	Khan Mohammed Gadhi	1	2.05	24	5.160	3.184	8.344	-	-	-	5.16	3.18	8.34	2.05
40	Abdullah Panhwar	1	0.89	12	1.485	1.051	2.536	-	-	-	1.49	1.05	2.54	0.89
41	Dinar Panhwar	1	0.68	5	1.499	0.585	2.084	-	-	-	1.50	0.58	2.08	0.68
42	Dodo Khan Panhwar	1	0.82	30	0.356	1.981	2.337	-	-	-	0.36	1.98	2.34	0.82
43	Dost Mohammed Panhwar	1	0.87	24	0.795	1.687	2.482	-	-	-	0.80	1.69	2.48	0.87

ERR PETITION 2020-21

Sr. No.	Name of Town / Village	No. of Villages	Total Mains (Kms)	No. of Consumers	Cost Rs. In Million			Cost Rs. In Million							
					Total Cost			Total Cost							
					Total Cost			Expected to be Capitalized							
					Grant	Own	Total	FY 2020-21 Petition							
					A	B	(A+B)	Over & Above to be Adj against Grant	Own	Total	Over & Above to be Adj against Grant	Own	Total	Kms	
44	Mevo Khan Lund	1	0.82	18	1.013	1.334	2.347	-	-	-	-	1.01	1.33	2.35	0.82
45	Andal Khan Panhwar	1	1.15	18	1.693	1.519	3.212	-	-	-	-	1.69	1.52	3.21	1.15
46	Haji Muhammad Bux Laghari & Khar Muhammad Laghari	2	6.10	17	19.592	7.315	26.907	-	-	-	-	19.59	7.31	26.91	6.10
47	Wali Muhammad Laghari & Gazi Dari Ghulam Hyder Laghari	2	9.58	187	15.072	17.388	32.460	-	-	-	-	15.07	17.39	32.46	9.58
48	Karim Bux Laghari, Gul Muhammad Laghari, Juma Khan Laghari, Munshi Muhammad Hussain Laghari, Subzal Village, Muhammad Ismail Mahar & Bhano Malik	7	11.24	178	21.478	17.772	39.250	-	-	-	-	21.48	17.77	39.25	11.24
49	Chutta Khan Laghari	1	5.10	49	13.226	7.600	20.826	-	-	-	-	13.23	7.60	20.83	5.10
50	Sanjar Wasoo, Shahmore Wasoo, Salim Shah Bukhari, Waloo Sanghar, Rajib Wasoo, Muhammad Bux Wasoo & Puhal Wasoo	7	9.70	23	30.945	3.197	34.142	-	-	-	-	30.95	3.20	34.14	9.70
51	Hafiz Sultan Ahmed Wasoo, Gul Bahar Khan Sanghr, Pirbhu Marwaree, Muhammad Murad Sanghar, Dil Murad Sanghar Sanghar & Sabal Khan Aribanee	6	9.40	57	30.571	5.998	36.569	-	-	-	-	30.57	6.00	36.57	9.40
52	Haji Mithal Agahee & Abdullah Lakhani	2	6.84	83	21.228	5.729	26.957	-	-	-	-	21.23	5.73	26.96	6.84
53	Jumo Sanghar	1	1.50	9	2.920	1.235	4.155	-	-	-	-	2.92	1.23	4.15	1.50
54	Atta Muhammad Sanghar	1	1.00	24	1.066	1.762	2.828	-	-	-	-	1.07	1.76	2.83	1.00
55	Umaid Ali Sanghar	1	2.00	30	2.455	2.500	4.955	-	-	-	-	2.46	2.50	4.96	2.00
56	Meo Sanghar	1	1.70	18	2.851	1.834	4.685	-	-	-	-	2.85	1.83	4.69	1.70
	TOTAL	191	514.08	11,807	1,024.75	777.60	1,798.08	322.89	352.50	671.12	211.88	701.86	425.10	1,126.96	302.20

Sui Southern Gas Co. Ltd.
Details of Plant & Machinery
For F.Y. 2020 - 21

Table# D-6.1

S/N	Description	Projected Capitalisation (Rs in million)	Addition	Replacement	Total	Utility	Unit Cost Comparison Data		Need Assessment/ Cost Benefits
							Ref. Year	FY 2020-21	
Rs in million									
1	Solar Panal 150W complete with charge controller, 100 amps, 12 vdc Lead Acid battery, 04 LED bulbs, 01 Ceiling fan	1.500	10	-	10	HQ-1 & HQ-2	NA	0.150	Required for lighting arrangement at remote location
2	Fork Lifter 3 Ton	5.000	1	-	1	HQ-3	NA	5.000	Fork lifter required for loading & unloading of heavy machinery / equipment
3	Solar Panal 150W complete with charge controller, 100 amps, 12 vdc Lead Acid battery, 04 LED bulbs, 01 Ceiling fan	0.900	6	-	6	HQ-3	NA	0.150	Required for lighting arrangement at remote location
4	Solar Panal 150W complete with charge controller, 100 amps, 12 vdc Lead Acid battery, 04 LED bulbs, 01 Ceiling fan	0.900	6	-	6	HQ-SKP	NA	0.150	Required for lighting arrangement at remote location
5	Solar Panal 150W complete with charge controller, 100 amps, 12 vdc Lead Acid battery, 04 LED bulbs, 01 Ceiling fan	0.900	6	-	6	Section IV	NA	0.150	Required for lighting arrangement at remote location
6	Solar Panal 150W complete with charge controller, 100 amps, 12 vdc Lead Acid battery, 04 LED bulbs, 01 Ceiling fan	0.900	6	-	6	HQ-DADU	NA	0.150	Required for lighting arrangement at remote location
7	Pump with 3 Phase motor(Set) skid mounted suction 2.5" , Discharge 1.5" "3 Phase 400 VAC, 60 Hz	0.600	-	1	1	HQ-DADU	NA	0.600	Required for HQ-Colony water supply, Due to old and poor condition existing is beyond expenses repair
8	Generator 15KVA	2.900	1	-	1	HQ-SUI	NA	2.900	Required for alternate arrangement against main power breakdown.

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Sui Southern Gas Co. Ltd.
Details of Plant & Machinery
For F.Y. 2020 - 21

Table# D-6.1

S/N	Description	Projected Capitalisation (Rs in million)	Addition		Replacement	Total	Utility	Unit Cost Comparison Data		Need Assessment/ Cost Benefits
			Qty					Ref. Year	FY 2020-21	
			Rs in million							
9	Solar Panel 150W complete with charge controller, 100 amps, 12 vdc Lead Acid battery, 04 LED bulbs, 01 Ceiling fan	0.750	5	-	5	HQ-SIBI	NA	0.150	Required for lighting arrangement at remote location	
10	Solar Panel 150W complete with charge controller, 100 amps, 12 vdc Lead Acid battery, 04 LED bulbs, 01 Ceiling fan	0.750	5	-	5	HQ-QTA	NA	0.150	Required for lighting arrangement at remote location	
11	Complete solar CP System	7.000	2	-	2	CP (T)	NA	3.500	Additional are req'd for MP-298 on ILBP, KMP-418 on IRBP to meet high current requirements in these areas.	
12	Solar Module 150 Watt	1.500	60	-	60	CP (T)	NA	0.025	Additional are req'd for upgrading of existing solar system installed at various locations to meet high current requirement	
13	Electric Motor Driven Water Pump Type: Centrifugal 20 HP, 2800 RPM Suction: 4" Discharge: 3" 3 Phase 400 VAC, 50 Hz	1.600	-	2	2	Trans Admin	NA	0.800	Replacement of existing pumps are required at Gulshan Pumping station supplying water to KT. Existing pumps involves high cost in its repair & maintenance.	
14	Diesel Engine Driven DC Generator (Welding Plant) 400-450AMP at 36 Volts	4.500	-	1	1	Trans-ERC	NA	4.500	The existing welding plant is 25 years old and having problems of current regulation which cause defects in welding. The repair is beyond economically viable. Therefore new Plant is requested for ERC HQ-2	
15	Split Sleeve Leak Clamp for pipe-Pipe size: 42" dia Pipe seam weld: Spiral	10.000	2	-	2	Trans-ERC	NA	5.000	Required for 42" dia RLNG pipeline to meet any emergency arises due to leakage.	
16	Leak Clamp with Pilot pin For pipe size: 42" dia	3.990	6	-	6	Trans-ERC	NA	0.665	Required for RLNG pipeline to rectify minor leakages in Emergency.	
17	Leak Clamp with Pilot pin For pipe size: 24" dia	3.040	8	-	8	Trans-ERC	NA	0.380	Required for minor leakages/ pinholes mostly on Kunnar Pasaki Pipeline, caused by miscreants acts of installing clamps on SSCC pipelines instead of , in ignorance, parallel passing PARCO oil pipelines for stealing oil.	

Sui Southern Gas Co. Ltd.
Details of Plant & Machinery
For F.Y. 2020 - 21

Table# D-6.1

S/N	Description	Projected Capitalisation (Rs in million)	Addition	Replacement	Total	Utility	Unit Cost Comparison Data		Need Assessment/ Cost Benefits
							Ref. Year	FY 2020-21	
Rs in million									
18	Low Clearance Cold Cutting Machine for 10" to 14" dia Pipe Range	0.400	1	-	1	Trans-ERC	NA	0.400	Cold cutting is to be carried out during Transmission Gas pipe line maintenance and emergency activities. At present hydraulically operated cold cutting machines are available in ERC Shikarpur and Quetta. Since the work is to be carried out in remote areas if any situation of failure of hydraulic engine we remain handicap. In such situation manually operated cold cutting machines are requisite.
19	Low Clearance Cold Cutting Machine for 16" to 18" dia Pipe Range	0.480	1	-	1	Trans-ERC	NA	0.480	Cold cutting is to be carriedout during Transmission Gas pipe line maintenance and emergency activities. At present hydraulically operated cold cutting machines are available in ERC Shikarpur and Quetta. Since the work is to be carried out in remote areas if any situation of failure of hydraulic engine we remain handicap. In such situation manually operated cold cutting machines are requisite.
20	Low Clearance Cold Cutting Machine for 20" to 24" dia Pipe Range	0.550	1	-	1	Trans-ERC	NA	0.550	Cold cutting is to be carriedout during Transmission Gas pipe line maintenance and emergency activities. At present hydraulically operated cold cutting machines are available in ERC Shikarpur and Quetta. Since the work is to be carried out in remote areas if any situation of failure of hydraulic engine we remain handicap. In such situation manually operated cold cutting machines are requisite.
21	Fork Lifter 5 Ton	10.000	1	-	1	CMG - RLNG	NA	10.000	Required for shifting of material from yard area to workshop, store & maintenance job at HQ-2
22	Fork Lifter 5 Ton	10.000	1	-	1	CMG - Indignous Gas	NA	10.000	Required for shifting of material from yard area to workshop, store & maintenance job at HQ-3 comp station.
23	Gas Leak Detector-Laser Methane Leak Detector Handheld	2.900	1	-	1	MPL-I	NA	2.900	Required for gas leak detection on Transmission network
24	Dead Weight Tester - Calibration Pressure Ranged 0 to 100,000 Psi	2.900	1	-	1	MPL-I	NA	2.900	Required for Gauges & Controller calibration at HQ-Shikarpur
25	Gas Engine Generator 20KVA	9.000	-	2	2	Services	NA	4.500	The existing generators at RS-Golarahi, RS-5 & RS-Damboli installed 18 years back have already completed its useful life and are now frequently developing faults and are beyond economical repair. In view of law & order conditions and for smooth & uninterrupted SCADA & Telecom system, the old generators needs urgent replacement

Sui Southern Gas Co. Ltd.
Details of Plant & Machinery
For F.Y. 2020 - 21

Table# D-6.1

S/N	Description	Projected Capitalisation (Rs in million)	Addition	Replacement	Total	Utility	Unit Cost Comparison Data		Need Assessment/ Cost Benefits
							Ref. Year	FY 2020-21	
Rs in million									
26	Generator 20 KVA with Sound proof Canopy	15.000	3	-	3	Services	NA	5.000	CTS Sawan, CTS Ban Qasim and SMS Pakland are located at remote areas and due to law & order situations and for proper cooling required for the installed measurement equipment, these generators are urgently required.
27	Major Overhauling of Gas Engine Generators Caterpillar make 360KW	6.500	1	-	1	Services	NA	6.500	This Generator is kept as standby arrangement for any breakdown of main generators at HQ. Major overhauling is due as it have completed running Hours recommended by manufacturer. This will increase life of Generator and shall be utilized at other location after Major overhauling.
28	Top Overhauling of Gas Engine Generators 200KVA	13.500	3	-	3	Services	NA	4.500	These Generators are Power source of Electricity at HQ-Shikarpur, HQ Quetta & GM (East) Office Korangi - Karachi. These generators have completed more than 13000 running Hours. Top overhauling as per recommendation of manufacturer is due which will increase life of Generators.
29	Modernization of Elevators at Head Office.	-	-	-	-	Services	NA	-	Additional budget is required for modernization of 19 years old Elevators at Head Office.
30	Renovation of Electrical wiring for staff colony at HQ - 3 and HQ - Dadu	2.000	10	-	10	Services	NA	0.200	Due to frequent short circuit and breakdown, the two decades old wiring & switch sockets needs urgent replacement as it is dangerous for human lives & home appliances.
31	Renovation of Electrical wiring, switch boards, Distribution Boards, Lights Fixture, Ceiling & Exhaust fans at 11 Nos. CFC's in Karachi.	1.200	6	-	6	Services	NA	0.200	Mostly wirings are old that results in frequent failures & damaging costly equipments and are also very dangerous for Human lives in case of any short circuit.
32	Water Heater System for Head office building	1.500	-	1	1	Services	NA	1.500	The existing Water Heating system has completed 20 years useful life. The model being obsolete is now beyond repairing and needs urgent replacement.
33	37KW VFD for HVAC System H.O	1.350	-	3	3	Services	NA	0.450	Existing VFDs are beyond repair due to obsolete model as such needs urgent replacement.
34	Gas Flow Computer 4 Stream	14.000	-	2	2	Measurement Metering Transmission	NA	7.000	25 Nos. 4 Stream Gas Flow Computers of Emerson Process - USA, Model - FB-407 are in operation on entire Transmission Network. The vender has informed that this model is now obsolete and they will not be able to provide spares of this model in future. These flow computers were procured during last 15 years time and frequent defects develop at older installations. Therefore, we have planned to replace 02 Flow computers in FY:2020-21 to increase the reliability.

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Sui Southern Gas Co. Ltd.
Details of Plant & Machinery
For F.Y. 2020 - 21

Table# D-6.1

S/N	Description	Projected Capitalisation (Rs in million)	Addition	Replacement	Total	Utility	Unit Cost Comparison Data		Need Assessment/ Cost Benefits
							Ref. Year	FY 2020-21	
Rs in million									
35	Gas Flow Computer 1 Stream	6.000	-	3	3	Measurement Metering Transmission	NA	2.000	28 Nos. 1- Stream Gas Flow Computers of different Make and models are in operation on Transmission Network. These flow computers were procured during last 11 years time and frequent defects develop at older installations. Therefore, we have planned to replace 03 Flow computers in FY:2020-21 to increase the reliability.
36	Multifunction Calibrator	4.000	-	2	2	Measurement Metering Transmission	NA	2.000	02 are required to provide to (Meas-Trans) Teams of various Head Quarters for calibration of flow computers and EVSs installed at SMSs /Check Meters, for saving company resources and time.
37	Actuator for 16" dia. Ball Valve.	8.000	4	-	4	Measurement Metering Transmission	NA	2.000	Required for 03 Nos. Metering skids for RLNG installed at MVA Pakland to control supply of RLNG, from Gas Control KT to SNGPL and Karachi offtake as per supply and demand and
38	Explosion proof torches	0.050	10	-	10	Measurement Metering Transmission	NA	0.005	Required for use in hazards area at POD check meters, SMSs, and CTSs.
39	Digital Multimeters	0.225	3	-	3	Measurement Metering Transmission	NA	0.075	Required for repair/maintenance of Flow Computers, EVCs, TOCs and solar charge controllers etc at KT and Meas-Trans work shops at Head Quarters.
40	Universal Battery Charger(6-12 VDC, 100 Amps)	0.150	1	-	1	Measurement Metering Transmission	NA	0.150	Required for charging of batteries of various equipment of Measurement Section.
41	HART Communicator	2.000	1	-	1	Measurement Metering Transmission	NA	2.000	Required for calibration of orifice meters and smart transmitters installed at SMSs & POD Check Meters.
42	On-line Gas Chromatograph	36.000	-	3	3	GQCL	NA	12.000	On-line Gas Chromatograph units to be replaced were procured in the year 2004 and are now obsolete & their spares are no more available from the OEM. Therefore, replacement of these units is essentially required at SMSs. & POD Check Meters.
43	Bench type Gas Chromatograph.	13.000	1	-	1	GQCL	NA	13.000	Bench type gas chromatographs are required one for SNG one for Natural Gas to be placed at Lab KT for analysis of samples of SNG / NG received from large number of LPG-Air Mix Plants being installed & Natural gas from Distribution & Transmission network for Energy based billing to respective customers.

Sui Southern Gas Co. Ltd.
Details of Plant & Machinery
For F.Y. 2020 - 21

Table# D-6.1

S/N	Description	Projected Capitalisation (Rs in million)	Addition	Replacement		Total	Utility	Unit Cost Comparison Data		Need Assessment/ Cost Benefits
								Ref. Year	FY 2020-21	
Rs in million										
44	UPS 3KVA	2.500	-	5		5	GQCL	NA	0.500	On-line UPS units to be replaced are old and not repairable, installed at different Gas Quality monitoring locations, SMSs & POD check meter stations on Transmission network. Therefore, replacement of these units is essentially required to meet the operational requirement.
45	Air Compressor - Low Pressure - 100 Psig	2.800	1	-		1	DSM-DISTRIBUTION CENTRAL REGION	NA	2.800	Required for operation maintenance.
46	Tee Drilling Machine	2.000	2	3		5	DSM-DISTRIBUTION CENTRAL REGION	NA	0.400	Required to equipped all Maintenance teams, in order to attend low pressure complaints and to stop gas during rectification.
47	Pipe Squeezing Machine Steel (With Hydraulic Pump)	2.100	3	3		6	DSM-DISTRIBUTION CENTRAL REGION	NA	0.350	Required for Fitter teams for stoppage of gas leakage during emergency.
48	Pipe Squeezing Machine Steel (With Hydraulic Pump)	1.600	2	2		4	DSM-DISTRIBUTION CENTRAL REGION	NA	0.400	Required for Welding teams for necessary repair and rectification work.
49	Welding Plant - DC GENERATOR, 400-450AMPS, D/E	7.000	1	1		2	DSM-DISTRIBUTION CENTRAL REGION	NA	3.500	Require to establish new teams to meet the targets and replacement of existing asset No.
50	Dewatering Pump	4.800	2	2		4	DSM-DISTRIBUTION CENTRAL REGION	NA	1.200	Required for de-watering during rectification jobs.
51	Generator 5KVA	0.500	-	2		2	CONSTRUCTION/M AINS LAYING-DISTRIBUTION CENTRAL REGION	NA	0.250	Required for P.E Teams
52	Air Compressor - Low Pressure - 100 Psig	2.800	-	1		1	CONSTRUCTION/M AINS LAYING-DISTRIBUTION CENTRAL REGION	NA	2.800	Required for Distr. Central SITE.
53	Generator 5KVA	1.000	2	2		4	REHABILITATION-DISTRIBUTION CENTRAL REGION	NA	0.250	Required for P.E Welding teams. Replacement required for defective.
54	Water Pump (Diaphragm Type)	1.200	1	-		1	REHABILITATION-DISTRIBUTION CENTRAL REGION	NA	1.200	Required for de-watering during rectification jobs.
55	Electro Fusion Machine	2.400	4	4		8	REHABILITATION-DISTRIBUTION CENTRAL REGION	NA	0.300	Required for P.E Welding teams. Replacement required for defective.

Sui Southern Gas Co. Ltd.
Details of Plant & Machinery
For F.Y. 2020 - 21

Table# D-6.1

S/N	Description	Projected Capitalisation (Rs in million)	Addition	Replacement	Total	Utility	Unit Cost Comparison Data		Need Assessment/ Cost Benefits
				Qty			Ref. Year	FY 2020-21	
Rs in million									
56	Welding Plant - DC GENERATOR, 400-450AMPS, D/E	3.500	1	-	1	UTILIZATION (IND)- DISTRIBUTION CENTRAL REGION	NA	3.500	Require to establish new teams to meet the targets.
57	Generator 5KVA	1.000	2	2	4	UTILIZATION (SERVICE SECTION)- DISTRIBUTION CENTRAL REGION	NA	0.250	Replacement required against Asset # 02250 (2005) & Asset # 40109 (2005) which is beyond economical repair
58	Electro Fusion Machine	1.800	2	4	6	UTILIZATION (SERVICE SECTION)- DISTRIBUTION CENTRAL REGION	NA	0.300	Replacement against old ones which beyound economical repair.
59	Transformer Rectifier - Oil Cooled	7.000	15	5	20	CP (D)	NA	0.350	For Cathodic Protection of Unprotected Underground Gas pipeline. 09 nos. TR for normal CAPEX Budget FY 2020-21 & 06 nos. Ex-NGEP Project. 1. 05 Nos. CP West Region 2. 05 Nos. CP East Region 3. 05 Nos CP Central Region.
60	Electro Fusion Machine	0.900	1	2	3	MAINS LAYING (CONSTRUCTION)- EASTERN REGION	NA	0.300	Required for P.E Welding teams, replacement of old / defective machines.
61	Butt Fusion Machine (With Assecorties)	1.600	1	1	2	MAINS LAYNG (CONSTRUCTION)- EASTERN REGION	NA	0.800	Required for P.E Welding teams, replacement of old / defective machines.
62	Generator 5KVA	0.600	1	2	3	MAINS LAYING (CONSTRUCTION)- EASTERN REGION	NA	0.200	Required for P.E Welding teams
63	Generator 5KVA	0.400	-	2	2	UD (Services)- EASTERN REGION	NA	0.200	Replacement due to high maintenance cost
64	Electro Fusion Machine	0.600	-	2	2	UD (Services)- EASTERN REGION	NA	0.300	Replacement due to high maintenance cost
65	Electro Fusion Machine	1.200	2	2	4	Rehabilitation Section- Eastern Region	NA	0.300	Required for P.E Welding teams, replacement of old / defective machines.
66	Generator 5KVA	0.600	2	1	3	Rehabilitation Section- Eastern Region	NA	0.200	Required for Distr East Korangi
67	Generator 5KVA	0.600	1	2	3	DSM-EASTERN REGION	NA	0.200	Required for P.E Welding teams
68	Electro Fusion Machine	0.600	2	2	4	DSM-EASTERN REGION	NA	0.150	Required for P.E Welding teams
69	Water Pump (Diaphragm Type)	1.200	-	1	1	DSM-EASTERN REGION	NA	1.200	Required for Emergency work
70	Pipe Squeezing Machine(1"-2" dia Steel)	1.600	3	1	4	DSM-EASTERN REGION	NA	0.400	Required for Steel Welding teams

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Sui Southern Gas Co. Ltd.
Details of Plant & Machinery
For F.Y. 2020 - 21

Table# D-6.1

S/N	Description	Projected Capitalisation (Rs in million)	Addition	Replacement	Total	Utility	Unit Cost Comparison Data		Need Assessment/ Cost Benefits
							Ref. Year	FY 2020-21	
Rs in million									
71	T-3 Drilling Machine	1.200	-	3	3	DSM-WESTERN REGION	NA	0.400	Required to equipped all Maintenance teams, in order to attend low pressure complaints and to stop gas during rectification.
72	Electro Fusion Machine	0.600	1	1	2	DSM-WESTERN REGION	NA	0.300	Additional required by maintenance team for PE network.
73	Generator 5KVA	0.400	-	2	2	DSM-WESTERN REGION	NA	0.200	Required for above fusion machines
74	Pipe Squeezing Machine Steel (With Hydraulic Pump)	0.700	-	2	2	DSM-WESTERN REGION	NA	0.350	Required for Fitter teams for stoppage of gas leakage during emergency.
75	Pipe Squeezing Machine Steel (With Hydraulic Pump)	0.800	-	2	2	DSM-WESTERN REGION	NA	0.400	Required for Welding teams for necessary repair and rectification work.
76	Dewatering Pump	0.500	-	2	2	DSM-WESTERN REGION	NA	0.250	Required for de-watering during rectification jobs.
77	Pipe squeezing Machine 20mm To 63MM	1.800	2	1	3	CONSTRUCTION/ MAIN'S LAYING- WESTERN REGION	NA	0.600	Required for P.E Teams
78	Generator 5KVA	0.200	-	1	1	CONSTRUCTION/ MAIN'S LAYING- WESTERN REGION	NA	0.200	Required for P.E Teams
79	T Drilling Machine	0.400	1	-	1	UD (Industrial)- WESTERN REGION	NA	0.400	For Steel Welding Team
80	Generator 5KVA	0.400	-	2	2	UD (Services)- WESTERN REGION	NA	0.200	Replacement required against Asset # 02250 (2005) & Asset # 40109 (2005) which is beyond economical repair
81	Electro Fusion Machine	0.600	-	2	2	UD (Services)- WESTERN REGION	NA	0.300	Replacement against old ones which beyound economical repair.
82	Generator 5KVA	0.600	-	3	3	REHABILITATION WEST	NA	0.200	Required for P.E Welding teams. Replacement required for defective.
83	Water Pump (Diaphragm Type)	1.200	1	-	1	REHABILITATION WEST	NA	1.200	Required for de-watering during rectification jobs.
84	Electro Fusion Machine	1.200	2	2	4	REHABILITATION WEST	NA	0.300	Required for P.E Welding teams. Replacement required for defective.
85	Generator 50KVA	5.000	-	1	1	Billing	NA	5.000	Working is delayed du to no electricity as the existing generator cannot bear the load of whole building and usually remain out of order. There are two Billing Zones (Landhi and Malir), CFC, CRD, are also exist in the premise.
86	Suction Pump	0.025	1	-	1	Billing	NA	0.025	For use of Zonal office.
87	Generator 6KVA	0.600	-	2	2	Measurement Distribution	NA	0.300	Replacement of Old Generator of Mobile Field Proving Unit

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Sui Southern Gas Co. Ltd.
Details of Plant & Machinery
For F.Y. 2020 - 21

Table# D-6.1

S/N	Description	Projected Capitalisation (Rs in million)	Addition	Replacement	Total	Utility	Unit Cost Comparison Data		Need Assessment/ Cost Benefits
							Ref. Year	FY 2020-21	
Rs in million									
88	Paint Booth	4.000	1	-	1	MRS	NA	4.000	Complete set of painting booth as per HSE standard is required
89	Lath Machine 5 HP	0.600	1	-	1	MRS	NA	0.600	It is required for machining work in defective meters
90	Welding Plant	14.000	-	4	4	DISTRIBUTION NORTH (LS)	NA	3.500	Additional required for 1 No. for construction/NTV deptt. , & 1 No. for Tando Hyder Subzone and 1 No. for Khoski Sub Zone. Replacement is required for replacement of 4 No. 1996 Model which have become out of order for Industrial Section , S&U Section, Rehab Section and Construction Section HYD (1 of each section).
91	Air Compressor-250 CU Ft/min @ 100 psig	5.600	-	2	2	DISTRIBUTION NORTH (LS)	NA	2.800	Additional Required for Tando Hyder and Shahdadpur subzones.Replacement required for 1 No. old/out of order compressor of industries section & 1 No. for Tando Allahyar Subzone.
92	Air Compressor (small size & pressure) 15 psig	0.100	2	-	2	DISTRIBUTION NORTH (LS)	NA	0.050	Required for testing the house line of domestic customers for rehabilitation.
93	Steel Pipe Squeezing Machine	0.700	2	-	2	DISTRIBUTION NORTH (LS)	NA	0.350	Additional required for Maintenance Hyderabad for Killing of service line of Industrial connections at high pressure.
94	Steel Pipe Squeezing Machine	0.400	1	-	1	DISTRIBUTION NORTH (LS)	NA	0.400	Additional required for Maintenance Hyderabad for Killing of service line of Industrial connections at high pressure.
95	Generator 5KVA	0.600	3	-	3	DISTRIBUTION NORTH (LS)	NA	0.200	Additional is required for PE Connections & PE Mains laying work to established new team in Utilization department & at Sub Zones of Hyderabad Region.
96	Electro Fusion Machine	0.900	3	-	3	DISTRIBUTION NORTH (LS)	NA	0.300	Additional is required for PE Connections & PE Mains laying work to established new team in Utilization department.
97	T Drilling Machine	1.500	1	2	3	DISTRIBUTION NORTH (LS)	NA	0.500	Additional required for Sub Zone of Hyderabad Region to equiped the Zones & Sub Zones Replacement required for out of order Machine of S&U Hyderabad and Thatta.
98	Pipe Bending Machine	0.500	5	-	5	DISTRIBUTION NORTH (LS)	NA	0.100	Additional 1 no for each Zone to bend the GI pipe for U Band connection.
99	Dewatering Pump	1.200	1	-	1	DISTRIBUTION NORTH (LS)	NA	1.200	Required for Rehabilitation Department where waterlogged area exists.
100	Dewatering Pump	0.900	3	3	6	DISTRIBUTION NORTH (LS)	NA	0.150	Replacement for old at Maintenance, UD Hyderabad & Rehab. Deptt. Additional required for Rehab & out stations of Hyderabad Region to equiped the Zones & Sub Zones.
101	Odorizer Unit	75.000	15	-	15	DISTRIBUTION NORTH (LS)	NA	5.000	Additional required at Baqar / Raju Nizamani, Oderolal, Bubak, Bhan Saeedabad of Hyderabad Region. Padidan of Nawabshah Region and for Larkana and Sukkur Region.

Sui Southern Gas Co. Ltd.
Details of Plant & Machinery
For F.Y. 2020 - 21

Table# D-6.1

S/N	Description	Projected Capitalisation (Rs in million)	Addition	Replacement	Total	Utility	Unit Cost Comparison Data		Need Assessment/ Cost Benefits
							Ref. Year	FY 2020-21	
Rs in million									
102	Welding Plant	3.500	-	1	1	MAINTENANCE	NA	3.500	Replacement required for Old one.
103	Air Compressor	2.800	-	1	1	MAINTENANCE	NA	2.800	Replacement required for Old one.
104	Steel Pipe Squeezing Machine	0.700	2	-	2	MAINTENANCE	NA	0.350	Additional required for different maintenance activities.
105	Generator 5KVA	0.200	1	-	1	MAINTENANCE	NA	0.200	Additional required to generate electricity for emergency maintenance work at sites while existing Generators are attached with P.E electro fusion work.
106	P.E Pipe Squeezing Machine	0.200	1	1	2	MAINTENANCE	NA	0.100	Required for different maintenance activities to stop the gas in emergency: Mostly two squeezing machines are used to stop the flow of gas from both sides of pipeline. To meet the emergency in all zones of Hyderabad Region, we required one more additional machine.
107	Electro Fusion Machine	0.350	1	-	1	MAINTENANCE	NA	0.350	Required for emergencies & leak rectification & Theft eradication jobs.
108	Dewatering Pump	0.250	1	-	1	MAINTENANCE	NA	0.250	Required for dewatering of small pits during repair maintenance activities during drainage over flow in the streets.
109	Dewatering Pump	0.450	1	2	3	MAINTENANCE	NA	0.150	Required for dewatering of small pits during repair maintenance activities during drainage over flow in the streets.
110	E-5 Machine	0.800	1	-	1	MAINTENANCE	NA	0.800	Required for pipeline Maintenance activities in all zones of Hyderabad Region.
111	D-5 Drilling Machine	0.700	1	-	1	MAINTENANCE	NA	0.700	Required for pipeline Maintenance activities in all zones of Hyderabad Region.
112	T Drilling Machine	1.000	1	1	2	MAINTENANCE	NA	0.500	Required for drilling work of pipe fitting in all zones of Hyderabad Region.
113	Transformer Rectifier - Oil Cooled	7.000	15	5	20	CP (D)	NA	0.350	For Cathodic Protection of Unprotected Underground Gas pipeline. 07 nos. TR for normal CAPEX Budget FY 2020-21 (for UFG Target 2020-21) & 08 nos. Ex-NGEP Project.
114	Generator 50KVA	3.500	1	-	1	MRS	NA	3.500	In order to continuous power failure in Regional Office Hyderabad, progress with respect UFG Special project is badly being affected. For enhancement of progress, uninterrupted power supply is essentially required. In view of the facts, the same is being proposed.
115	Generator 5.5KVA	0.250	-	1	1	Measurement Distribution	NA	0.250	Replacement required for one generator which is out of order.
116	Welding Plant	17.500	5	-	5	DISTRIBUTION NORTH (US)	NA	3.500	1 No. each additional required for Sub Zones Piryalu, Khanpur Mahar, Setharia, Rohri & Kotdiji.

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Sui Southern Gas Co. Ltd.
Details of Plant & Machinery
For F.Y. 2020 - 21

Table# D-6.1

S/N	Description	Projected Capitalisation (Rs in million)	Addition	Replacement	Total	Utility	Unit Cost Comparison Data		Need Assessment/ Cost Benefits
							Qty	Ref. Year	
Rs in million									
117	Electro Fusion Machine	1.500	5	-	5	DISTRIBUTION NORTH (US)	NA	0.300	Required for Rohri & Pano Aqil Sub Zone & rehabilitation work to meet the targets
118	T-3 Drilling Machine	4.000	10	-	10	DISTRIBUTION NORTH (US)	NA	0.400	Required for UD & Zones / Sub Zones of Sukkur Region
119	Dewatering Pump	0.150	1	-	1	DISTRIBUTION NORTH (US)	NA	0.150	Required for R.O Sukkur
120	Transformer Rectifier - Oil Cooled	3.500	10	-	10	CP (D)	NA	0.350	For Cathodic Protection of Unprotected Underground Gas pipeline, 05 nos. TR for normal CAPEX Budget FY 2020-21 (for UFG Target 2020-21) & 05 nos. Ex-NGEP Project.
121	Generator 5KVA	1.200	2	-	2	CP (D)	NA	0.600	Required for supplying electricity during the recording of PSP readings & attending the ground bed faults of CP source points at the time of monthly/ weekly visits of locations where power
122	Generator 5KVA	1.500	5	-	5	Billing	NA	0.300	To supply electricity during power failure (Zones/Sub-Zones) 1) Pir-jo-Goth (2) Dharki (3) Mirpur Mathelo (4) Ghotki (5) Ranipur
123	Welding Plant	17.500	-	5	5	DISTRIBUTION NORTH (LS)	NA	3.500	Replacement required against irreparable / old model welding plant of FY 2005-11
124	Electro Fusion Machine	1.400	-	4	4	DISTRIBUTION NORTH (LS)	NA	0.350	Replacement required against irreparable / old model Electro fusion Machines
125	Generator 20KVA	3.000	2	-	2	DISTRIBUTION NORTH (LS)	NA	1.500	Additional required for Zonal Offices N'feroze and Sanghar for power generation during breakdown of electricity.
126	T Drilling Machine	1.500	-	3	3	DISTRIBUTION NORTH (LS)	NA	0.500	Replacement required against irreparable / old model Machines being available at different locations of N'Shah Region
127	D-5 Drilling Machine	0.700	1	-	1	DISTRIBUTION NORTH (LS)	NA	0.700	Additional required for commissioning / drilling of new developed schemes at N'feroze & Sanghar zones
128	Pipe Bending Machine	0.200	2	-	2	DISTRIBUTION NORTH (LS)	NA	0.100	Additional required for Zonal offices N'feroze & Sanghar
129	Generator 5KVA	0.600	2	-	2	Billing	NA	0.300	For Billing Section of Zone & Sub Zones.
130	Welding Plant	10.500	1	2	3	DISTRIBUTION NORTH (US)	NA	3.500	Additional required for Shahdadkot Sub Zone. Replacement required for plants 3 Nos. R.O Larkana & 1 No at Thul, as the welding plants there become very old and are beyond economical repair.

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Sui Southern Gas Co. Ltd.
Details of Plant & Machinery
For F.Y. 2020 - 21

Table# D-6.1

S/N	Description	Projected Capitalisation (Rs in million)	Addition	Replacement	Total	Utility	Unit Cost Comparison Data		Need Assessment/ Cost Benefits
				Qty			Ref. Year	FY 2020-21	
Rs in million									
131	Electro Fusion Machine	0.600	2	-	2	DISTRIBUTION NORTH (US)	NA	0.300	Required for Rohri & Pano Aqil Sub Zone
132	Air Compressor	2.800	-	1	1	DISTRIBUTION NORTH (US)	NA	2.800	Replacement required for compressor at Jacobabad zone as the same is very old & beyond economical repair
133	Generator 5kVA	0.800	-	4	4	DISTRIBUTION NORTH (US)	NA	0.200	Replacement required each for Sub Zonal offices of Naudero, Ratodero, Nasirabad and Radhan for operational activities as the existing generators become very old and are beyond economical repair.
134	Welding Plant 400 Amp	21.000	1	5	6	DISTRIBUTION NORTH BALOCHISTAN	NA	3.500	Required for Kuchlak, Pishin and replacement of Cantt, Samungli, Maintenance, Sariab, and Sibi
135	Air Compressor	5.600	1	1	2	DISTRIBUTION NORTH BALOCHISTAN	NA	2.800	Required for Pishin and replacement of Cantt, Samungli, Maintenance, Sariab, and Sibi
136	T Drilling Machine	2.400	2	4	6	DISTRIBUTION NORTH BALOCHISTAN	NA	0.400	Addl (02) Nos for Mastung & Kuchlak and replacement for Sibi, Pishin, Sariab, Maint & Samungli and Cantt
137	D-5 Drilling Machine	2.100	1	2	3	DISTRIBUTION NORTH BALOCHISTAN	NA	0.700	Addl (02) Nos for Mastung & Kuchlak and replacement for Sibi, Pishin, Sariab, Maint & Samungli and Cantt
138	Odorizer Unit	12.500	5	-	5	DISTRIBUTION NORTH BALOCHISTAN	NA	2.500	Addl: (05) for Maint.
139	Transformer Rectifier	4.550	10	3	13	CP (D)	NA	0.350	For Cathodic Protection of Unprotected Underground Gas pipeline. 05 nos. TR for normal CAPEX Budget FY 2020-21 (for UFG Target) & 05 nos. Ex-NGEP Project.
140	MU-300 Multiple Drilling & Tapping Machine	8.000	-	1	1	MMP	NA	8.000	To replace the existing MU-300 drilling and tapping machine which is more than 25 years old and has already completed useful life. The performance of the machine is not in accordance with the Meter Plant requirement.
141	Threading Machine 7/8	2.500	-	1	1	MMP	NA	2.500	To replace the existing 7/8 tapping machine which is more than 10 years old. The performance of the machine is not meeting our production requirement.
142	Air Conditioning Plant 30 Tons 331,000 BTU	7.000	-	2	2	MMP	NA	3.500	Required for G-4 Assembly Hall, G-4 Calibration and Packing Area. The existing AC plant of 20 tons is more than 15 years old and has become unserviceable (beyond economic). The unit was covering G-4 Assembly Hall only.

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Sui Southern Gas Co. Ltd.
Details of Plant & Machinery
For F.Y. 2020 - 21

Table# D-6.1

S/N	Description	Projected Capitalisation (Rs in million)	Addition	Replacement	Total	Utility	Unit Cost Comparison Data		Need Assessment/ Cost Benefits
							Ref. Year	FY 2020-21	
Rs in million									
143	GI Ducting with insulation and flexible connection for air conditioning of G-4 Assembly Hall -8000 Sq Ft approx	2,500	-	1	1	MMP	NA	2,500	To replace the existing GI duct which has become more than 15 years old and badly corroded and broken at various spots.
144	Gas Engine Driven Generator Set	30,000	-	1	1	Compressor Station HYD	NA	30,000	C/F from FY 2019-20. The Generator Set installed at Hyderabad Compressor Station was procured in Year 2000. It is about 18 years old and we are encountering frequent unwarranted shutdowns & tripping. Its body parts are corroded and repair is time consuming & costly. Compressor Units also shutdown due to tripping of generator.
145	Gas Engine Driven Generator Set	30,000	1	-	1	Compressor Station Shikarpur	NA	30,000	C/F from FY 2019-20. Additional Gas Generator 400 Kw is required to cater the load of New proposed Gas Turbine driven Compressor Unit of 200MMCFD capacity at Shikarpur compressor station in addition to 02 existing DR compressor Units.
146	Major Overhauling of Waukesha 440 KVA Gas Engine Generators	20,000	1	-	1	Services HO	NA	20,000	C/F from FY 2019-20. These Generators are Prime Power source of Electricity at HO. They have completed more than 60000 running Hours. Major overhauling is due this will increase life of Generators.
147	Supply, installation, testing & commissioning of new Control panel for Kone Elevators at Head Office.	40,000	-	4	4	Services HO	NA	10,000	C/F from FY 2019-20. Model of 04 Nos. existing Control Panels are obsolete and also spares are not available with local supplier and international market. Therefore There are beyond repair due to non availability of spares.
148	Mobile Crane	20,000	-	1	1	Engineering Services KT	NA	20,000	C/F from FY 2019-20. Replacement of 01 No. (11-15 ton) Mobile Crane required against 11 ton Mobile Crane Inv. No. 02/08/013/0001 (Y.O.P 1974-75) which is beyond economical repair and under retirement process. Also, 01 No. Mobile Crane (15 ton) Inv. No. 05/08/013/0001 (Y.O.P 1983-84) has already been Retired but No replacement is received as yet.
149	Electric Gas Generator 250 KVA	20,000	-	1	1	Engineering Services Khadeji	NA	20,000	C/F from FY 2019-20. Replacement of 02 No. Electric Gas Generators required at Khadeji Camp against the Generators INV No. 02/08/038/0004 & 0005 (Y.O.P 1974-75), which have already been Retired but No replacement is received as yet.
150					-			-	
	Total	702,360	367	169	536				

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Sui Southern Gas Co. Ltd.
Details of Construction Equipments
For FY 2020 - 21

Table# D-6.2

S/N	Description	Projected Cost (Rs in million)	Addition Units	Replacement Units	Total No. of Units	Utility	Unit Cost Comparison Data		Need Assessment	Cost Benefit Analysis	Present Status (if any)
							Ref. Year	FY 2020-21			
Rs in million											
1	Pipe Layer	270.000	-	2	2	Trans.		135.000	Replacement of 02 Nos Pipelayers required for forth coming Transmission/Distribution projects. In last few years retirement of 40 Ton Cat Pipelayers Inv# 02/08/09/0006 & 0007 year of manufacturing 1975 alongwith 02 Nos 20 Ton CAT Pipelayers Inv#02/08/009/0001 & 0003 Year of manufacture 1975 carried out. We have not recieved replacement of these capacities since 1994.	It is essential that new machines are purchased for timely completion of the projects. The cost of these machines will be recovered within 4 to 5 years on full utilization of these machines. The market value of these machines will be 85% of the original value even after recovery of the total cost within 5 years which is the saving in addition to the timely completion of the projects.	
2	Excavator	120.000	-	2	2	Trans.		60.000	Excavators with Bucket for Ditching in normal soil and with hammer attachment for hard rock are normally utilized. Heavy Duty Excavators required in replacement with recently retired Hyundai Excavators Inv# 13/08/14/0008 & 0009 year of manufacturing 1991 & 1996 and CAT Excavator Inv#09/08/001/0001 & 0002.	The cost of these machines will be recovered within 4 to 5 years on full utilization of these machines, the market value of these machines will be 75% of the original value even after recovery of the total cost within 5 years which is the saving in addition to the timely completion of the projects.	
3	Hydrostatic Pressurising Pump	30.000	-	1	1	Trans.		30.000	These pumps are required for pressurizing of large diameter pipelines at the defined pressure during hydrostatic testing activity. Replacement with 01 No. Hydrostatic Pressurising pump required against Retired Pump Inv. No. 02/08/037/0002.	Not easily available in the market on rental. The cost will be recovered within four years.	
4	Hydraulic Jack Hammer / Breaker Attachment for Hyundai Excavators	13.600	2	-	2	Trans.		6.800	Jack Hammer is an attachment to Excavators for Ditching flinth /hard rock. Presently for 24 No. available Excavators P&C have only 3 No. Jack Hammer attachment. Required for upcoming 30"/42" Dia projects.	Not easily available in the market on rental. The cost will be recovered within five years.	
TOTAL		433.600	2	5	7						

Sui Southern Gas Company Limited
Detail of Motor Vehicles
For F.Y 2020 - 21

Table# D-6.3

S/N	Description	Projected Cost Rs	Addition Units	Replacement Units	Total No. of Units	Unit Cost Comparison Data		Need Assessment	Cost Benefit Analysis
						Ref. Year	FY		
							FY 2020-21		
1	Ambulance	10,000	-	1	1	N/A	N/A	10,000	The acquisition of proposed vehicles will facilitate the company to meet OGRA prescribed Service & Performance Standards. Frequent breakdown of old vehicles would be avoided, which will result in enhanced reliance on available resources and improve efficiency.
2	Body Fabrication for Pickup 800 CC/ Single Cabin	10,600	-	-	-	N/A	N/A	N/A	
3	Car 1000 CC	101,900	40	24	64	2018-19	1,315	1,592	
4	Car 1300 CC	48,000	9	7	16	2018-19	2,374	3,000	
5	Car 1800 CC	48,000	7	5	12	2018-19	2,913	4,000	
6	Crane Mounted Mini Truck	10,000	-	1	1	N/A	N/A	10,000	
7	Four Wheelers Bike	6,000	10	-	10	N/A	N/A	0,600	
8	Fuel Tanker	29,000	-	2	2	N/A	N/A	14,500	
9	Hi Roof Van	71,500	25	40	65	2018-19	8,140	1,100	
10	Hiace Van	41,000	-	7	7	2017-18	4,192	5,857	
11	Motorcycle 125 CC	2,400	4	12	16	N/A	N/A	0,150	
12	Motorcycle 70 CC	11,100	62	86	148	N/A	N/A	0,075	
13	Pickup 800 CC	70,000	15	55	70	N/A	N/A	1,000	
14	Pickup Double Cabin 4x4	5,500	-	1	1	2018-19	4,804	5,500	
15	Pickup Single Cabin 4x2	192,200	13	40	53	2018-19	2,760	3,626	
16	Pickup Single Cabin 4x4	105,000	-	21	21	N/A	N/A	5,000	
17	Tractor	8,700	3	-	3	N/A	N/A	2,900	
18	Vehicle Tracking System	1,200	-	-	-	N/A	N/A	-	
19									
GRAND TOTAL		772,100	188	302	490				

SUI SOUTHERN GAS COMPANY LIMITED

Table# D-6.3.1

DETAILS OF VEHICLES (OPERATIONAL & NON-OPERATIONAL)

PETITION 2020 - 21

				Rs. In Million
S#	OPERATIONAL VEHICLES	ADD.	REP.	TOTAL
1	Ambulance	-	1	10.000
2	Body Fabrication for Pickup 800 CC/ Single Cabin	-	-	10.600
3	Crane Mounted Mini Truck	-	1	10.000
4	Four Wheelers Bike	10	-	6.000
5	Fuel Tanker	-	2	29.000
6	Hi Roof Van	25	40	71.500
7	Hiace Van	-	7	41.000
8	Motorcycle 125 CC	4	12	2.400
9	Motorcycle 70 CC	62	86	11.100
10	Pickup 800 CC	15	55	70.000
11	Pickup Double Cabin 4x4	-	1	5.500
12	Pickup Single Cabin 4x2	13	40	192.200
13	Pickup Single Cabin 4x4	-	21	105.000
14	Tractor	3	-	8.700
15	Vehicle Tracking System	-	-	1.200
16				
	Sub-Total Operational (A)	132	266	574.200
	NON-OPERATIONAL VEHICLES			
1	Car 1000 CC	40	24	101.900
2	Car 1300 CC	9	7	48.000
3	Car 1800 CC	7	5	48.000
	Sub-Total Non-Operational (B)	56	36	197.900
	Grand Total (A+B)	188	302	772.100

Sui Southern Gas Company Ltd.

Detail of Land

For F.Y 2020 - 21

NO.	DESCRIPTION	Amount Rs in million	Need / Justification
1	Acquisition of Land for New CP Stations-DIST SITE	4,500	Required Land for CP Stations
2	Open plot for Main Regional Store & Pipe Yard for Hyderabad Region.	40,000	The Regional Office Hyderabad become in the center of Qasimabad & surrounded by thickly populated residential colonies due to which many neighbours has given legal notices to shift the company's store & pipe yard from existing location. So it becomes very necessary to make necessary arrangements for shifting of Regional Store & Pipe Yard near to Hyderabad City to meet the day to day requirement of Regional Head quarter. So it will be beneficial for company to purchase the plot along Super High way side in between Jamshoro & loony kot segment.
3	Acquisition of Land for New CP Stations Hyd/N'shah	3,500	Required Land for CP Stations
4	Acquisition of Land for New CP Stations Sukkur/Larkana	2,500	Required Land for CP Stations
5	Acquisition of Land for New CP Stations Quetta	2,500	Required Land for CP Stations
	Total	53,000	

Sui Southern Gas Company Ltd.

Details of Buildings

For F.Y 2020 - 21

Table # D-6.5

S No.	Description	Revenue Petition Rs Million	Need / Justifications
1	Construction of Care taker Rooms	0.900	Care Taker Rooms Required for Security guards at Dadu Canal OHC MP-71 1/2 U/S.
2	Re-construction of b/wall enclosure at RS Jhatpat	2.900	Required to repair and extension of CC Flooring at MVA G-2 & dakhana to protect Valve assembly and pipeline.
3	C.C Flooring of above ground MPL structure / setup at CTS Bin Qasim.	5.600	Newly flooring is required under the Pipeline Structure of MVA in order to stop the development of wild grass to maintain the housekeeping.
4	Construction of new Care Taker rooms	1.800	New rooms required for care takers .installation of new solar system at Johi shakh kmp-226 & CP solar room at kmp-365.
5	Solar Room	2.520	Additional are req'd for MP-298 on ILBP, KMP-418 on IRBP to meet high current requirements in these areas.
6	Care Taker Room	1.008	Additional are req'd for MP-309 on ILBP & KMP-372 on IRBP as there is no c/taker room with CP station.
7	Supply & Fixing of Civil and Masonry work for Tiles at Basement (Offices + Power House Area) HO	1.500	The existing floor of Power House & other HO-Basement area is badly damaged as such dust is greatly accumulating in the area which is not good for the equipment & machine. As such complete tile flooring work is urgently required for making area dust free that in turn shall not only increase the life of equipment but also shall contribute to good house keeping.
8	Construction of Transit rooms at CTS-Sawan.	-	CTS-Sawan is located in HQ-1 Sukkur and to & fro travelling takes about 05-hours. Therefore construction of Transit Rooms (02-Bed Rooms, wash rooms & Kitchen/Dining, veranda etc) is required for Executives and staff of the company and Representatives of SNGPL, visiting the station for Operation/maintenance and Joint Meter Readings and Joint Meter Checks, to complete the jobs in one visit and thus saving time and resources of Company.
9	Analyzer Shelter/ Room	3.000	Proposed Analyzer Shelters are required at different POD Check Meters/ SMSs where, GC rooms are not available. These units will be portable type equipped with on-line GC, Moisture analyzer, Flow computer etc and complete shelter can be moved from one location to other to meet operational requirement of Check meters with respective gas fields.
10	White wash of KT Medical Centre	0.300	White wash was done in 2014
11	White wash of HO Medical Centre	0.500	White wash was done in 2014
12	Construction of Barracks for Unionized Staff at Khadeji Camp	-	Current Barracks are very old and due to non compliance HSE policy. Hence RCC construction of 03 Nos Barracks is required.

Sui Southern Gas Company Ltd.
Details of Buildings
For F.Y 2020 - 21

Table # D-6.5

S No.	Description	Revenue Petition Rs Million	Need / Justifications
13	Construction of Wash Room for Dope Yard Section	0.600	Required Executive & Staff for Dope Yard Section
14	Replacement of Main Gate Size 20' x 8' (160 Sq/ft)	0.500	The main Gate is very Old and repaired many times. Now the condition of the gate is very critical
15	Construction of Boundry wall at K/T stores Department	6.000	Boundry wall between SSGC Stores departmt and NED university is standing in a dilapidated condition, suspicious to collapse during rains. Therefore need immediate reconstruction for safety and security issues.
16	Construction of store yard at HQ2	3.000	Boundry wall between SSGC Stores departmt and NED university has become in Tatters keeping in view of security issues this boundry wall require Reconstruction or reinforcement
17	Epoxy Paint on floor at Commercial Section	1.000	It is required for commercial & Industrial meter testing & repair section due to the frequent movement of heavy meters
18	Electric Panels for Building & Prover	1.000	it is required to upgrade the capacity to meet enhanced load
19	50 W LED Lights on Boundary Walls	0.150	Currently is there is no any light at boundary wall, so this is required for security & safety purpose
20	False ceiling in Commercial Repair Hall and R&D Section	0.225	It is required for effective air conditioning in sections
21	Ceiling LED Light 2' x 2'	0.250	Required for proper illumination
22	Construction of Store Room	2.000	Required for keeping record of Sales Department and will be constructed on roof of old building.
23	Replacement of TBS/PRS's Cages (Fencing)	3.000	Mostly the fencing of main regulation stations are damaged and needs repair / renovation to promote the company vision.
24	Rock wall (Admin Block)	1.600	The concern of Sr. Management on the aggravated outlook og SSGC Regional Office Building Quetta. Approved and estimated by Sr.GM(D) and I/C DGM (Civil Works) on the directives of MD SSGCL on his visit 03rd May 2016.
25	Pavers Inside Office Building	1.540	According to HSE Meeting Minutes (QIII) HSE Zonal Team, Zone # 12, (the Sewerage Line in the Office premises spills out during the rainy season & the surface drainage system is also in poor condition as the rain water accumulates near the Outer Gate).

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Sui Southern Gas Company Ltd.

Details of Buildings

For F.Y 2020 - 21

Table # D-6.5

S No.	Description	Revenue Petition Rs Million	Need / Justifications
26	RCC Hall for Industrial	25.000	Carried forward from 2019-20
27	Regional Office Building N'shah	5.492	Carried forward from 2019-20
28	Construction of 1st Floor of (Meas-Trans) Building at K.T.	9.000	Carried forward from 2019-20
29	Analyzer Shelter/ Room	6.000	Carried forward from 2019-20
30	Construction of Double Story Building at S-14 Sandspit Beach Hut.	5.508	Carried forward from 2019-20
31	Alucobond sheet (Admin Block)	8.000	Carried forward from 2019-20
Grand Total		99.893	

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Sui Southern Gas Co. Ltd.
Details of Telecommunication
For F.Y. 2020 - 21

Table#D-6.6

S/N	Description	Amount Rs in million	Need / Justification
1	Replacement of guyed towers with self-support tower at Thariri Mohabat	55.000	The 250 ft. old Guyed Tower were deployed in 1975-76 at RS-1, RS Thariri wheras 225 feet guyed tower at RS Sari outlived their economical life. The reason for self support tower deployment came to cater wind loading of solid radom antennas, which were used after migration of communication system from 2 GHz to 8 GHz. Furthermore the old towers were designed for Grid Antennas not for Radome Antennas.
2	300 ft Self-Support Tower at RS-4 (Phase-II)	10.000	SCADA System Security is required to counter external threats. In first phase consultant shall be hired, in second phase procurement and deployment shall be undertaken.
3	SCADA System security	-	SCADA System Security is required to counter external threats. In first phase consultant shall be hired, in second phase procurement and deployment shall be undertaken.
4	Hybrid solar system for Killi & sari	2.400	Hybrid Solar System is required at Repeater Stations for uninterruptable DC Power supply for Telecom and SCADA System.
5	Reporting server for SCADA System	15.000	Reporting server is required for Daily weekly reports for Transmission Department and Distribution Department.
6	Drone with camera	0.250	Drone with camera is required for inspection of an antenna and towers.
7	PABX Exchange for Korangi Distribution East Zone	1.500	The old exchange needs urgent replacement as it is frequently developing faults and electronic cards are not available.
8	Telecom links RS-2 - RS-NARA - RS-Kadanwari	35.000	Old 2 GHz frequency have to be vacated as per directives of PTA. Furthermore old system has lived its economical life of 10 years. Carried forward from 2019-20.
9			
Total		119.150	

Table#D-6.7

Sui Southern Gas Co. Ltd.
Details of Tools & Equipments
For F.Y. 2020-21

		Rs in million
S/N	Description	Amount
1	6" Control Valve	7.000
2	8" Control Valve	22.400
3	Advance Self Adhesive Leak Rectification Tapes	0.300
4	Air Blower Heavy Duty	0.080
5	Air Pump (Vehicle)	0.015
6	Airconditioning Gas Charging Kit with complete accessories	0.400
7	Angle Grinder	0.225
8	Battery Charger	0.150
9	Battery for Generator 40 kv	0.025
10	Battery Tester	0.050
11	Black box hidden Spy Camera	0.280
12	Buffing Machine	1.000
13	Chain Pulley Block along with Tripod	0.050
14	Chain Pully Block	0.200
15	Circuit Breaker Draw type	1.500
16	Clamp Meter /Tong Tester	0.160
17	Clamp Meter with accessories (Digital)	0.450
18	Coating Thickness Meter	0.200
19	Compression Meter	0.080
20	D-5 Drilling Machine	0.400
21	Die Set (1/2" to 1")	0.500
22	Digital Multimeter/ Digital Volt Meter	0.100
23	Digital Pressure Gauge	6.080
24	Digital Thermometer	0.605
25	Digital Weighing Scale	0.120
26	Direct Current Voltage Gradient (DCVG)	2.500

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Table#D-6.7

Sui Southern Gas Co. Ltd.
Details of Tools & Equipments
For F.Y. 2020-21

		Rs in million
S/N	Description	Amount
27	Double taping machine with scan	0.600
28	Electric Blower	0.160
29	Electric Blower for Domestic Test Bench	0.090
30	Electric Die Machine	0.840
31	Electric Heat Tracing Cable with accessories	1.400
32	Electric Motor Driven Pressure Cleaner	0.600
33	Electric Slab Scissor Lift (height above 10m)	0.500
34	Electronic Pressure Gauge	1.540
35	Exhaust Fan Plastic body	0.350
36	Flange Spreader	-
37	Flow Stopper Valve	0.150
38	Gas Cutting & Welding set	0.750
39	Gas Leak Detector	105.300
40	Gas leak Detector	0.800
41	GPS enabled magnetic vehicle tracking device	0.280
42	Grease Gun	0.300
43	Grinder	0.040
44	Grinder Machine	0.025
45	Hand Grinder	0.070
46	Hand Held Bag Stitching Machine	0.330
47	Hand Pallet	0.500
48	Heavy Duty Rechargeable Light	0.200
49	High Pressure Grease Gun	0.150
50	Holiday Detector	4.300
51	Hydraulic Grease Gun	0.400
52	Infra-red Temperature Meters	0.120
53	Jal-bujh Timer Device	0.140

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Table#D-6.7

Sui Southern Gas Co. Ltd.
Details of Tools & Equipments
For F.Y. 2020-21

		Rs in million
S/N	Description	Amount
54	Laser Distance Measuring Device	0.120
55	Loose Tools	1.520
56	Manual Hydraulic Stackers (Hand Pallet)	0.500
57	Measuring Wheel	0.090
58	MS Racks for Store 3' x 5'	0.400
59	MS sliding scissor door for New R&D building	0.150
60	Multi Functional Calibrator with Complete Kit	1.600
61	Multimeter Digital with accessories	0.350
62	Multipurpose Kit Bags	0.120
63	Odor meter	1.200
64	Odorant Detector	0.700
65	Oxy-Acetylene Pipe Cutting And Beveling Machine	0.350
66	Padestial fan Remote control	0.200
67	Padetal Fan	0.900
68	Pallet Racks	0.540
69	Peel Tester Force in Kg & Lbs	0.500
70	Pipe Squeezing Machine Steel (With Hydraulic Pump)	2.500
71	Pipeline Cable Locator	3.300
72	Pipeline Current Mapper (PCM)	2.000
73	Pipeline Locator	10.850
74	Pit Gauge	0.100
75	Plasma Cutting Machine with accessories	4.000
76	Plunger Bar	6.800
77	Pneumatic analog pressure guage	0.220
78	Pneumatic Impact Wrench Air Gun for Commercial & Industrial Meters	0.200

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Table#D-6.7

Sui Southern Gas Co. Ltd.
Details of Tools & Equipments
For F.Y. 2020-21

		Rs in million
S/N	Description	Amount
79	Pneumatic Screwdriver with Spindle	1.500
80	Pneumatic Spray Gun for Paint	0.015
81	Portable Welding Units (Engine Driven)	0.660
82	Power Grinder	0.025
83	Pressure Gauges Digital	0.220
84	Prover for Domestic / Commercial Meter (Software Opreated)	50.000
85	Ratchet Die Set	3.700
86	Road Breaker (Electric)	0.700
87	Road Breaker / Hydraulic jack Hammer	0.300
88	Road Ditching Drill	0.200
89	Roller Bearing V Block Set	0.150
90	Service Valve Changer	0.500
91	Set of Tools Box containg special spaners, wrenches, allen Kes etc.	0.400
92	Small Tools & Toolkit	0.100
93	Smart Wrenches	0.125
94	Solar Battery Tester	1.200
95	Spy eye glasses Hd	0.800
96	Stablizer Servomotors type 3 KVA	0.280
97	Steel Racks	1.125
98	Surface profile gauge(Digital)	0.375
99	Tool Box	0.040
100	Tool Trolley with Tools	0.450
101	Tool-Kit Trolly	0.700
102	Trolley for Cylinders (Oxygen & DA)	0.150
103	Tube Bender (Portable Bench Type)	0.800

Table#D-6.7

Sui Southern Gas Co. Ltd.
Details of Tools & Equipments
For F.Y. 2020-21

		Rs in million
S/N	Description	Amount
104	Ultra Sonic Thickness Gauge	0.400
105	Ultraviolet temperature meter	0.300
106	Vacuum Pump	0.150
107	Vernier Caliper Digital	0.600
108	VISE with triport stand	1.800
109	Voice activated audio recorder / listening bug	0.160
110	Wet film thickness meter	0.450
111	Wet Test Meter	2.000
TOTAL		274.390

Under UFG Reduction Plan of the Company special emphasis has been placed to increase number of steel & PE network maintenance teams and the existing teams be equipped with modern tools & equipments.

The purchase of above tools will facilitate performance of duties by company employees and improve their efficiency. The worn out tools have also been proposed for replacement.

Tools have usually very short life and in SSGC the tools are depreciated in 3 years. Besides UFG control activities Tools & Equipments are required to perform routine electrical/mechanical maintenance jobs by our services department.

Details of Compressor Stations

For FY 2020 - 21

Table# D-6.3

S/N	Description	Addition Units	Replacement Units	Total No. of Units	Projected Cost (Rs in million)	Need Assessment	Cost Benefit Analysis	Reasons for Variations
1	35 K Overhaul of DR-990 Gas Turbine Engine S/No. 626-201-006	-	-	-	420,000	The Gas Turbine Engine S/No. 626-201-006 is installed at Shikarpur Compressor Station. It has clocked 34804 hrs and our projected hours at the time of despatching this Engine in 2020-21 are about 42000 hrs. The Engine is to be overhauled at Original Equipment Manufacturer M/s GKN Aerospace Sweden overhaul facility as per OEM recommended overhaul schedule.		
2	Refurbishment of Solar Taurus T-60 Compressor Rotor/Bundle - RLNG	-	-	-	60,000	Rotor /Bundle removed from Unit F of HQ-2 Compressor station, needs refurbishment due to wear off of Bundle and rotor impeller edges. This Rotor / Bundle shall be utilized in case of failure of any installed Rotor Bundle.		
3	Repair of Fuel Control Valve AGV-10 at original equipment manufacture facility- sweden	-	-	-	10,000	Seven (07) nos. Fuel Control Valve AGV-10 installed on Dresser Rand comp units. The cost of new fuel control valve is 6.5 million. At present we have only 01 spare fuel control valve, therefore we intend to repair fuel control valve from OEM for future use.		
4	Air Dryer	-	-	-	1,500	Sibi Compressor station air dryer is obsolete, spare parts are not available. Atlas Copco OEM has refused to provide spare parts. Air dryer is being utilized for dry seal gas system of solar compressor units T4700.		
5	Replacement of Station & Units Valves	-	-	-	60,000	Shikarpur, HQ.3, Sibi and HQ.2 Dresser Rand Units and station valves are old, leaky and spare parts are not available. It is very necessary to replace these leaky valves, getting very hard to operate these valves. Few valves at multiple locations are continuously leaking since long.		
6	30 K Overhaul of Solar T-60 Gas Turbine Engine installed at RLNG HQ-2 Compressor Station	-	-	-	300,000	Six Turbine Engines are installed at RLNG HQ-2 Compressor Station. Solar Unit B has clocked 12000 Hrs. and our projected Hrs. at the time of despatching this Engine in 2020-21 are about 23000 Hrs. The Engine is to be overhauled at Original Equipment Manufacturer M/s Solar Turbines overhaul facility as per OEM recommended overhaul schedule.		
7	Refurbishment of Dry gas Seal Cartridges for Solar T-60 Gas compressor installed at RLNG HQ-2 Compressor Station - RLNG	-	-	-	18,000	After Refurbishment / overhaul of Solar T-60 Gas Compressor at HQ-2, We have recovered 14 No Dry Gas Seal Cartridges which need refurbishment to use in the future in case of failure of any seal. In the first phase we will send 6 seal cartridges to OEM M/s John crane for repair/refurbishment.		
8	01 New Compressor Unit at Sibi	1	-	1	2,094,000	The construction of mentioned infrastructure would provide sustainable gas supply and availability of additional gas to meet growing demand of Quetta and surrounding region. 01 Compressor having 200 MMscfd flow capacity has been opted on the basis of technical and financial analysis.		
9	New Compressor at Shikarpur to Jacobabad for QPL	1	-	1	1,969,000	The construction of mentioned infrastructure would provide sustainable gas supply and availability of additional gas to meet growing demand of Quetta and surrounding region. The simulation studies reveal that by implementing mentioned three (03) countermeasures the Quetta pipeline capacity would enhance from 149 to 181 MMscfd.		

Details of Compressor Stations
For FY 2020 - 21

Table# D-6.8

S/N	Description	Addition Units	Replacement Units	Total No. of Units	Projected Cost (Rs in million)	Need Assessment	Cost Benefit Analysis	Reasons for Variations
10	Compressor units & extension of facility at Nawabshah (Total 30,000 HP) - (leftover work - building executive mess) - RLNG	-	-	-	130.000	Required for leftover work - building executive mess.		
	TOTAL	2	-	2	5,062.500			

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E

SUI SOUTHERN GAS COMPANY LIMITED
PETITION FOR ESTIMATED REVENUE REQUIREMENT

FY 2020-21

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SUI SOUTHERN GAS COMPANY LIMITED

Transmission and Distribution Cost - Detailed

Rs. Million

S.No.	Description	Determination RERR FY 2019-20 (11-12-2019)	Petition FY 2020-21	Variance of Pet 2020-21 over OGRA Det 2019-20	Notes on Reason for change
1	Total Salaries ,wages and benefits at Benchmark	15,520.00	18,567.00	3,047.00	1
2	<u>Gas Internally Consumed</u>				
	Compression	333.00	530.90		
	Domestic / Other use	88.00	70.94		
	Distribution	2.84	4.79		
	Other - LHF	0.06	0.29		
	Sub total:	423.90	606.93	183.03	2
3	<u>Stores Spares and Supplies Consumed</u>				
	Transmission & Compression and Others		451.27		
	Distribution		1,134.29		
	Head Office		175.19		
	Freight & handling		28.25		
	Sub total:	798.00	1,789.00	991.00	3
4	<u>Material & labour used on consumer's installation</u>	39.00	39.00	-	
5	<u>Electricity</u>	230.00	405.00	175.00	4
6	<u>Rent, Rates, and Taxes</u>				
	Rent	165.00	172.00	7.00	
	Royalty	9.00	2.50	(6.50)	
	Others	137.00	116.00	(21.00)	
	Sub total:	311.00	290.50	(20.50)	
7	<u>Travelling</u>				
	Local travelling				
	Executives	30.00	30.28	0.28	
	Subordinates	5.00	5.48	0.48	
	Foreign travelling	-	0.77	0.77	
	Other travelling	96.00	105.47	9.47	
	Sub total:	131.00	142.00	11.00	5
8	<u>Insurance</u>				
	Third party	0.52	0.52	0.00	
	Fire risk/Damage to property	58.00	64.94	6.94	
	Other insurance	75.80	85.68	9.88	
	Sub total:	134.32	151.137	16.82	6
9	<u>Postage & Bill Delivery by Contractors</u>	103.00	131.92	28.92	7
10	<u>Repair and Maintenance</u>				
	Transmission		221.42		
	Distribution		2,075.13		
	Compression		2.05		
	Other		601.40		
	Sub total:	1,633.00	2,900.00	1,267.00	8

SUI SOUTHERN GAS COMPANY LIMITED

Transmission and Distribution Cost - Detailed

Rs. Million

S.No.	Description	Determination RERR FY 2019-20 (11-12-2019)	Petition FY 2020-21	Variance of Pet 2020-21 over OGRA Det 2019-20	Notes on Reason for change
11	Legal and Professional charges				
	Legal	100.00	107.93	7.93	
	Professional	46.00	152.02	106.02	9
	Meter Reading by Contractors	90.00	122.00	32.00	10
	Collecting Agent Commission	3.00	3.00	-	
	Sub total:	239.00	384.95	145.95	
12	Security Expense				
	Transmission		481.19		
	Distribution		250.13		
	Head Office and others		37.59		
	Sub total:	722.00	768.92	46.92	11
13	OGRA Fee	130.11	211.53	81.43	
14	Advertisement	112.00	159.80	47.80	12
15	Gas Bills Collection Charges	197.00	238.99	41.99	
16	Gas Bills stubs processing Charges	36.00	32.47	(3.53)	13
17	Other				
	Communications		55.82	55.82	
	Subscriptions		42.48	42.48	
	Other miscellaneous		124.90	124.90	
	Sub total:	148.14	223.19	223.19	14
	Gross T&D Cost	20,907.47	27,042.35	6,283.03	
18	Revenue Expenditure relating to LNG - expenses	2,527.90	3,029.00	501.10	
	Gross T&D Cost	23,435.37	30,071.35	6,784.13	
19	Less : Recoveries /Allocations				
	Amount allocated to GDS (N)	1,833.58	2,083.16	249.58	
	Others	7.24	1.60	(5.64)	
	Installation Cost Recovered	19.05	19.00	(0.05)	
	Cost allocated to Meter Plant	63.16	5.00	(58.16)	
	Recoveries/Refunds of Services Cost from/to SNGPL	295.93	130.00	(165.93)	
	Allocation to (out)	-	55.10	55.10	
	Sub total:	2,218.96	2,293.86	74.90	
	Net T&D Cost	21,216.41	27,777.49	6,561.09	

NOTES ON REASONS FOR VARIATIONS FROM OGRA DETERMINATION ON RERR FOR FY 2019-20 DATED 11.12.19

		Rs. Million
1	HR Cost: Please see details in basis & assumptions.	
2	Gas Internally Consumed: Increased is mainly due to decrease in volumes & increase in rates rates:	
	-Volume variance	205.46
	-Rate variance	-22.53
	Total	182.93
3	Stores, Spares & Supplies Consumed: The Authority deducted an amount of Rs. 499 million or 38% from the estimates (ERR FY 2019-20) of the company, in addition to it the major increase is attributed on account of extensive UFG control activities as well as due to expected increase in consumption & prices of chemical products/fuel and lubricants besides general inflation.	
4	Electricity: The enhanced amount is required to meet the expected increase in electricity tariff.	
5	Travelling: The increase is on account of general inflation & expected increase in air fares for local/foreign travelling including	
6	Insurance: The increase is on account of expected increase in assets base.	
7	Postage and Bill delivery by contractors: Increase is due to expected enhanced activity and rates by courier services. The increase is due to expected increase in customers and rate revision.	
8	Repair & Maintenance: In ERR FY 2019-20, Authority disallowed Rs. 1,050 million or 39% out of the requested amount of Rs. 2,683 million, however owing to the extensive UFG control programme/strategy for FY 2020-21 an amount of Rs. 2,900.0 has been estimated.	
9	Legal & Professional Charges: The Authority deducted an amount of Rs. 53 million i.e. 53% from legal & professional charges from the estimates (ERR FY 2019-20) of the company, additionally the main reason for increase under this head is mainly due to HR Consultancy charges for Manpower and Potential Assessments.	
10	Meter Reading by contractors: Existing Contract will be expired in June 2020. New tender is expected to be at a higher rate. Also 125,000 plus new connection are projected for FY 2020-21 in the budget, consequently Company customer base will expand.	
11	Security Expenses: Increase due to revised agreements with security agencies to cope up with security needs at important locations/ Co's installations.	
12	Advertisement: The company in its petition for FY 2019-20 projected an amount of Rs. 169 million, OGRA allowed Rs. 112 million and deducted 57 million, however for FY 2020-21 the company has estimated a lower amount of Rs. 160 million. However, the expenses are required for Media campaign for combating Theft UFG, Leakages & UFG campaign, Gas defaulters & recovery campaign, Natural gas conservation campaign, customer awareness campaign and other Operational and Corporate image building advertisements.	
13	Gas Bills Collection & Stub Processing Charges: Gas bill collection charges are expected to increase due to enhanced rates from Rs. 8/bill (rates effective since 2006) to Rs. 9/bill.	
14	Others: Expenses are already determined (lesser by 130 million or 47%) on lower side by the Authority. Enhanced budget for communication is required to deploy additional network links for Disaster Recovery facility, SMS and launch of other value added services / Whats App communication services through which SSGC's customers will receive monthly billing, lodge complaints, get status of new gas connections, history of their bills etc.	

SUI SOUTHERN GAS COMPANY LIMITED
GIC : COMPRESSOR STATIONS

Table # E-2

	Determination RERR FY 2019-20 dt: 11-12-2019	PETITION ERR FY 2020-21
Particulars		
Compressor Station A (Location) SKP		
Compressor Running hours		8,760.0
Volume of gas handled /compressed (MMCF)		33,288.0
Volume of gas handled /compressed (MMBTU)		31,890.0
GIC (MMCF)		348.0
GIC (BBTU)		333.4
GIC (Rs. in million)	-	193.7
Compressor Station C (Location) HQ- 3		
Compressor Running hours		15,432.0
Volume of gas handled /compressed (MMCF)		62,344.0
Volume of gas handled /compressed (MMBTU)		61,010.0
GIC (MMCF)		504.0
GIC (BBTU)		493.9
GIC (Rs. in million)	-	287.0
Compressor Station D (Location) SIBI		
Compressor Running hours		4,320.0
Volume of gas handled /compressed (MMCF)		49,275.0
Volume of gas handled /compressed (BBTU)		47,304.0
GIC (MMCF)		90.0
GIC (BBTU)		86.4
GIC (Rs. in million)	-	50.2
Total Compressors (All Locations)		
Compressor Running hours	-	28,512.0
Volume of gas handled /compressed (MMCF)	-	144,907.0
Volume of gas handled /compressed (BBTU)	-	140,204.0
GIC (MMCF)	553.7	942.000
GIC (BBTU)	551.9	913.714
GIC (Rs. in million)	332.689	530.904

Table # E-2

Table # E-3

Particulars	FY 2019-20				FY 2020-21			
	DETERMINATION RRR				PETITION			
	MMCF	MMMBTU	Rs. Million		MMCF	MMMBTU	Rs. Million	
Compression								
Metered	553.7	551.9	332.7		942.0	913.7	530.9	
Unmetered								
Sub total	553.7	551.9	332.7		942.0	913.7	530.9	
Company own use								
Metered	151.0	146.0	88.0		126.0	122.1	70.9	
Unmetered					0.0	0.0	0.0	
Sub total:	151.0	146.0	88.0		126.0	122.1	70.9	
LHF - Internally used								
Metered	0.1	0.1	0.06		0.5	0.5	0.3	
Unmetered					0.0	0.0	0.0	
Sub total:	0.1	0.1	0.06		0.5	0.5	0.3	
Gas Purged								
Metered	0.0	0.0	0.0		0.0	0.0	0.0	
Unmetered	0.0	0.0	0.0		20.0	20.0	11.6	
Sub total:	0.0	0.0	0.0		20.0	20.0	11.6	
Domestic/other use								
	24.6	24.2	14.6		5.0	5.0	2.9	
Sub total: Transmission	729.4	722.2	435.3		1093.5	1061.3	616.7	
Loss Due To Sabotage								
Transmission								
Distribution								
Total								
Distribution								
Metered	4.3	4.2	2.8		7.9	8.3	4.8	
Unmetered	0.0	0.0	0.0		0.0	0.0	0.0	
Sub total:	4.3	4.2	2.8		7.9	8.3	4.8	
Third Party Damages								
(Unmetered)	365.5	362.8	218.7		364.5	361.8	210.2	
Sub total Distribution	365.5	362.8	218.7		372.4	370.0	215.0	
GAS CONSUMED								
INTERNALLY TOTAL	1099.2	1089.2	656.6		1465.9	1431.3	831.7	
Metered	708.8	703.2	423.9		1076.4	1044.566	606.9	
Unmetered					389.5	386.8	224.7	
GRAND TOTAL	708.8	703.2	423.9		1465.9	1431.3	831.7	

**SUI SOUTHERN GAS COMPANY LIMITED
STORES AND SPARES CONSUMED**

Table # E-4

Particulars	Rs. Million			
	FY 2019-20	FY 2020-21	Variation between FY 2020-21 and 2019-20	
			Rs. Million	%age
Transmission	273.283	451.272	177.99	65
Distribution	832.234	1134.287	302.05	36
Head Office	132.002	175.190	43.19	33
Sub total	1237.518	1760.749	523.23	42
Freight & Handling	14.482	28.251	13.77	95
Grand total	1252.000	1789.000	537.00	43
Less en-block reduction by OGRA	454.000			
Allowed	798.000			

SUI SOUTHERN GAS COMPANY LIMITED
Electricity

Table # E-5

Particulars	FY 2019-20	FY 2020-21	Rs. Million	
	Determination RERR	Petition	Variation between FY 2020-21 & 2019-20	
			Rs.Million	%age
Transmission & Compression	34.835	61.340	26.505	76
Distribution				
1 Karachi Region	83.088	146.307	63.219	76
2 Sindh Interior Region	42.558	74.939	32.381	76
3 Balochistan Region	8.309	14.631	6.322	76
Sub total	133.955	235.877	101.92	76
Head Office	61.210	107.783	46.573	76
Grand total	230.000	405.000	175.000	76

SUI SOUTHERN GAS COMPANY LIMITED **TRAVELLING EXPENSES**

Table # E-6

Rs. Million

Particulars	FY 2019-20	FY 2020-21	Variation between FY 2020-21 & 2019-20	
	Determination RERR	Petition	Rs. Million	%age
Transmission	29.978	32.495	2.52	8
Distribution	20.637	22.369	1.73	8
Head Office	80.386	87.135	6.75	8
Total	131.000	142.000	11.00	8

**SUI SOUTHERN GAS COMPANY LIMITED
INSURANCE**

Table # E-7
Rs. Million

Particulars	FY2019-20	FY2020-21	Variation between FY 2020-21 & 2019-20	
	Determination RERR	Petition	Rs.Million	%age
Third Party insurance	0.520	0.522	0.002	0
Fire risk/Damage to property	58.000	64.936	6.936	12
Motor Vechical Insurance	35.015	44.019	9.004	26
Other Insurance including Consequential loss	40.784	41.660	0.876	2
Total	134.319	151.138	16.819	13

SUI SOUTHERN GAS COMPANY LIMITED
PROFESSIONAL CHARGES

Table # E-8

Particulars	FY 2019-20	FY 2020-21	Rs. Million	
			Variation between	
			Rs. Million	%age
	Determination RERR	Petition		
Professional charges	99.000	152.023	53.023	54
Total	99.000	152.023	53.023	
En-block reduction by OGRA	53.000			
	46.000			

SUI SOUTHERN GAS COMPANY LIMITED
SECURITY EXPENSE

Table # E-9

Particulars	FY 2019-20	FY 2020-21	Rs. Million	
			Variation between FY 2020-21 & 2019-20	
	Determination RERR	Petition	Rs. Million	%age
Transmission	572.465	481.191	(91.27)	(16)
Distribution	302.246	250.132	(52.11)	(17)
Head Office & Others	68.289	37.593	(30.70)	(45)
Total	943.000	768.917	(174.08)	(18)
Less en-block reduction by OGRA	221.000			
Allowed	722.000			

**SUI SOUTHERN GAS COMPANY LIMITED
ADVERTISEMEMENT**

Table # E-10

Particulars	Rs. Million			
	FY 2019-20 Determination RERR	FY 2020-21 Petition	Variation between FY 2020-21 & 2019-20	
			Rs. Million	%age
1 Compulsory Advertisement	100.251	144.800	44.55	44
2 Voluntary Advertisement	11.749	15.000	3.25	28
Total	112.000	159.800	47.80	43