



**SPECIAL AUDIT REPORT
ON
RLNG SUPPLY CHAIN
PETROLEUM DIVISION
AUDIT YEAR 2021-22**

AUDITOR-GENERAL OF PAKISTAN

PREFACE

Articles 169 and 170 of the Constitution of the Islamic Republic of Pakistan 1973 read with Sections 8, 12 and 15 of the Auditor-General's (Functions, Powers and Terms and Conditions of Service) Ordinance 2001 require the Auditor-General of Pakistan to conduct audit of the receipts and expenditure from the Federal Consolidated Fund, Public Account and that of Government Commercial Undertakings and of any Authority or Body established by the Federation. The special audit of RLNG supply chain was carried out accordingly.

The Directorate General Audit Petroleum & Natural Resources, Lahore conducted special audit on RLNG supply chain during May-June 2022 as per ToRs forwarded by Petroleum Division since inception of RLNG business from March, 2015 to June, 2021. The Special Audit Report identifies structural gaps in RLNG supply chain besides other audit findings relating to financial management.

Audit findings indicate the need for making amendment in legal framework governing RLNG regime besides removing structural gaps and shortcomings in RLNG supply chain.

This report has been finalized in light of discussions held on the paras in Departmental Accounts Committee meeting.

The Audit Report is submitted to the President of Pakistan in pursuance of Article 171 of the Constitution of the Islamic Republic of Pakistan 1973, for causing it to be laid before both Houses of Parliament (Majlis-e-Shoora).

Islamabad
Dated: April 27, 2023

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(Muhammad Ajmal Gondal)
Auditor-General of Pakistan

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ABBREVIATIONS AND ACRONYMS

ADP	Annual Delivery Plan
BoD	Board of Directors
BTU	British Thermal Unit
CAPEX	Capital Expenditure
CCoE	Cabinet Committee on Energy
CDC	Channel Development Cess
CTS	Custody Transfer Station
CM	Cubic Meter
CNG	Compressed Natural Gas
DAC	Departmental Accounts Committee
DES	Delivery Ex-Ship
ECC	Economic Coordination Committee
ENGRO	Energy for Growth
EETPL	ENGRO Elengy Terminal Private Limited
ENI	Ente Nazionale Idrocarburi
ERR	Estimated Revenue Requirement
FG	Federal Government
FOB	Free on Board
FRR	Final Revenue Requirement
FRU	Floating Re-gasification Unit
FSRU	Floating Storage and Re-gasification Unit
FY	Financial Year
GCV	Gross Calorific Value
G to G/G2G	Government to Government
GHPL	Government Holding (Pvt.) Ltd
GHV	Gross Heating Value
GIDC	Gas Infrastructure Development Cess
GoP	Government of Pakistan
GPPs	Government Power Producers
GSPA	Gas Sale and Purchase Agreement
GSAs	Gas Sales Agreements
GTA	Gas Transportation Agreement
HOA	Head of Agreement
IA	Implementation Agreement
IHC	Islamabad High Court
IPPs	Independent Power Producers
IRR	Internal Rate of Return
ISGS	Interstate Gas System (Pvt.) Ltd.
KE	Karachi Electric

KIBOR	Karachi Inter Bank Offered Rates
KMs	Kilo Meters
LCIA	London Court of International Arbitration
LGs	Liquefied Gases
LNG	Liquefied Natural Gas
LoI	Letter of Interest / Intent
LPG	Liquefied Petroleum Gas
LPS	Late Payment Surcharge
LSA	LNG Service Agreement
MMBTU	Million Metric British Thermal Unit
MMCFD	Million Metric Cubic Feet per Day
MMSCF	Million Metric Standard Cubic Feet
MPNR	Ministry of Petroleum and Natural Resources
MTPA	Million Ton Per Annum
NAB	National Accountability Bureau
NG	Natural Gas
NTDC	National Transmission and Dispatch Company
OGRA	Oil and Gas Regulatory Authority
OPEX	Operating Expenditure
OSA	Operation and Service Agreement
PC	Planning Commission
PD	Petroleum Division
PLL	Pakistan LNG Limited
PLTL	Pakistan LNG Terminal (Pvt.) Ltd
PGPCL	Pakistan Gas Port Consortium Limited
PNC	Price Negotiation Committee
PPRs	Public Procurement Rules
PPRA	Public Procurement Regulatory Authority
PQA	Port Qasim Authority
PSEs	Public Sector Enterprises
PSO	Pakistan State Oil
Q-Flex	Qatar-Flex
QG	Qatar Gas
QP	Qatar Petroleum
RFP	Request for Proposal
RLNG	Re-gasified Liquefied Natural Gas
ROA	Return on Assets
SBLC	Stand-By Letter of Credit
STS	Ship to Ship Transfer
SCF	Standard Cubic Foot
SGS	Standard Global Services
SIGTTO	Society of International Gas Tanker and Terminal Operator

SNGPL	Sui Northern Gas Pipeline Company Ltd
SRO	Statutory Regulatory Orders
SSGCL	Sui Southern Gas Company Ltd
SPA	Sale Purchase Agreement
T&D	Transmission & Distribution
TA	Tripartite Agreement
TAPI	Turkmenistan-Afghanistan-Pakistan-India
TBTU	Trillion British Thermal Unit
TOE	Ton Oil Equivalent
TO/O	Terminal Owner and/or Operator
ToRs	Terms of References
TCF	Trillion Cubic Feet
TPA	Third Party Access
TPI	Third Party Inspection
UFG	Unaccounted for Gas
WACOG	Weighted Average Cost of Gas

EXECUTIVE SUMMARY

The Director General Audit, Petroleum & Natural Resources, Lahore carries out the audit of Ministry of Energy (Petroleum Division) and Public Sector Enterprises (PSEs) under the Petroleum Division. Special audit of RLNG supply chain was conducted during May-June, 2022.

LNG / RLNG supply chain involved several organizations including DG Gas and DG Liquefied Gases (LGs), PSEs i.e. PSO, PLL, SSGCL and SNGPL working under Petroleum Division. OGRA was responsible for RLNG pricing. The special audit involved scrutiny of record at Ministry of Energy (Petroleum Division), and all PSEs included in the whole supply chain as per TORs. The special audit covered the period from March, 2015 to June, 2021.

Key Audit Findings

- i. LNG / RLNG supply chain was plagued with duality of legal regimes, RLNG pricing was dealt as petroleum products under the Petroleum Product (Petroleum Levy) Ordinance, 1961 whereas it was dealt as gas for determination of transportation charges under OGRA Ordinance, 2002¹.
- ii. LNG Policy, 2011 was neither fully implemented nor its main objectives could be achieved due to non-determination of economic cost and absence of private sector participation in import and utilization of idle capacity of terminal and pipeline².
- iii. SNGPL assessed demand of RLNG without using any logical basis and did not include demand of sectors other than Power sector³.
- iv. Unresolved disputes / discrepancies among the stakeholders relating to RLNG quantities against each other⁴.
- v. SNGPL did not pay outstanding dues of Rs 289,724 million on account of cost of RLNG, LPS and adjustment of exchange loss to PSO and PLL resulting in piling up circular debt⁵.

¹ Para 5.1.1

² Para 5.1.2

³ Para 5.2.1

⁴ Para 5.3.1 & 5.4.9

⁵ Para 5.3.2, 5.3.3 & 5.3.4

- vi. SSGCL withheld RLNG and did not make payments of outstanding dues of Rs 124,193.169 million. SNGPL stopped payment of terminal charges which accumulated to Rs 78,969 million resulting in non-payment to PSO / PLL⁶.
- vii. PLL did not finalize G2G agreements with seven nominated suppliers and relied mainly on uneconomical spot buying⁷.
- viii. Excessive terminal charges due to award of contract to EETPL on the basis of defective bid evaluation in which consultant compared EETPL price proposal of its 9 years old FSRU with irrelevant projects having new FSRU / FRU with land based storages⁸.
- ix. Faulty award of contract for Terminal-1 to EETPL in two phases; first for 400 mmcf/d leaving rights of remaining capacity with the EETPL and second phase for 200 additional capacity, resulting in higher terminal charges of Rs 867.701 million⁹.
- x. PLL paid excess capacity charges of US\$ 3,278,443 to PGPCL in violation of contractual obligations and PLTL (now PLL) lodged claim of LD charges of US\$ 50.585 million equivalent to Rs 7,587.75 million due to delayed establishment of terminal¹⁰.
- xi. LNG pipeline project was financed through commercial borrowing by gas companies on refusal of Finance Division for arrangement of funds under GIDC which resulted in charging of Guaranteed Rate of Return of Rs 48,836 million by OGRA under the prevalent regulatory framework¹¹.
- xii. ECC issued guidelines for RLNG pricing and its components in May, 2018 but OGRA could not determine the final RLNG prices since inception of RLNG regime. In December, 2021, OGRA assigned the compilation of RLNG price components to SNGPL which could not be done despite lapse of more than seven months¹².
- xiii. PQA was charging higher port charges (USD 244.801 million: Rs 36,720 million) as compared to neighboring countries on the plea that traffic of other terminals had to be closed due to port constraints and LNG ships

⁶ Para 5.4.1 & 5.5.7

⁷ Para 5.3.7

⁸ Para 5.4.2

⁹ Para 5.4.3

¹⁰ Para 5.4.4 & 5.4.5

¹¹ Para 5.5.1

¹² Para 5.6.1

security protocols. On other hand, PQA charged Channel Development Cess of Rs 3,053 million but work on widening of channel could not be initiated¹³.

- xiv. SNGPL claimed differential amount of Rs 35,192 million on account of RLNG diverted to domestic sector without any measurement and billing to end consumers. SNGPL did not account for total volume of indigenous gas diverted to RLNG consumers on account of energy equivalence which had reducing effect on overall claim¹⁴.
- xv. SNGPL diverted RLNG to domestic sector in the months of March 2019 & 2021, April 2020 & 2021 and May, 2020 in violation of winter load management and claimed differential amount of Rs 14,281.199 million¹⁵.

¹³ Para 5.6.3 & 5.6.4

¹⁴ Para 5.7.1

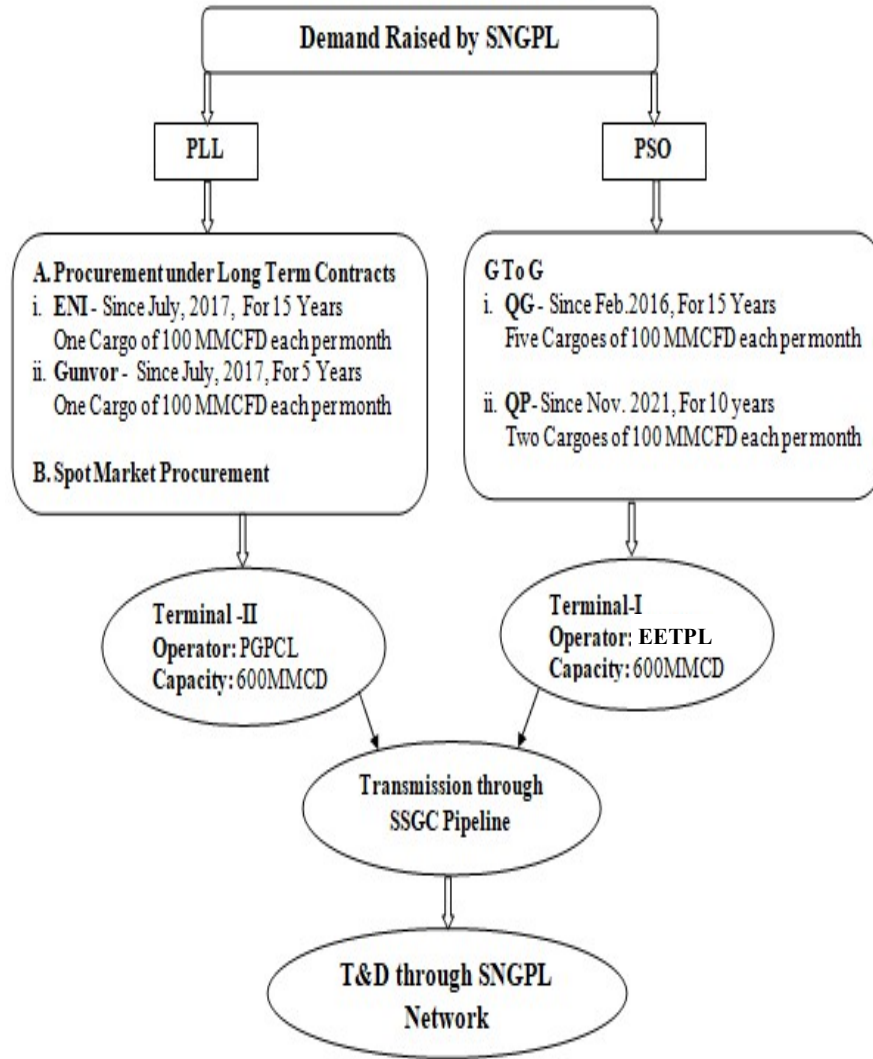
¹⁵ Para 5.7.3

1. Introduction

Liquefied Natural Gas (LNG) is the liquid form of natural gas that has been cooled to a temperature of approximately -256°F (-160°C) that condenses it to a liquid. Liquefaction reduces the volume of the natural gas by approximately 600 times making it economical for transportation in specially designed vessels. A conventional LNG carrier can transport 125,000 – 140,000 cubic meters of LNG which provides 3.32 million MMBTU of energy. The imported LNG is unloaded / re-gasified at the Floating Storage and Re-gasification Unit (FSRU). Then Re-gasified LNG is delivered to gas companies for onward transmission to end consumers.

In Pakistan, LNG / RLNG supply chain is governed by Petroleum Division and its directorates i.e. DG Gas & DG LGs responsible for policy formulation and submission of cases to cabinet and its committees for seeking approval in LNG RLNG related matters. Public Sector Enterprises such as SNGPL, PSO, PLL, and SSGCL are assigned different roles. SNGPL is entrusted with the demand assessment keeping in view the demand supply gap of gas in the country and its communication to LNG importers. PSO and PLL are responsible for importing LNG as per demand raised by SNGPL / SSGCL. Then imported LNG is unloaded / re-gasified at two Floating Storage and Re-gasification Units (FSRUs) which were run by private sector entities i.e. EETPL and PGPCL which are licensees of OGRA. For coordination with Terminal Operators, SSGCL and PLL entered into Operation and Service Agreements for re-gasification and delivery of RLNG to SSGCL. The Company is responsible for onward transportation of RLNG to SNGPL for transportation and distribution to end consumers. The whole supply chain of LNG / RLNG is regulated by OGRA for which it issues licenses to all private sector entities and notifies RLNG prices on the basis of guidelines issued by Federal Government.

RLNG - Supply Chain



2. Background

Natural gas is a major contributing fuel in country's energy mix almost 45%. The demand for natural gas particularly by Residential, Fertilizer and Power sectors has increased over the years causing more pressure on limited indigenous gas supplies. The indigenous gas production declined by 9 percent per annum. With the increase in population and subsequent enhancement in economic activities, demand of natural gas in Pakistan has increased over time. The known recoverable indigenous gas reserves, however, are insufficient to meet the demand. Total demand of gas in the country was about 1.770 TCF¹⁶ per annum (ranges between 4,500 to 6000 mmcf) whereas indigenous production was 1.263 TCF per annum (reduced to 3,200 mmcf from 3700 mmcf) leaving a deficit of 0.507 TCF per annum (shortfall also mitigated from import of LNG to 1,300 mmcf from 2,300 mmcf). Demand and supply position from the FY 2015-16 to 2020-21 is as follows:

(MMCFD)

Sector	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Domestic	840	797	779	860	882	920
Commercial	96	90	88	87	79	81
Industrial	611	355	403	551	549	563
CNG	380	184	193	178	151	152
Power	1945	1,322	1,549	1658	1,548	1,697
Fertilizer	795	715	653	760	758	733
Cement	201	173	211	0	1	15
Captive Power	387	393	380	117	135	145
Total Sectoral Demand	5,255	4,029	4,256	4,211	4,103	4,305
UFG & Internal consumption	604	670	715	715	513	545
Total Demand	5,859	4,698	4,971	4,926	4,616	4,850
SNGPL Supply	1463	1364	1259	1282	1,050	1,158
SSGCL Supply	1278	1180	1072	1164	1,161	1,087
Independent Supply	990	990	990	1040	1,056	1,279
Total Country Supply	3731	3534	3321	3486	3,267	3,524
Gap	2,128	1,164	1,650	1,440	1,349	1,326

Sources: OGRA Annual Industry Report 2016-17 – 2019-20

¹⁶ OGRA Annual Industry Report 2019-20

In order to address this gap, various imports options remained under review of the GoP during last decade. In 2014, the Government of Pakistan decided to import LNG and took initiative for establishment of first LNG terminal. Import of LNG was started in March, 2015 and FG entered into a G2G agreement with Qatar. Consequent upon the G2G agreement, PSO entered into a long-term contract (SPA) of 15 years with Qatar Gas. A company, PLL, was established with the objective to import LNG. PLL also entered into two contracts, one 15-years long term agreement with international supplier Ente Nazionale Idrocarburi (ENI) and another 5 years short term agreement with Gunvor.

3. Audit Objectives

- 1) Assessment of economic cost calculations made by PLL/PSO for determining targeted floor and ceiling price of LNG;
- 2) Verification of Invoicing by SSGCL/PLL to SNGPL (terminal charges, cost of supply and LSA margin);
- 3) Verification of payments made by SSGCL/PLL to ENGRO Elengy Terminal Limited / Pakistan Gasport Company;
- 4) Month-wise analysis of LNG/RLNG inventories at receivable terminals;
- 5) Basis used for assessment of accurate RLNG demand from end consumers by SSGCL/SNGPL;
- 6) Verification of actual retainage by LNG Terminals as per the agreement including the mass balancing reconciliation of RLNG received by the terminals and the RLNG volume re-gasified and delivered by the terminals at CTS Bin Qasim;
- 7) Assessment of payment made to terminal operator there-against;
- 8) Verification of quantity purchased and invoices received from PSO and PLL there-against on the basis of measurement reports / joint metering report;
- 9) Verification of RLNG volume received by SSGCL and delivered to SNGPL at delivery / swapping point;

- 10) Evaluation of appropriate segregation of duties maintained for RLNG procurement activities including authorization requirements of Board of Directors;
- 11) Review of RLNG pricing mechanism by OGRA in line with the policy decisions and government approvals / guidelines;
- 12) Review of the outstanding dues of PSO & PLL against SNGPL including LPS, exchange rate gain/loss and demurrages;
- 13) Review of the status and implementation of transactional agreement (tripartite agreement) among PSO, SSGCL and SNGPL;
- 14) Verification of payment received by SSGCL from SNGPL in respect of RLNG sales;
- 15) Verification of invoices issued by SNGPL to SSGCL for RLNG withheld by SSGCL as per OGRA decision;
- 16) Verification of RLNG stock in pipeline from the reports generated by SNGPL and SSGCL; and
- 17) Verification of RLNG sold to power and fertilizer sector consumers from the invoices and to other industrial commercial and domestic consumers from the computer generated reports.

4. Audit Scope And Methodology

Special audit involved several entities; the audit was conducted at MoE/PD, DG Gas, DG LGs, and other entities i.e. Pakistan LNG Limited, Sui Northern Gas Pipelines Limited, Pakistan State Oil and Sui Southern Gas Company. OGRA issued licenses to Terminal Operators and also notified RLNG prices. Audit covered the period from 2015-16 to 2020-21.

Audit methodology comprised of following procedures and steps:

- i. Understanding the LNG / RLNG Supply Chain
- ii. Collection of Record
- iii. Desk Audit
- iv. Identification of High Risk Areas
- v. Performing Substantive Testing

- vi. Performing Analytical Procedures

5. Audit Findings and Recommendations

Audit findings are divided into following major areas of LNG / RLNG supply chain:

- i. Legal Regimes
- ii. Demand
- iii. Import
- iv. Regasification (RLNG Infrastructure)
- v. Transportation (RLNG Infrastructure)
- vi. Pricing
- vii. Sales

5.1 Legal Regimes

Indigenous gas being a regulated activity is administered through legal regime consisting of OGRA Ordinance, 2002, Natural Gas Tariff Rules, 2002 and Natural Gas Licensing Rules, 2002. OGRA Ordinance, 2002 deals with System Gas/indigenous gas only under which pricing is done twice a year. Federal Government introduced two LNG Policies in 2006 and 2011 with a view to optimizing the primary energy mix, based on economic and strategic considerations; enhancing private sector participation in the energy sector by strengthening the regulatory framework and institutional capacity and developing energy infrastructure. OGRA framed LNG Rules 2007 to regulate licensing of LNG business.

Federal Government started importing LNG in March, 2015 through its designated PSEs. Imported LNG is re-gasified at two terminals (FSRUs) established by private sector entities (EETPL and PGPCCL) after issuance of licenses under LNG Policy, 2011 read with LNG Rules, 2007. The Federal Government, however, introduced a separate legal regime for RLNG business in the country by making an amendment in Petroleum Products Ordinance, 1961 (Schedules-First and Second) to include RLNG and gas companies therein. Petroleum Products Ordinance, 1961 takes RLNG as petroleum product under which pricing is done on monthly basis. RLNG is being transported from the

same pipeline along with NG for supply to end consumers, but these products are subject to two different prices.

5.1.1 Duality of legal regimes leading to mismanagement in RLNG supply chain
(Entities: PD, DG Gas, & LG)

According to decision of ECC vide Case No ECC-52/07/2015 dated April 09, 2015 and Case-62/08/2015 dated April 23, 2015, import of LNG was started through PSO and the RLNG price was to be determined on similar lines as that of Petroleum Products Pricing under The Petroleum Products (Petroleum Levy) Ordinance, 1961 (SRO No 408(I)/2015 dated May 07, 2015). Further, according to ECC decision vide case No. ECC-/122/13/22012 dated 03.10.2012 and Case No ECC-52/07/2015 dated 09.04.2015 and Case-62/08/2015 dated 23.04.2015, suitable amendments were required to be made in OGRA rules to facilitate import of LNG. Furthermore, ECC vide case No. ECC-37/09/2018 dated 11.05.2018 approved that Cabinet Division in consultation with OGRA may process the amendment in OGRA ordinance, 2002 to cover the entire LNG/RLNG supply chain in its regulatory framework i.e. from licensing to pricing of RLNG.

During special audit of LNG / RLNG supply chain for the period from March, 2015 to June, 2021, it was observed that the Federal Government introduced a separate legal regime for RLNG business in the country by making an amendment in Petroleum Products Ordinance, 1961 (Schedules-First and Second) to include RLNG and gas companies therein. Petroleum Products Ordinance, 1961 took RLNG as petroleum product under which pricing was done on monthly basis. On the other hand, OGRA dealt indigenous gas under OGRA Ordinance, 2002 and its prices notified twice a year. Moreover, one component i.e. "Transportation Charges" of RLNG pricing was also determined by OGRA under OGRA Ordinance, 2002 along with determination of indigenous gas prices. This duality of legal regimes impeded the whole supply chain of RLNG as the RLNG was costlier than indigenous gas. Despite ECC's instructions in October, 2012, April, 2015 and May, 2018 to amend OGRA Ordinance, 2002 for bringing RLNG pricing there-under to calculate Weighted Average Cost of Gas" (WACOG) by taking into account the blended cost of both indigenous and imported gas, the subject duality of regime could not be removed till the end of FY 2020-21. Further, consensus on the proposed pricing mechanism could not be developed due to reservations from the gas producing

provinces on the proposed price mechanism. In January, 2022, OGRA Ordinance, 2002 had been amended to include RLNG but its implementation was still awaited.

Audit was of the view that due to duality of legal regime, two prices for gas prevailed in the country which translated in making the demand of RLNG erratic, resulting into other supply chain issues including accumulation of huge circular debt in gas sector.

The matter was reported to the Ministry of Energy (Petroleum Division) and PSEs on July, 14, 2022. In DAC meeting held on July, 25-26, 2022, DG (Gas) explained that after amendment in OGRA Ordinance working on various pricing models was in process and various proposals were under discussion with stakeholders. Upon finalization of proposals, action would be taken accordingly. The pricing formula would be finalized by December, 2022.

DAC directed the management to finalize the pricing model at the earliest and share the outcomes with Audit.

Audit recommends Petroleum Division to implement the OGRA (Amendment) Act, 2021 to remove duality of legal regime by bringing RLNG pricing under OGRA Ordinance, 2002. In this regard, Federal Government is to issue guidelines to OGRA under section 21 of OGRA Ordinance, 2002.

5.1.2 Non-implementation of LNG policy due to non-determination of economic cost & firm demand of LNG and absence of private sector participation
(Entities: PD, DG Gas, & LG)

Federal Government introduced two LNG Policies in 2006 and 2011 with a view to optimizing the primary energy mix, based on economic and strategic considerations; enhancing private sector participation in the energy sector by strengthening the regulatory framework and institutional capacity and developing energy infrastructure. According to Para 3.1(b) of LNG Policy 2011, LNG Developer or LNG Buyer / RLNG Seller will provide evidence of sufficient purchase commitment (in the form of a Head of Agreement) from end users for a minimum volume of RLNG sufficient to support the terminal investment and the potential for further sales, if necessary, in order to cover the full contractual LNG purchase commitment.

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that the agreement for regasification of LNG was executed for construction of first LNG terminal with ENGRO ELENGY Terminal (Private) Ltd in April, 2014. But the agreement with LNG Terminal Operator was executed without fulfilling the requirements of LNG Policy, 2011 as given below:

- Neither Petroleum Division / LNG importers nor Power Division / RLNG buyers considered any economic cost for determining targeted floor and ceiling of LNG to ensure affordability of LNG for power generation;
- Power Sector being the largest end user of RLNG did not report any economic cost / target floor and ceiling on the basis of which LNG importers would execute long term agreements G2G / Commercial;
- No firm demand (on basis of GSPA with end users) of RLNG was assessed and communicated by the RLNG buyer i.e. SNGPL;
- No long term agreement (SPA) either G2G or Commercial was executed by the designated LNG buyer i.e. PSO at the time of construction of LNG Terminal; and
- For LNG import, private sector participation could not be started as envisaged in the LNG Policy due to non-allocation of Third Party Access to idle terminal capacity and pipeline capacity.

Audit was of the view that due to non-fulfilling of the pre-requisite of LNG Policy, 2011 LNG / RLNG supply chain could not be streamlined and any economic cost, target floor and ceiling of LNG could not be determined to ensure firm demand securing affordability of end consumers.

The matter was reported to the Ministry of Energy (Petroleum Division) and PSEs on July, 14, 2022. In DAC meeting held on July, 25-26, 2022, management of DG (LGs) explained that ECC guidelines were fully implemented. The establishment of new LNG Terminal was in process. The participation of private sector related to PSO and PLL, DG Gas explained that LNG Policy 2011 needed a holistic review which was under consideration. Further, there were no rules for 3rd party access to terminals in order to take advantage of under-utilized capacities available at the terminals. The

management of PLL explained that for private participation tenders were floated four times under Third Party Access. However no bidder qualified.

Audit was of the view that the establishment of Terminal-1 in 2015 preceded the Sale Purchase Agreement in 2016. Resultantly, Terminal Service Agreement was executed in two phases in an uneconomical manner and capacity charges for unutilized 65 days were paid.

DAC directed the Petroleum Division i.e. DG (Gas & LGs) to carry out a holistic review of LNG Policy, 2011 and determine economic cost / ceiling and target floor for LNG procurement, enhance the private sector participation and justify the delay between establishment of terminal and finalization of SPA. No further progress was reported till finalization of report.

Audit recommends Petroleum Division to implement the DAC decision and take remedial measures to streamline the LNG / RLNG regime.

5.1.3 Complexity in RLNG supply chain due to involvement of multiple organizations resulting in high prices of RLNG

(Entities: PD, DG Gas, & DG LGs)

According to Para 2(b)(iii) of LNG Policy, 2011, the LNG Buyer(s) would enter into an agreement with the LNG Terminal Owner and/or Operator (hereinafter referred to as the “LNG TO/O”) for the provision of LNG receiving, storage and re-gasification services at its terminal under a tolling agreement.

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that LNG / RLNG supply chain involved Petroleum Division (DG Gas & DG LGs) for policy formulation and approval thereof, OGRA for issuing licenses to various entities for transmission & distribution of gas, to terminal operators for re-gasification. OGRA also issued RLNG prices. Other entities involved in assessment of demand (SNGPL), import of LNG (PSO & PLL), its re-gasification (EETPL / SSGCL & PGPCCL / PLL), and measurement of RLNG delivered by terminal operator to SSGCL was done through private consultant, transportation and sales of RLNG through transmission and distribution network (SNGPL & SSGCL). Segregation of duties on organizational basis created bottlenecks in the smooth running of RLNG supply chain.

- i. SNGPL was responsible for assessment of RLNG demand. There was no role of administrative ministry or OGRA in demand assessment such as function performed by DG Oil / OGRA in Oil Sector. Hence, there was neither any administrative nor any regulatory oversight on assessment of demand. SNGPL was communicating to PSO / PLL, the demand of only Power Sector and demand of other sectors which constituted almost 33% was not being raised to LNG importers. No SoPs were framed by the Petroleum Division for assessment and timelines for communication of demand to LNG importers.
- ii. LNG was imported by two other PSEs i.e. PSO and PLL but private sector participation could not be started as yet, hence LNG import was completely managed by PSEs. Now PLL has only one term cargo under commercial contract with ENI and remaining LNG would be procured through spot buying which was no more viable due to high RLNG prices. Role of PLL is becoming redundant if no further long term contract would be executed.
- iii. Terminal Operators were private sector entities i.e. EETPL and PGPCL but agreements (LSA / OSA) with terminal operators were executed through SSGCL and PLTL which created extra tolling charges i.e. Margins of SSGCL & PLTL @ \$ 0.025 per mmbtu each which could have been avoided if the agreements were executed by the LNG importers as envisaged in LNG Policy, 2011.
- iv. Transportation of RLNG was the responsibility of SNGPL and SSGCL jointly. But third party access to pipeline was not given to private sector and private sector participation could not be started in LNG / RLNG business as envisaged in LNG Policy, 2011.
- v. Main Buyer of RLNG was SNGPL. Neither any public sector enterprises like SSGCL nor any private sector entity had any direct gas purchase agreement with PSO and PLL.

Audit was of the view that involvement of multiple organizations created complexities, and increased the RLNG prices by passing on the tolling charges of all the organizations to end consumers.

The matter was reported to the Ministry of Energy (Petroleum Division) and PSEs on July, 14, 2022. In DAC meeting held on July, 25-26, 2022, DG Gas

explained that supply chain entities involved in the transaction were clearly defined i.e. PLL and PSO were the government nominated LNG buyers / importers and gas utility companies SNGPL and SSGCL were the RLNG seller companies.

DAC directed the Petroleum Division / DG Gas and LGs to review the LNG Policy and LNG Supply Chain infrastructure to reduce the cost of RLNG for consumers and share the outcomes with Audit. No further progress was reported till finalization of report.

Audit recommends Petroleum Division to look into the present structure of LNG / RLNG supply chain especially roles of PSO / PLL / SSGCL in import of LNG and service agreements with terminal operators.

5.2 Demand

With the increase in population and subsequent enhancement in economic activities, demand of natural gas in Pakistan has increased over the years. Natural gas is a major contributing fuel (almost 45%) in country's energy mix. Demand and supply position according to Petroleum Industry Report of OGRA for the FY 2015-16 to 2020-21 is given below:

(MMCFD)

	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Demand	5,255	4,029	4,256	4,211	4,103	4,305
UFG & Internal consumption	604	670	714	715	513	545
Total Demand	5,859	4,698	4,971	4,926	4,616	4,850
Total Country Supply	3,731	3,534	3,321	3,486	3,267	3,524
Gap	2,128	1,164	1,650	1,440	1,349	1,326

In order to address this gap, various imports options remained under review of the GoP during last decade. In 2014, the Government of Pakistan decided to import LNG and entered into a G2G agreement with Qatar. Consequent upon the G2G agreement, PSO entered into a long-term contract of 15 years with Qatar Gas. A company, PLL, was established with the objective to import LNG. PLL also entered into two contracts, one 15-years long term agreement with ENI and another 5 years short term agreement with Gunvor. In February, 2021, PSO entered into another G2G agreement with Qatar Petroleum for 3 MTPA LNG (2 cargoes in first year and 3 cargoes from June, 2022 for 10 years).

5.2.1 Inaccurate assessment of demand resulting in non-finalization of G2G agreements and mismanagement in procurement of LNG

(Entities: PD, SNGPL, SSGCL)

According to Para 3.1(b) of LNG Policy 2011, LNG Developer or LNG Buyer / RLNG Seller will provide evidence of sufficient purchase commitment (in the form of a HOA) from end users for a minimum volume of RLNG sufficient to support the terminal investment and the potential for further sales, if necessary, in order to cover the full contractual LNG purchase commitment.

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that SNGPL was responsible for demand assessment of RLNG. SNGPL was communicating to PSO / PLL, the demand of only Power / Fertilizer Sectors. Demand of Industry- Export / Non-Export, Captive Power, CNG, commercial and domestic sector (for diversion in winter), which constitutes almost 33%, was not raised to LNG importers. SSGCL was also withholding RLNG for sales in its franchise area without executing any agreement with the SNGPL. SNGPL was submitting Annual Delivery Programme (ADP) to PSO for RLNG purchases but no such ADP was given to PLL. Moreover, average 970 mmcf/d RLNG were off-taken against installed 1200 mmcf/d capacity whereas SNGPL had agreements with IPPs/GPPs of committed volumes of 540 mmcf/d to 1536 mmcf/d (subject to confirmation) excluding other sectors. But the demand of other sectors despite having allocations from the DG Gas (commercial 50 mmcf/d, industry 200 mmcf/d and housing societies 100 mmcf/d: total 350 mmcf/d) was never communicated to LNG importers. Hence, the demand was still erratic because demand of Power Sector was now on “As and When Available Basis” whereas SNGPL had to buy LNG on “Take or Pay Basis”. Due to erratic demand of RLNG, G2G agreements with seven nominated suppliers could not be finalized and PLL was forced to spot buying of LNG from volatile international LNG markets. Resultantly, higher LNG prices of Rs 983 million were fetched for month of July, 2021.

Audit was of the view that without involvement of administrative ministry in the process of demand assessment, SNGPL had been assessing / reporting demand of only power sector to PSO / PLL and demand of other sectors was not assessed / reported to PLL to ensure timely processing of spot buying for fetching economical bids.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs. In DAC meeting held on July, 25-26, 2022, management of SNGPL explained that the demand from Power sector was very inconsistent. The issue had been taken up at inter-ministerial level several times to ensure firm demand from Power Sector.

DAC directed the management to rationalize the matter of demand estimates in consultation with relevant stakeholders in order to reduce the size of variance between the Estimated and Actual demand. Further, DAC directed the SNGPL to

provide the copy of latest GSAs with industrial consumers for verification. No further progress was reported till finalization of report.

Audit recommends implementation of the decision of DAC and devising a proper mechanism for assessment by taking into account demand of all sectors' RLNG consumers under the supervision of Petroleum Division / DG Gas.

5.3 Import

In order to fill supply/demand gap of gas, FG started import of LNG through PSO in 2015 and PLL in 2017. Two LNG terminals were established in 2015 and 2017 and each terminal was operated by EETPL and PGPCPL respectively. FG asked PSO to execute long term agreement with QG for 15 years for 5 cargoes per month in Feb. 2016 for 180 months whereas a short term contract with Gunvor was executed for import of one cargo per month in March, 2016 for 60 months. Similarly, PLL also executed two long term contracts with ENI and Gunvor in 2017. Details of Contracts for LNG are given below:

Nature of Contract	PSE	Supplier	Contract Period in Years	Volume MMCFD	Cargoes Per Month	Rate of Slope (%)
G2G	PSO	QG	15	500	5	13.37
Commercial	PSO	Gunvor*	5	100	1	13.37
G2G	PSO	QP	10	200 300	2 3**	10.97
Commercial	PLL	ENI	15	100	1	11.95
Commercial	PLL	Gunvor***	5	100	1	11.62
Spot	PLL	Anyone	-	300	3	Market Rate

* Contract of PSO with Gunvor started in March, 2016 and expired in December, 2020

**Contract of PSO with QP: number of cargoes will be increased to 3 from July, 2022

***Contract of PLL with Gunvor will end in June, 2022

Since March, 2015 to June, 2021, PSO imported 386 LNG vessels containing 1,228,643,697 mmbtu and PLL imported 160 LNG vessels containing 513,804,030 mmbtu from December, 2017 to June, 2021.

5.3.1 *Less receipt of invoiced LNG / RLNG by SNGPL from SSGCL due to non-reconciliation* (Entities: SNGPL, SSGCL, PSO, PLL)

According to TA-1 initialed between PSO, SSGCL and SNGPL, PSO will supply imported LNG and issue invoices to SNGPL and deliver LNG to SSGCL for re-gasification and transport / delivery of RLNG to SNGPL for sale in its franchise area. Another agreement initialed between PLL and SNGPL, PLL supply imported RLNG to SNGPL after importing and re-gasifying LNG from PGPCPL. According to Clause 18 & 26 of OSA/LSA between EETPL/SSGCL and PGPCPL / PLL, an independent surveyor will be appointed on behalf of

EETPL, SSGCL / PLL for measurement and quality determination of LNG / RLNG at transfer points STS and CTS Bin Qasim followed by retrospective adjustments on account of measurement errors and inaccuracy.

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that since inception of LNG / RLNG regime, PSO imported LNG and delivered it to SSGCL for re-gasification by EETPL on tolling charges. PSO issued invoices for LNG to SNGPL and received payments according to invoices whereas SSGCL also issued invoices on account of re-gasification charges to SNGPL and received payments accordingly. According to terms of agreement, measurements at transfer points i.e. Ship to Ship (STS) and Custody Transfer Station (CTS) was done by independent surveyor whereas measurement at CTS Sawan was done through Joint Metering Reports. There were huge discrepancies in the quantities provided by SNGPL, SSGCL and PLL on account of LNG opening / closing balances at EETPL, LNG re-gasified at EETPL, actual retainage, RLNG delivered to SSGCL by EETPL at CTS Bin Qasim, RLNG delivered by PLL to SSGCL and RLNG delivered to SNGPL by SSGCL. The details are as under:

(RLNG in MMBTU)

	According to SNGPL	According to SSGCL / PSO & PLL	Diff- quantity
Opening balance-EETPL	192,295,204	144,912,786	47,382,418
LNG Imported – PSO	1,228,643,697	1,228,834,996	(191,299)
LNG re-gasified – EETPL According to SGS	1,219,329,225	1,216,759,147	2,570,079
Actual retainage – SGS	9,335,729	9,410,431	(74,702)
Closing balance - (EETPL)	192,618,920	144,919,038	47,699,882
Closing balance – according to calculation		147,578,204 -144,919,038 Difference exists within SSGCL record	2,659,166
LNG imported by PLL & Received by SSGCL from PGPCCL	512,205,408	513,804,030	(1,598,622)
Total RLNG Received by SSGCL at CTS bin Qasim	1,731,534,633	1,730,563,177	971,456
RLNG withheld by SSGCL	145,401,077	146,056,120	(655,043)
RLNG delivered by SSGCL to SNGPL via SWAP	1,586,133,556	1,584,507,057	1,626,499

After analysis of table/information, following issues were highlighted:

- i. According to SNGPL record, quantity of LNG re-gasified by EETPL was more than that reported by SSGCL which actually received the RLNG deliveries from EETPL;
- ii. PLL invoiced more RLNG quantity to SNGPL whereas it actually received less;
- iii. SNGPL did not carry out reconciliation with SSGCL to ensure receipt of RLNG as compared to invoiced quantity of LNG by PSO for which SNGPL had to make payments. Reasons of less quantity were excess retainage and measurement uncertainties of meters installed at transfer points by Terminal Operator; and
- iv. SNGPL was making payments to PSO and PLL without carrying out reconciliations and retrospective adjustments were not being done on account of measurement errors and inaccuracy.

Audit was of the view that due to absence of reconciliation on monthly / annual basis and inaccuracies of measurement facilities, there were discrepancies at all stages which raised financial disputes and withholding of payments against each other, thus making the whole supply chain cash strapped and all stakeholders facing financial crunch.

The matter was reported on July 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs. In DAC meeting held on July, 25-26, 2022, Management of SNGPL explained that record was being reconciled with other stakeholders and reconciled record would be shared with Audit.

DAC directed the management of SNGPL, SSGCL and PLL to reconcile the figures relating to whole RLNG supply chain and share with Audit. No further progress was reported till finalization of report.

Audit recommends to implement decision of DAC besides sorting out discrepancies in quantities by rectifying measurement inaccuracies among all the stakeholders.

**5.3.2 Non-recovery of outstanding dues on account of RLNG from SNGPL –
Rs 256,716 million** (Entities: SNGPL, PSO, PLL)

Tripartite Agreement (TA-1) which was initialed on 29 August 2015 and Tripartite Agreement No. 2, was signed on June, 6, 2016, Clause 9.4.1 requires that SNGPL will make payment to PSO on eighth day of completion of unloading of cargo or 3rd day of receipt of invoice issued by PSO.

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that PSO and PLL sold RLNG to SNGPL but GSPA of both the suppliers with SNGPL was not finalized. As on November, 30, 2021, SNGPL did not make payment of overdue amounts on account of RLNG to PSO and PLL mainly due to unpaid subsidies to export sector, fertilizer sector and differential cost of diverted RLNG to domestic sector, unresolved disputes with SSGCL and circular debt etc. as detailed below:

(Rs in million)

Sellers	Outstanding amount against SNGPL
PSO	112,598
PLL	144,118
Total	256,716

Audit was of the view that due to unpaid subsidies and non-resolution of disputes among the stakeholders and circular debt, huge amounts remained outstanding and LNG importer had to incur further finance cost due to financial crunch.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs. In DAC meeting held on July, 25-26, 2022, management of SNGPL explained that as of November, 2021, the receivables from various stakeholders including SSGCL Rs. 65 billion, Power Sector Rs. 65 billion, subsidies to export sector receivable from government Rs. 26 billion and differential amount of RLNG diversion to domestic sector was Rs. 121 billion and other disputes with consumers involving Rs. 37 billion. SNGPL was committed to make payments to all its stakeholders including PSO and PLL provided the amount stuck with above stakeholders was realized on timely basis. DG (Gas) explained that an amount of Rs. 60 billion were released on account of differential amount of RLNG diverted to domestic sector during the last Financial Year and Rs. 25 billion was budgeted in financial year 2022-23.

DAC directed the management / DG Gas to share the documents for release of Rs. 60 billion on account of RLNG diversion and directed the SNGPL / SSGCL to resolve the issue of RLNG withheld besides expediting the payment of balance outstanding amount to PSO and PLL. No further progress was reported till finalization of report.

Audit recommends implementation of DAC decision.

5.3.3 Accumulation of huge arrears on account of LPS from SNGPL due to non-finalization of TA-1 – Rs 28,310.953 million

(Entities: SNGPL, SSGCL, PSO, PLL)

According to Tripartite Agreement (TA-1) which was initialed on 29 August 2015, if payment of any bill (invoice) issued by PSO to SNGPL is not made on due dates, a late payment surcharge calculated at Delayed Payment Rate will be applicable on any outstanding amount. According to Section 9.5 of the initialed GSPA between PLL and SNGPL and according to Clause 10.1 of Tripartite Agreement No. 2, if payment of any invoice issued is not made on due date, a late payment surcharge calculated at Delayed Payment Rate will be applicable on any outstanding amount (one-month KIBOR plus two percent per annum, calculated for the actual number of days which the relevant amount remains unpaid on the basis of 365 days).

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that TA-1 between PSO, SNGPL and SSGCL was initialed on 29 August, 2015 but could not be finalized till date due to unresolved issues i.e. Take or Pay payment etc. Hence, huge arrears on account of LPS of Rs 23,846 million on delayed payments on account of sold RLNG were accumulated over the years. PSO could neither invoke LPS clause nor any penal clause owing to absence of any legal agreement fully executed with the SNGPL. On the other hand, SNGPL invoked Take or Pay clauses against GPPs under TA-2 executed between SNGPL and GPPs during the FY 2017-18 and SNGPL received late payment surcharge from GPPs according to provisions of TA-2 during previous years. Similarly agreement between PLL and SNGPL was also not finalized, consequently, PLL could not claim LPS on these delayed payments. This resulted in loss of Rs 4,464.953 million on account of LPS up to June 30, 2021.

Audit was of the view that due to non-finalization of TA-1, LPS clause could not be invoked by PSO, thus LPS amount of Rs 28,310.953 million had been accumulated over the years.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs.

The DAC in its meeting dated 25-26 July, 2022 directed the management of SNGPL, PSO and SSGCL to expedite the execution of GSA with relevant parties through Petroleum Division. No further progress was reported till finalization of report.

Audit recommends Petroleum Division to finalize the TA-1 by resolving issues like inclusion of Take or Pay clause and matter relating to LPS be settled.

5.3.4 Accumulation of huge arrears on account of exchange loss from SNGPL due to non-finalization of TA-1 – Rs 4,697 million

(Entities: SNGPL, PSO, PLL)

According to RLNG pricing components for RLNG duly approved from ECC vide case No.ECC-87/11/2015 dated 06.06.2015, relevant adjustments due to exchange rate (gain or loss) shall a component of DES LNG Price and recovered from the RLNG consumers by SNGPL for onward payment to PSO.

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that TA-1 between PSO, SNGPL and SSGCL was initialed on 29 August, 2015 but could not be finalized till date due to unresolved issues i.e. Take or Pay payment etc. Hence, huge arrears of exchange loss of Rs 4,697 million (which was charged by SNGPL through RLNG prices during July, 2017 to June, 2021) were accumulated over the years. PSO could not invoke any penal clause owing to absence of any legal agreement fully executed with the SNGPL. Whereas, amount due on account of exchange loss of Rs 4,697 million (July, 2017 to June, 2021) owing to appreciation of dollar against Pak rupee could not be collected from end consumers despite ECC guidelines issued in 2015 and RLNG prices were not finalized by OGRA. Due to this, PSO remained unable to collect the exchange loss of Rs 4,697 million.

Audit was of the view that due to provisional RLNG prices, the matter relating to adjustment of exchange gain or loss could not be settled despite lapse of seven years of RLNG regime.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs.

The DAC in its meeting dated 25-26 July, 2022, directed the SNGPL to take up the matter with OGRA for inclusion of adjustment of exchange loss in RLNG prices. No further progress was reported till finalization of report.

Audit recommends implementation of DAC decision.

5.3.5 Unfavorable impact of PPRA regime resulting into uneconomical spot buying of LNG *(Entities: PD, PLL)*

According to rule 13 of PPRA rules, 2004, under no circumstances the response time shall be less than fifteen days for national competitive bidding and thirty days for international competitive bidding from the date of publication of advertisement or notice. Further, According to rule 35 of rules *ibid*, the procuring agency shall announce the result of bid evaluation, in the form of final evaluation report giving justification for acceptance or rejection of bids at least ten days prior to the award of procurement contract. Under the prevalent PPRA regime, the overall import procedure takes up, on average, more than 60 days, with a 30-day mandatory period between advertisement and bid submission and a 10 days period between bid announcement and award of tender. Further, Wood Mackenzie report depicted that Pakistan pay additional price @ \$0.66/MMBTU to \$1.50/MMBTU as premium due to its procurement process i.e. bid validity duration, port charges, credit support, payment term, pricing structure and LNG specification.

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that PLL took usually 45-60 days for procurement of spot cargoes whereas internationally spot LNG trade took short time 1-5 days to conclude. Market research showed that state-owned entities in our neighboring countries had been concluding spot LNG tenders within 24 hours. Keeping in view LNG market volatility, bidders withdraw their bid as its monetary exposure was only to the extent of bid bond whereas the incentive, by selling cargo on higher price, was huge. For instance, from the bid opening date (28 December 2020) and the award date (7 January 2021) for actual delivery in February 2021 spot tender, international spot LNG prices rose more than 35%. The increase in prices translated into an increment of around USD \$11 million in value of a cargo.

Moreover, PSO mainly procured LNG under SPA with QG and QP and procured only two cargoes through spot buying during the FY 2020-21. Due to involving lengthy bidding process, PSO received even higher prices (differential of Rs 1,206.561 million) than that of PLL during the months of April-May, 2021 because PLL had specific exemptions for its cargoes in that period. PPRA granted specific exemption to PLL on case-to-case basis and exemption of response time and bid validity for 06 cargoes during the FY 2020-21 and other 06 cargoes up to December, 2021. But the spot buying from international LNG market warranted a permanent solution.

Audit was of the view that due to delayed sensitization of the issue with PPRA, LNG was purchased by PLL through spot buying on uneconomic prices and issue could not be resolved on permanent basis.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs. In DAC meeting held on July, 25-26, 2022, management explained that matter had been taken up with PPRA for permanent resolution of the issue. The case was in final stage. The outcomes would be shared with Audit.

DAC directed the DG (LGs) to pursue the matter with PPRA for early finalization. No further progress was reported till finalization of report.

Audit recommends implementation of DAC decision.

5.3.6 Unjustified cancellation of bids and rebidding resulting in higher LNG prices – Rs 983 million *(Entities: PD, PLL)*

According to rule 4 of PPRA rules, 2004, Procuring agencies, while engaging in procurements, shall ensure that the procurements are conducted in a fair and transparent manner, the object of procurement brings value for money to the agency and the procurement process is efficient and economical.

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that in 02 cases, PLL management cancelled bids and went for rebidding process considering bids to be exorbitant, ignoring the lengthy procurement process and shorter lead time (tender to delivery). Resultantly, higher LNG prices to the extent of Rs 983 million were fetched as compared to bids received in previous tender. **(Annexure- 1)**

Audit was of the view that due to defective procurement manual wherein lead time and rate admissibility in terms of economic cost and target ceiling and floor were not defined, shorter lead time, higher prices were fetched during rebidding / retendering.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs. The management in its reply dated July 2022 stated that in accordance with PPRA's guideline of accepting single bids while ensuring rate reasonability, bids received for initial tenders for July, 2021 could not be awarded. However, PLL was constrained to purchase these cargoes later owing to directions from the ministry to procure LNG to avoid expected energy shortage in the country.

DAC, in its meeting dated December, 28, 2022, directed the Petroleum Division to conduct a fact finding inquiry and submit the report within two months.

Audit recommends to review the procurement manual in respect of lead time and rate admissibility in terms of economic cost and target ceiling and floor which are not defined.

5.3.7 Non-finalization of G2G agreements with PLL (7 nominated suppliers) resulting in potential loss - Rs 9,767.326 million

(Entities: PD, PLL, DG LGs)

According to decision of the Economic Coordination Committee (ECC) in its case No. ECC-121/21/2016, Pakistan LNG Limited (PLL) was mandated to carry out negotiations with other LNG producing countries subject to availability / reliability of their LNG suppliers under Inter-Government Agreements.

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that the Federal Government entered into Inter-Government agreements with 07 LNG producing countries. Accordingly, PLL initialed SPAs with nominated suppliers and sought price proposals in sealed envelopes. Meanwhile, Price Negotiation Committee (PNC) formed a subcommittee on May 08, 2018 to negotiate the prices with suppliers. Pursuant to the meetings of the PNC sub-committee with nominated suppliers on May 22, 2018 and May 25, 2018, the suppliers submitted their revised price proposals on May 26, 2018 which were valid till June 15, 2018. However, subsequent meetings of PNC sub-committee scheduled to be held in June, 2018

to finalize the proposals could not be convened due to unavailability of the chairman as well as member and the price offer expired on June 15, 2018. The entire negotiation process with nominated suppliers was scrapped and PLL was compelled to procure LNG at higher price from international market. PLL made 30 spot cargoes from July, 2018 to September 2021 at an average slope of 12.84% of Brent compared to 11.82% of Brent offered by G2G suppliers. Thus, excess cost of Rs 9,767.326 million (US\$ 57.454 million) was borne by PLL which could have been saved, if proceedings of PNC were not discarded.

Audit was of the view that due to non-finalization of G2G agreements, PLL was fully exposed to the volatile LNG market for spot buying which was not feasible due to extra ordinary higher and unaffordable LNG prices.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs. In DAC meeting held on July, 25-26, 2022, management of PLL explained that the previous G2G process could not be completed due to non-availability of firm demand from SNGPL. However, in 2022 the Petroleum Division re-started the process of entering into G2G LNG supply agreement through price negotiation committee.

Audit highlighted that PLL had only one contract with ENI for one cargo and long term G2G agreements were necessary for its existence whereas spot trade in volatile LNG market was economically unviable.

DAC directed the DG (LGs) and PLL to explore the possibility of negotiating G2G agreements at the earliest. No further progress was reported till finalization of report.

Audit recommends to implement the DAC decision besides fixing the responsibility on the person(s) at fault.

5.4 Regasification

It is the process of converting the LNG back to gaseous state. This process takes place at Floating Storage and Re-gasification Unit (FSRU). These units are specifically designed for the purpose of storing and re-gasifying LNG thus turning it into Re-gasified Liquefied Natural Gas (RLNG). Two FSRUs are established at PQA one each for PSO and PLL.

Ministry of Petroleum and Natural Resources designated ISGS for tendering process of terminal-1 in July, 2013. ISGS recommended SSGCL for accepting proposed prices of EETPL on evaluation of technical and financial bids by a consultant i.e. QED Consulting Limited. On recommendation of ISGS, SSGCL approved the commercial evaluation of bid on November 25, 2013. ECC vide Case No. ECC-45/7/2014 dated February, 28, 2014, approved the project “Fast Track LNG Services Project” in principle. SSGCL entered in LNG Service Agreement with EETPL April, 30, 2014 for regasification capacity of 400 mmcf/d at tolling charges of \$0.66 per mmbtu. The Terminal was commissioned on March 27, 2015 in 11 months. Moreover, Ministry of Petroleum and Natural Resources confirmed procurement of additional regasification capacity of 200 mmcf/d available at EETPL terminal on demand confirmation by SNGPL and novation of LSA agreement. SSGCL negotiated additional 200 mmcf/d for capacity charges of \$0.253391 per mmbtu, utilization charges of \$0.1745 per mmbtu at levelized charges of \$0.48 per mmbtu. Terminal-1 is being operated at full capacity of 600 mmcf/d from the FY 2017-18 onwards.

ECC vide its decision dated October 26, 2015, mandated GHPL to start the process for construction of 2nd LNG Terminal at Port Qasim under tolling arrangement through open competitive bidding process under PPRA rules, 2004. On November, 2015 ECC decided that GHPL may establish a subsidiary for setting up of LNG Terminal. Accordingly, PLTL was incorporated under the Companies Ordinance, 1984 and acquired PGPCL terminal at levelized charge of \$0.4177/ mmbtu at 600 mmcf/d and 96 per cent availability. According to requirement of RFP, PGPCL incorporated a subsidiary namely PGP Consortium Limited (PGPCL) for execution of O&SA. The target completion date was June 30, 2017 but the terminal was completed on January, 4, 2018 with a delay of almost six months. However, 2nd terminal could not be operated at its full

capacity since its inception and capacity charges were being paid for idle capacity till June, 2021.

5.4.1 Non-recovery of terminal charges, cost of supply of gas and LSA margin from SNGPL - Rs 78,969 million (Entities: SNGPL, SSGCL)

According to Clause 16 of Gas Transportation Agreement (GTA) between SSGCL and SNGPL, SNGPL shall pay each tariff invoice to SSGCL by the 7th day following receipt of the tariff invoice. If the full amount of any undisputed tariff invoice is not paid when due, SNGPL shall pay a delayed payment charge to SSGCL at the rate of 1 month KIBOR plus 2%.

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that SSGCL failed to recover an amount of Rs 78,969 million from SNGPL on account of terminal charges, re-gasification charges, cost of supply of gas and LNG Sale Agreement margin. The detail is summarized below:

(Rs. in million)

Particulars	Invoice amount	Payments by SNGPL	Outstanding Amount
Terminal charges	91,303	39,907	51,396
Cost of supply-EETPL	22,801	6,541	16,260
Cost of supply-PGPCL	11,746	3,373	8,373
LSA margin	4,649	1,709	2,940
Total	130,499	51,530	78,969

Audit was of the view that due to unresolved disputes between two companies, huge amounts on account of terminal charges and LSA margin of Rs 78,969 million were remained outstanding.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs. In DAC meeting held on July, 25-26, 2022, management explained that terminal charges, cost of supply of gas and LSA margin were adjusted against the invoices issued by SNGPL on account of RLNG withheld by SSGCL.

Audit was of the view that both the companies stopped payment of due amounts against each other but no reconciliation of net payable amount by SSGCL as explained by SNGPL was provided to Audit.

DAC directed the SNGPL and SSGCL to resolve the disputes through Petroleum Division and OGRA besides providing reconciliation of net payable amount by SSGCL to Audit for verification. No further progress was reported till finalization of report.

Audit recommends implementation of DAC decision.

5.4.2 Excessive terminal charges due to award of contract on the basis of defective bid evaluation - Rs 4,608.131 million (Entities: ISGS, SSGCL)

According to Para 2(iii)(b) of LNG Policy, 2011, The LNG Buyer(s) would enter into an agreement with the LNG Terminal Owner and/or Operator (hereinafter referred to as the “LNG TO/O”) for the provision of LNG receiving, storage and re-gasification services at its terminal under a tolling agreement.

During special audit of LNG / RLNG supply chain, it was observed that bidding process of Terminal-1 was initiated in November, 2013 through ISGS and technical / commercial evaluation was conducted through a Consultant i.e. QED Consulting Limited. BoD of ISGC approved the technical and commercial evaluation reports furnished by the consultant. ISGS recommended SSGCL to accept the price proposal submitted by the technically qualified and compliant bidder i.e. M/s Elengy Terminal Pakistan Ltd. On recommendation of ISGS, SSGCL approved the commercial evaluation of bid on November 25, 2013 in which consultant admitted that ETPL was the only short-listed bidder and no direct comparator was available to evaluate the competitiveness of ETPL price proposal.

A scrutiny of the evaluation report revealed that the consultant undertook four comparisons which were not directly relevant and not based on actual facts. Detail analysis of the four comparisons are given in **Annexure-2**. FSRU of EETPL was 9 years old whereas in three comparisons, consultant made comparison with new FSRUs or FRU with land based large / small storages. Hence these 03 comparisons were irrelevant and in 4th comparison, consultant estimated cost of FSRU offered by EETPL by taking into account price of new FSRU prevailing in 2014 instead of taking price of FSRU in 2005 and reduced by 9 years (depreciation). Consultant fixed upper and lower limit for estimated cost without giving any justification of upper limit for FSRU price, pipeline cost and jetty cost was given by the Consultant. ETPL price proposal (levelized charges \$0.66 per mmbtu) fell beyond lower limit but consultant proposed

acceptance of bid price keeping in view upper limit. Thus, bid evaluation by the consultant was inconclusive and defective which provided only a confidence level without carrying out any market study of prices of 9 years old FSRUs causing more retainage. Thus, this resulted into loss of Rs 4,608.131 million due to excess retainage of EETPL terminal as compared to PGPCL terminal as detailed below:

(Rs in million)

Description		EETPL	PGPCL
Total Qty Imported (MMBTU)	A	1,228,834,996	517,830,848
*Retainage (MMBTU)	B	9,410,430	2,687,948
Qty Regasified (MMBTU)		1,219,424,566	515,142,900
Retainage %	$D = B/A * 100$	0.77 %	0.52 %
Diff	$E = D.EETPL - D.PGPCL$	0.25%	
Regasification Qty of difference of retainage (MMBTU)	$F = E * A$ (EETPL)	3,072,087	
Avg OGRA selling price	G	\$ 10	
Expected Revenue from diff of Qty of RLNG due to retainage	$H = G * F$	\$ 30,720,870	
Total Loss (\$ to 150PKR-average price)	$I = H * 150$	4,608.131	

*Retainage Audit Reports

Moreover, ECC also observed that LNG terminal was taking high return which needed to be rationalized. Hence, ECC vide Case No. 93/19/2018 dated 02.10.2018 directed Petroleum Divisions to seek legal opinion of Law & Justice Division on the agreements of LNG terminals to ascertain the legal options available with the Government, for revisiting terms and conditions of the agreements and submit a report thereon to the ECC for consideration. Further, the Cabinet vide Case No 615/41/2018 dated 18.10.2018 took note of the presentation on LNG terminals made by the Petroleum Divisions and directed that the Petroleum and Finance Divisions shall conduct negotiations with the LNG terminal company for rationalizing the excessive return being earned by them. To deliberate the issue in the light of opinion of Law & justice Division, a meeting of Ministers for Petroleum and Finance Division was held and it was decided that since NAB's inquiry was at an advanced/investigation stage hence it was better to let that course of events continue.

Audit was of the view that due to defective evaluation of financial bid of EETPL and giving no consideration to 9 years old FSRU causing more retainage, contract was awarded at higher tolling charges of \$0.66 per mmbtu. Further, award of contract warranting discount of 10-15% which was neither

recommended by the consultant nor ISGS / SSGCL was irregular and uneconomical.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs. In DAC meeting held on July, 25-26, 2022, management of SSGCL explained that ISGS recommended the acceptance of price proposal submitted by the technically qualified and compliant bidder i.e. Engro Terminal (Pvt) Ltd. Hence SSGCL Board adopted the price proposal of Engro and initiated the LSA negotiations according to RFP requirements. Negotiations were successful and contract was concluded. SSGCL role was to negotiate and conclude the contract without interfering with commercial arrangements implied in the bid. The matter was under investigation by NAB.

Audit was of the view that short comings in the evaluation report of the consultant were not responded by SSGCL / ISGS and no justification for tendering for 400 mmcf/d terminal capacity initially instead of 600 mmcf/d terminal capacity was given. Further, SSGCL finalized the terms and conditions of LSA at its own in which rights for remaining 200 mmcf/d were rested with the terminal operator.

DAC directed the management of SSGCL to pursue the case with NAB and final outcome be shared with Audit. No further progress was reported till finalization of report.

Audit recommends implementation of DAC decision.

5.4.3 Loss due to higher negotiated terminal charges for additional capacity as compared to initial capacity – Rs. 867.701 million (Entity: SSGCL)

According to Para 2(iii)(b) of LNG Policy, 2011, the LNG Buyer(s) would enter into an agreement with the LNG Terminal Owner and/or Operator (hereinafter referred to as the “LNG TO/O”) for the provision of LNG receiving, storage and re-gasification services at its terminal under a tolling agreement.

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that Ministry of Petroleum and Natural Resources confirmed procurement of additional regasification capacity of 200 mmcf/d available at EETPL terminal in 2016. The Board of Directors of the company vide its resolution dated 27.09.2016 approved procurement of additional re-gasification capacity. SSGCL floated a negotiated tendering vide

Tender Enquiry No. SSGCL / SC / 7747 on November, 16, 2016. Commercial bid was evaluated by consultant M/s QED who recommended SSGCL to accept the revised price proposal of capacity charges of \$0.253391 per mmbtu, utilization charges of \$0.1745 per mmbtu. Agreement with EETPL was amended to this effect and two rates for lower utilization rate (0.062730) US\$ per MMBTU up to 400 mmcf and higher utilization rate (0.1745) US\$ per MMBTU for additional 200 mmcf. The company paid higher utilization fee for throughput in excess of 400 mmcf at higher rate (\$0.1745) since July 2017 to June, 30 2021 which came to Rs. 867.701 million as detailed below:

Regasification Capacity	400 mmcf	200 mmcf
Utilization Rate (\$/mmbtu)	0.062730	0.1745
Difference in Rate (\$/mmbtu)	0.11177	
Qty Regasified (mmbtu)	65,115,252	
Gross amount (\$)	7,277,932	
Exchange Rate (Pak Rs)	105.5076	
Gross amount (Rs)	767,877,279	
Tax @13% (Rs)	99,824,046	
Total amount (Rs)	867,701,324	

Scrutiny of financial bid evaluation report revealed that EETPL offered an additional capacity fee of \$46,990/day in order to increase throughput by 200 mmcf with no change to the utilization fee. The consultant QED regarded additional capacity fee of \$46,990/day as high since no major capital expenditure was expected to be incurred to provide the additional capacity. EETPL reduced capacity fee by \$25,375/day to \$228,016/day capacity fee and utilization fee was bifurcated in lower utilization (\$0.06273/mmbtu) and higher utilization for additional capacity (\$0.1745/ mmbtu) which was almost three times higher than the utilization fee for throughput capacity of 400 mmcf. The amendment in the contract on higher utilization fee was not submitted to Petroleum Division for soliciting approval from the ECC / Federal Government. Moreover, EETPL terminal charges were on higher side as compared to PGPCL terminal with Capacity Fee of \$245,220/day and utilization fee of \$0.009/mmbtu. PGPCL FSRU was relatively new whereas FSRU of EETPL was 9 years old at the time of commissioning in 2014.

Audit was of the view that due to unjustified award of contract in two phases (first for 400 mmcf and second for additional 200 mmcf) despite paying relatively higher capacity fee of \$272,000/day in first year and

\$228,000/day in subsequent years (2-15 years) resulted in payment of higher utilization fee of Rs 867.701 million in five years.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs.

The DAC in its meeting dated 25-26 July, 2022, directed the management of SSGCL to share the breakup of additional cost incurred by the operator for additional 200 mmcf/d capacity as given by Engro. No further progress was reported till finalization of report.

Audit recommends implementation of DAC decision.

5.4.4 Non-recovery of LD charges due to late commissioning of LNG Terminal-2 – US\$ 50.585 million equivalent to Rs 7,587.75 million

(Entity: PLL)

According to clause 8.8.2 of the Operation and Service agreement (OSA) dated July 01, 2016, b/w M/s Pakistan LNG Terminal Ltd (**PLTL**) (the Customer) and M/s Pakistan Gasport Consortium Ltd. (**PGPCL**) - (the Operator), in consideration of its acceptance of the postponed scheduled commercial start date the Customer shall be entitled to recover from the Operator liquidated damages at the rate of US\$ 0.200 million per day during the period commencing from the day immediately after the original scheduled commercial start date until the new scheduled commercial start date. Again, according to clause 8.8.3 of the ibid, in the event that the acceptance tests are not completed by the new scheduled commercial start date for reasons other than force majeure or a customer delay, the customer shall be entitled to recover from the Operator liquidated charges @ US\$0.300 million per day during the period commencing the day immediately after scheduled commercial start date until the commercial start date.

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that the Operator failed to complete LNG terminal within scheduled commercial start date i.e. June 30, 2017. M/s PLTL extended the target completion date up to November 28, 2017 besides lodging a claim on September 25, 2017, regarding LD charges of US\$ 30 million (@ US\$ 200,000*150 days) for the period from June 30, 2017 to November 28, 2017. M/s PGPCL again failed to complete LNG terminal within new scheduled commercial start date i.e. November 28, 2017. Hence, M/s PLTL lodged a 2nd claim for US\$ 20.585 million (=US\$ 11,100,000 + US\$ 9,485,000) (@ US\$

300,000*37 days) vide letter dated February 26, 2018 for the period from November 28, 2017 to January 03, 2018. Thus, M/s PLL (PLTL) lodged claims of LD charges and damages for US\$ 50.585 million equivalent to Rs 7,587.75 million in 2017-18 but failed to recover the LD charges despite lapse of almost two years. Resultantly, the operator lodged claim by invoking arbitration proceeding under LCIA on January 29, 2020 which was accepted on May 06, 2020 and was pending for final decision.

Audit was of the view that due to non-receipt of bank guarantee / SBLC by PGPCL and non-invoking of arbitration proceedings despite lodging claim in 2018 but PGPCL invoked arbitration proceedings in January, 2020 in LCIA.

The matter was reported to the Ministry of Energy (Petroleum Division) and PSEs on July, 14, 2022. In DAC meeting held on July, 25-26, 2022, management of PLL explained that the case was under arbitration (LCIA). Hearing had been concluded and the decision would be shared with Audit as and when received.

DAC directed the management to pursue the case vigorously. No further progress was reported till finalization of report.

Audit recommends implementation of DAC decision.

5.4.5 Over-payment to PGPCL on account of capacity charges -US\$ 3,278,443 equivalent to Rs 491.766 million (Entity: PLL)

According to clause 13.1.2 of OSA, not later than a date which is two months after the Effective Date in case of the first Programme Year and subsequently 1 April in each year before a Programme Year1 the Customer shall provide to the Operator the Annual Flexibility Profile. If the Operator does not receive an Annual Flexibility Profile from the Customer, or does not receive it in a timely manner, then the Customer shall be deemed to have nominated a Daily Profile Factor of ninety-six per cent (96%) for every Day in each Contract Year. If the Annual Flexibility Profile varies from this assumption, then the average of the Daily Profile Factors over each Contract Year must still equal ninety-six per cent (96%). Further, according to clause 27.2 of OSA, subject to Clause 13.1.2, for each Month, in each Contract Year, the Capacity Charges shall be calculated as prescribed in it.

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that M/s PLL made payment of Rs. 299.972 million on account of Capacity Charges to M/s PGPCCL from Jan-2018 to June-2021. Capacity payments were made over and above the average of the Availability Factor / Daily Profile Factor i.e. ninety-six per cent (96%) according to OSA ibid. This resulted in excess payment of US \$ 3,278,443 (Rs 491.766 million @ Rs 150 / USD) **Annexure-3.**

Audit was of the view that over payment of US\$ 3,278,443 beyond 96% percent Availability Factor was made to terminal operator.

The matter was reported on July 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs. In DAC meeting held on July, 25-26, 2022, management of PLL explained that working / calculation of over payment may be shared with them for submission of detailed reply which were shared during DAC by Audit.

DAC directed the management to submit a detailed reply within three days. No further progress was reported till finalization of report.

Audit recommends to expedite the recovery of excess paid amount.

5.4.6 Loss due to non-allocation of idle capacity to third party - US\$ 93. 102 million equivalent to Rs 13,965.3 million (Entities: PD, DG LGs, PLL)

Federal Government introduced two LNG Policies in 2006 and 2011 with a view to optimizing the primary energy mix, based on economic and strategic considerations; enhancing private sector participation in the energy sector by strengthening the regulatory framework and institutional capacity and developing energy infrastructure. The ECC of the cabinet on 28.07.2020 (case No. ECC-312/34/2020) considered the summary dated July 24, 2020 submitted by the Petroleum Division regarding Third Party Access (TPA) to LNG terminals: excess capacity and Government contracted un-utilized capacity and approved, in principal, the concept of auctioning the unutilized capacity of the government.

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that the management paid US\$ 304.590 million to M/s PGPCCL on account of capacity charges and utilization fee from January, 2018 to June 30, 2021 for re-gasification of 506,263,012

MMBTU. The rate of levelized terminal charges on full capacity was US\$0.4177 per MMBTU but due to under-utilization of the terminal / non-allocation of third party access, the actual levelized charges paid were @ US\$ 0.6016 per MMBTU. PLL used average terminal capacity 282, 419, 336 & 486 MMCFD in the calendar years 2018, 2019, 2020 & 2021 (upto June), thus, leaving average 160 MMCFD idle capacity up to June, 2021. Non auction of idle capacity resulted in excess capacity charges of US\$ 93.102 million (Rs 13,965.3 million: @ Rs 150 per dollar) from 2018-2021.

Audit was of the view that due to non-auction of idle capacity to encourage private sector participation as envisaged in LNG Policy, 2011, huge amount of capacity charges of \$93.102 million (Rs 13,965.3 million approx.) were paid for the idle capacity.

The matter was reported on July 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs. In DAC meeting held on July, 25-26, 2022, management of PLL explained that capacity was allocated to private sector according to ECC decision dated 24th July 2020 which could not be auctioned due to non-receipt of bids. Terminal was utilized at 85% during calendar year 2021. DG Gas highlighted in response to earlier para, that TPA Rules for terminal capacity were not framed by OGRA.

DAC directed the management of PLL to ensure the optimal utilization of terminal capacity and DG LGs to take up the matter with OGRA for preparation of TPA Rules for terminal capacity. No further progress was reported till finalization of report.

Audit recommends implementation of DAC decision.

5.4.7 Higher tolling charges at EETPL as compared to PGPCL-US\$ 48.875 million equivalent to Rs 7,331.25 million (Entities: PD, DG LGs)

According to LSA amended time to time, re-gasification charges @ US\$ 0.5085 per MMBTU which include (capacity charges and utilization) was finalized at EETPL for full capacity of 630 MMCFD. In case of M/s PGPCL at full capacity of 600 MMCFD, the re-gasification / levelized charges were @ US\$ 0.4177 per MMBTU which include (capacity charges, utilization and flexibility charges).

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that both the terminals had almost

same regasification capacity i.e. 600 mmcf/d but had different regasification charges, EETPL was higher by US \$ 0.0908 / mmbtu (EETPL \$0.5085 and PGPCL \$0.4177). Thus it would be in the national interest to get maximum regasification from the 2nd terminal having lesser levelized charges by using it at full capacity. Contrarily, more gas was being re-gasified on 1st terminal instead of 2nd having lesser levelized charges which caused extra burden on the end consumer as detailed below:

(Amount in US\$)

Charges per MMBTU	PLL / PGPCL	SSGCL / EETPL
Capacity Charges	0.3729	0.3427
Utilization Charges	0.0090	0.0998
Total Levelized Charges at actual capacity	0.3819	0.4425
Difference	0.0606	
Qty delivered at EETPL (MMBTU)	806,525,492	
Potential Savings	48.875 million	

Audit was of the view that RLNG tariff could have been reduced by US\$ 0.0606 per MMBTU if PGPCL terminal had operated with the same MMBTU delivered at EETPL. There would have been saving of \$48.875 million (Rs 7,331.25 million approx.) on account of terminal charges if PGPCL terminal was operated fully instead of EETPL terminal.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs.

The DAC in its meeting held on 25-26 July, 2022, directed all the stakeholders (SSGCL, PSO & PLL) to explore the possibilities of economical utilization of two LNG Terminals. No further progress was reported till finalization of report.

Audit recommends implementation of DAC decision.

5.4.8 Non-compliance of LNG policy / SIGTTO guidelines by PGPCL

(Entities: PD, OGRA, PLL)

According to para 4.1(a) of LNG Policy 2011, the LNG terminal will be constructed based on technical standards as prescribed by the OGRA from time to time, in consultation and approval of Department of Explosives, including

internationally acceptable industry technical standards as stipulated in Appendix to the Policy. Further, according to bench mark of Appendix – Site selection and Design for LNG port and Jetties – Society of International Gas Tanker and Terminal Operator (SIGTTO) channels width should be about five times the width of the ships similarly the turning areas should have minimum diameter of two to three times to width of the ship.

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that dredging of the jetty berthing basin and turning circles was not done according to LNG policy and benchmark specified above. PQA expressed its reservation that the berthing basin width at PGPCL terminal did not fulfill SIGTTO guidelines requirements which they recommended during the simulation runs conducted by SiPort, Spain. This resulted in less dredging and non-implementation of standards according to SIGTTO guidelines in violation of LNG policy 2011.

Audit was of the view that due to violation of LNG Policy, 2011, SIGTTO guidelines were not followed while dredging and berthing basin construction, berthing of Q-flex ships could not be accommodated at PGPCL terminal causing excess port charges and incidental cost as Q-flex ships carry one and half more quantity than conventional LNG carriers.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs. In DAC meeting held on July, 25-26, 2022, management of PLL explained that independent study had been completed to identify the quantum of dredging required. Terminal operator (PGPCL) had awarded the contract for dredging which would be completed in 12 weeks. Thereafter Q-flex would be handled at Termaianl-2.

DAC directed the management of PLL to ensure the completion of dredging within scheduled time by Terminal Operator besides justifying the non-compliance of LNG Policy, 2011. No further progress was reported till finalization of report.

Audit recommends implementation of DAC decision.

5.4.9 Less delivery of RLNG to SNGPL due to non-reconciliation and inaccuracies in measurement (Entities: SNGPL, SSGCL, PLL)

According to TA-1 initialed between PSO, SSGCL and SNGPL, PSO will supply imported LNG and issue invoices to SNGPL and deliver LNG to SSGCL for re-gasification and transport / delivery of RLNG to SNGPL for sale in its franchise area. Another agreement initialed between PLL and SNGPL, PLL supply imported RLNG to SNGPL after importing and re-gasifying LNG from PGPCL. According to Clause 18 & 26 of OSA/LSA between EETPL/SSGCL and PGPCL / PLL, an independent surveyor will be appointed on behalf of EETPL, SSGCL / PLL for measurement and quality determination of LNG / RLNG at transfer points STS and CTS Bin Qasim followed by retrospective adjustments on account of measurement errors and inaccuracy.

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that there were discrepancies in the record of PSEs i.e. SNGPL, SSGCL, PLL and PSO as depicted in the following table:

(RLNG in MMBTU)

	According to SNGPL	According to SSGCL / PSO & PLL	Diff- quantity
LNG re-gasified – EETPL according to JMR	1,219,329,225	1,216,759,147	2,570,079
Actual retainage – SGS	9,335,729	9,410,431	(74,702)
Closing balance - (EETPL)	192,618,920	144,919,038	47,699,882
Closing balance – according to calculation	144,919,038	147,578,204	2,659,166
Opening stock in pipeline-SSGCL	97,630,391	97,630,391	-
Total RLNG Received by SSGCL at CTS bin Qasim	1,731,534,633	1,730,563,177	971,456
RLNG withheld by SSGCL	145,401,077	146,056,120	(655,043)
RLNG delivered by SSGCL to SNGPL via SWAP	1,586,133,556	1,584,507,057	1,626,499
Closing stock in Pipeline – SSGCL	100,334,904	100,334,904	-

The scrutiny of above table showed that:

- i. According to SNGPL record quantity of LNG re-gasified by EETPL was more than that reported by SSGCL which actually received the RLNG deliveries from EETPL.
- ii. Actual quantity of RLNG delivered to SNGPL by SSGCL was different according to record of both companies i.e. 1,586,133,556 mmbtu and 1,584,507,057 mmbtu.
- iii. Actual retainage according to SNGPL was more than that of SSGCL whereas SSGCL was not only involved in measurements at terminal and transfer points but also it directly interacted with SGS for retainage audits.
- iv. Mass balance reconciliation was covered under retainage audit and gain or loss due to mass balancing was treated with retainage jointly. PGPCL terminal reported savings under retainage and delivered more RLNG to SSGCL whereas EETPL caused more retainage and consumed more LNG in regasification reducing the gain on mass balancing, hence less RLNG delivered to SSGCL as compared to PGPCL terminal.
- v. SSGCL showed closing balance of 144,919,038 mmbtu whereas closing balance actually came to 147,578,204 mmbtu according to calculations, this showed understatement of inventory by EETPL and SSGCL.
- vi. SSGCL withheld RLNG in addition to RLNG consumed for compression in pipeline and T&D losses and its quantities were different according to SNGPL and SSGCL.
- vii. This showed that reconciliation of quantities was not being done by the SSGCL and SNGPL to match the figures of actual LNG imported and re-gasified, LNG consumed by FSRU during regasification, RLNG delivered to SSGCL and onward delivered to SNGPL, RLNG withheld by SSGCL, RLNG used for in-house consumption / compression, T&D losses etc.
- viii. SNGPL was making payments to PSO, SSGCL and PLL without carrying out reconciliations and retrospective adjustments were not being done on account of measurement errors and inaccuracy.

Audit was of the view that due to non-carrying out reconciliation on monthly / annual basis and inaccuracies of measurement facilities, there were

discrepancies at all stages which raised financial disputes and withholding of payments against each other, thus making the whole supply chain cash strapped and all stakeholders facing financial crunch.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs. In DAC meeting held on July, 25-26, 2022, management of SNGPL explained that record was being reconciled which would be shared with Audit. Further, difference in calculation was due to different cut off dates being used in this calculation. Reconciliation with SSGCL would be provided shortly. As regards closing stocks in pipelines SNGPL detail working of closing stock in pipeline would also be shared shortly.

DAC directed the management of SNGPL, SSGCL to reconcile the discrepancies pointed out by Audit especially figures of retainage and stock in pipeline and share with Audit within a week. No further progress was reported till finalization of report.

Audit recommends implementation of DAC decision.

5.5 Transportation

For transportation of RLNG from Karachi to Lahore, 1200 KM pipeline was envisaged under Fast Track LNG Project whereas construction of pipeline was delayed and remained incomplete since September, 2018. SSGCL is responsible to transport RLNG from Port Qasim, Karachi to SNGPL transmission network at Sawan under GTA. Due to non-completion of LNG Pipelines Project, swapping arrangement was introduced between SSGCL and SNGPL under which SSGCL would receive RLNG from LNG Terminals and utilize the same in its franchise area on indigenous gas tariff and deliver equal volume of indigenous gas to SNGPL for sale in its franchise area on RLNG price. Swapping arrangement up to 100-125 mmcf/d is still continued. Moreover, LNG Pipeline is dedicated only for RLNG from Port Qasim to Sawan whereas from Sawan onwards pipeline below 42" dia was laid down and used to transport RLNG and indigenous gas simultaneously.

Similarly, storage facility required LNG Policy, 2011, were not developed by the concerned quarters. Under the said the Policy, LNG Developer / LNG Terminal Operator were required to develop LNG storage facility. However, no such LNG storage capacity had since been developed by the either LNG importers or Terminal Operators i.e. PSO / PLL / EETPL / SSGCL / PLTL / PGPCL etc.

5.5.1 Non-utilization of GIDC for financing of LNG pipeline resulting in extra burden on end consumer – Rs 48,836 million

(Entities: PD, DG Gas, SNGPL, SSGCL)

According to Section 4(1) of the Gas Infrastructure Cess Act 2015, the Cess shall be utilized by the Federal Government for or in connection with infrastructure development of Iran Pakistan Pipeline Project, Turkmenistan Afghanistan Pakistan India (TAPI) Pipeline Project, LNG or other Projects or for price equalization of other imported alternative fuels including LPG or for such other purposes connected therewith as determined by the Federal Government. Further, ECC vide Case No. ECC-124/15/2015 dated 03 September, 2015, considered summary dated 2nd September, 2015 submitted by MPNR regarding approval of bank borrowing to the extent of Rs 101 billion in favour of SNGPL and SSGCL and approved the proposal regarding financing of the project from commercial project. Moreover, condition 5.2 of the License issued by OGRA to SNGPL envisages that the Authority shall determine total revenue requirement

of the Licensee to ensure it achieve 17.5 % return on the value of its average net fixed assets in operation for each financial year.

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that SNGPL and SSGCL demanded Rs 60,000 million and Rs 41,000 million from GIDC respectively for laying of RLNG 36”/42” gas pipeline from Karachi to Lahore which were not provided. Consequently, the companies had to borrow financing from commercial banks for development of LNG Pipeline Projects. Not only gas consumers paid GIDC without fetching any corresponding services but were also charged Return on Assets on RLNG Pipeline developed through commercial borrowing. The OGRA / Gas companies charged ROA of Rs 48,836 million (SNGPL Rs 26,225 million, SSGCL Rs 22,611 million) to RLNG consumers.

Audit was of the view that due to financing of LNG Pipeline Project through commercial banks instead of GIDC collected amount, ROA on RLNG assets was allowed by OGRA which increased RLNG prices. This put extra burden on gas consumers who already paid GIDC against which no service was given to them.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs. In DAC meeting held on July, 25-26, 2022, management explained that transaction frame work was approved by ECC and company took actions in the light of ECC decision.

DAC observed that core purpose of GIDC Act could not be achieved and financing through commercial borrowing resulted in extra burden on RLNG consumers.

Audit highlighted that had the LNG Pipeline Projects were financed through GIDC as envisaged in GIDC Act, 2015, RLNG consumers would have not been charged extra Transportation Charges / ROA by Gas Companies / OGRA.

Audit recommends to ensure utilization of GIDC for the intended purposes.

5.5.2 Construction of lower dia pipeline hampering construction of new LNG terminals
(Entities: PD, DG Gas, SNGPL)

According to clause 5(5) of Public Sector Companies (Corporate Governance) Rules, 2013 The Board shall establish a system of sound internal control, which shall be effectively implemented at all levels within the Public Sector Company, to ensure compliance with the fundamental principles of probity and propriety; objectivity, integrity and honesty and relationship with the stakeholders. Further, CCoE, vide case No. CCE-27/7/2017 dated 6th June, 2017, directed the Petroleum Division to immediately start spadework for setting up a new LNG Terminal at Karachi / Port Qasim. Furthermore, CCoE vide Case No.CCE-18/05/2019 dated 13.03.2019, directed Petroleum Division to carry out a thorough study on the need of additional LNG terminals in view of shortage of gas in the country, up-Country gas pipeline projects, interconnectivity of LNG terminals & pipelines. Moreover, OGRA issued terminal construction licenses to Tabeer Energy (Private) Limited and Energas Terminal (Pvt.) Limited on April, 28, 2021.

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that SNGPL and SSGCL annexed the details of LNG Pipeline Project without submitting any feasibility report showing cost and benefits of total 42' pipeline (1100 KMs) or partial construction of 42' dia pipeline for seeking approval of ECC dated 03.09.2015. ECC accorded approval of funds arrangement from commercial banks and no explicit approval of pipeline specification (whether 42' dia or less) was given in ECC decision. SSGCL developed 338 KM 42" dia pipeline from Bin Qasim to Sawan. SNGPL developed only 170 KM 42" dia pipeline whereas 702 KM pipeline of lower dia from 16" to 36" was developed under Phase-I&II of Fast Track LNG Project. However, the project was approved from ECC but development of major portion of pipeline (702 KM) reduced the transportation capacity to 1,200 mmcf/d which could have been enhanced approximately up to 2250 mmcf/d if whole pipeline of equal dia (42") was developed. Resultantly, RLNG pipeline infrastructure could not be optimally augmented to cater for construction of any new terminal as directed by ECC /CCoE whereas OGRA issued licenses for construction of two new terminals. Further, lower transportation capacity had been causing many problems such as imposition of demurrages due to low off-takes and ullage / storage issues, pressure on line

pack causing possible shut down of local gas fields and forced intake of RLNG by SSGCL.

Audit was of the view that due to non-preparation of feasibility studies for LNG Pipeline Project, exact capacity of 42” dia pipeline was not worked out. Pipelines of lower dia were submitted for approval of ECC which caused development of less pipeline capacity up to 1000 mmcf. New LNG terminal could have been accommodated from the same 42” dia pipeline but now new pipeline were needed to be constructed for any new LNG terminal.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs. In DAC meeting held on July, 25-26, 2022, management explained that augmentation was carried out at its optimum structure for transportation of 1.2 BCF RLNG.

DAC directed the management of SNGPL to provide the copy of feasibility study for verification of Audit within a week. No further progress was reported till finalization of report.

Audit recommends to implement DAC decision besides initiating the augmentation of existing pipeline capacity to cater for RLNG from new terminals.

5.5.3 Non-preparation of completion reports of LNG pipeline project

(Entities: SNGPL, SSGCL, OGRA)

According to section 7.12 of Project Manual read with 13.4.4.2 of Accounts Manual and annual budget instructions of SNGPL, EIC shall prepare a Completion Report / Material Reconciliation Report consisting of actual consumption of pipe, fittings, and other jointing material etc. and forward to Head Office within 2 months of commissioning of a job number. Further a job holder is responsible for completion of job, completion report in all respects and finance department of SNGPL is responsible for allocation of overheads and necessary reconciliation of material and budget versus actual cost. Gas companies prepare completion reports for jobs / schemes undertaken by themselves and under GoP directives / other programs on the pattern of PC-IV customized to their needs.

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that SNGPL and SSGCL commissioned LNG Pipelines in two phases covering 1210 KMs. SSGCL laid

338 KM 42” dia pipeline whereas SNGPL laid 872 KM pipeline, out of which 170 KM was of 42” dia and remaining 702 KM pipeline ranged from 16” dia to 36” dia. Both the companies did not prepare any completion report (on the pattern of PC-IV) showing total length of pipeline, total funds utilized, material issued i.e. line pipe and jointing material, material utilized & material returned, labor cost incurred, finance cost incurred, construction cost overheads and administrative overheads booked to the LNG Pipeline Project, and details of any pending payments etc.

Audit was of the view that due to weak project management, completion reports of such a gigantic project was not prepared by both the Gas Companies which resulted in absence of holistic picture of the project cost and other important particulars.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs. In DAC meeting held on July, 25-26, 2022, management of SNGPL explained that completion report of all the segments were duly prepared according to the format then applicable. SSGCL did not give its stance.

DAC directed the management of SNGPL to provide the consolidated completion report of the whole project (instead of presently available jobwise completion report) within 15 days. DAC also directed SSGCL to provide completion report of LNG Pipeline Project. No further progress was reported till finalization of report.

Audit recommends implementation of DAC decision.

5.5.4 Non-validation of technical standards of LNG Pipeline

(Entities: SNGPL, OGRA, SSGCL)

OGRA introduced the Natural Gas Transmission (Technical Standards) Regulations 2004 vide SRO No. 675(I)/2004 as amended vide SRO No. 773(I)/2008 dated 23rd July, 2008, these technical standards shall take effect from 1st January, 2009. According to Regulation 5, regarding Compliance Compulsory, all such licensees, carrying out the regulated activity of transmission of natural gas, shall comply with the technical standards provided in these regulations.

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that SNGPL and SSGCL commissioned LNG Pipelines in two phases covering 1210 KMs for transmission of RLNG from Karachi to Lahore in September, 2018. Both the gas companies were carrying out regulated activity of transmission of natural gas and compliance of these technical standards was compulsory but OGRA did not carry out any validation of compliance of these technical standards through Third Party Inspection / Technical Audit since September, 2018. This project was the first project of 42” dia pipeline covering 508 KM in the country, hence validation of its technical standards was necessary to evaluate the quality of construction.

Audit was of the view that the OGRA granted ROA on LNG Pipelines for inclusion in Transportation Charges / RLNG Prices without carrying out any validation of technical standards.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs. In DAC meeting held on July, 25-26, 2022, management of SNGPL explained that in-line with license condition No. 28, OGRA had carried out a detailed technical audit and 3rd party inspection report was available for record which primarily dealt with the compliance of technical standards prescribed by OGRA. SSGCL’s response was not received.

DAC directed the management to share the TPI report relating to Transmission Pipeline Operations with Audit within three days and also directed SSGCL to submit reply. No further progress was reported till finalization of report. Audit contended that OGRA conducted technical audit of SNGPL’s whole network according to requirements of license but no exclusive TPI was conducted to validate the abovementioned technical standards for LNG pipeline infrastructure.

Audit recommends implementation of DAC decision.

5.5.5 Excess Transportation Charges due to inclusion of guaranteed rate of return – Rs 16,745.7 million (Entities: SNGPL, SSGCL & OGRA)

According to SRO No 408(I)/2015 dated May 07, 2015 under which RLNG was being administered under the Petroleum Products (Petroleum Levy) Ordinance, 1961 and no such guaranteed rate of return on assets (ROA) was envisaged. Further, according to IAS 16, the cost of an item of property, plant

and equipment is recognized as an asset if, and only if; it is probable that future economic benefits associated with the item will flow to the entity; and the cost of the item can be measured reliably. Depreciation is the systematic allocation of the depreciable amount of an asset over its useful life and the depreciation charge for each period is recognized in profit & loss statement as an expense.

During the special audit of RLNG supply chain for the period from March 2015 to June 2021, it was observed that management capitalized the fixed assets relating to LNG projects costing Rs 53,116 million according to FRR 2017-18. However, RLNG pipelines were not operationalized and swapping arrangement between SSGCL and SNGPL was continued from inception to September, 2018. On the other hand, SNGPL & SSGCL availed guaranteed rate of return of Rs 16,745.7 million in FY 2017-18 and 2018-19 on non-operational pipeline which was included in Transportation Charges. The same was charged to RLNG consumers through RLNG pricing allowed by OGRA on the plea of ECC decision dated January, 2016 conveyed by MoE (PD) vide its letter dated February 10, 2016 regarding inclusion of RLNG assets in asset based of SNGPL and SSGCL despite RLNG pricing determined under Petroleum Ordinance, 1961 and asset base of gas companies was maintained under OGRA Ordinance, 2002. Thus, this resulted into excess determination of transportation charges of Rs 16,745.7 million due to inclusion of guaranteed rate of return as detailed below:

	(Rs million)	
	SNGPL	SSGCL
FRR 2017-18	7,504	5,703
FRR 2018-19 (1 st quarter September 2018)	2,066.7	1,472
Total	9,570.7	7,175
Grand total	16,745.7	

Audit was of the view that due to non-operational pipeline, swapping arrangement for receiving indigenous gas was continued and RLNG was utilized / sold by SSGCL in its franchise area, but SNGPL availed inadmissible guaranteed Return on Assets on non-operational pipeline which resulted in extra burden on RLNG consumers. Furthermore, under RLNG pricing mechanism as petroleum product, no such ROA was allowed to any company.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs. In DAC meeting held on July, 25-26, 2022, management of SNGPL explained that segment-wise RLNG pipeline were

commissioned and were in operation and utilized for transporting additional flows received at custody transfer points. The management of SSGCL explained that under the swapping arrangements when dedicated lines were not laid existing network were utilized for transportation of gas to SNGPL. The return and depreciation of existing network were built in RLNG price and similar return and depreciation were offloaded from natural gas price.

DAC directed the management of SNGPL to share the transmission / flow gas reports with Audit. DAC further directed to SSGCL to get the stated stance verified from Audit.

During verification, it was found that SNGPL pipeline was constructed in segments on different dates and utilization of developed segments in transportation of swapped volumes prior to September, 2018 was yet to be got verified. As far as SSGCL's stance was not verified from Final Revenue Requirements of natural gas for the FYs 2017-18 and 2018-19. Furthermore, no response was given regarding admissibility of ROA to RLNG business under Petroleum Products Ordinance, 1961 was given by gas companies. No further progress was reported till finalization of report.

Audit recommends that grant of inadmissible guaranteed return under Petroleum Product Ordinance, 1961 be justified, in addition to this ROA on non-operational pipelines under OGRA Ordinance, 2002 be reversed.

5.5.6 Excess "Transportation Charges" due to inclusion of depreciation for non-operational RLNG pipeline – Rs 5,542.5 million

(Entities: SNGPL, SSGCL & OGRA)

According to IAS 16, the cost of an item of property, plant and equipment is recognized as an asset if, and only if; it is probable that future economic benefits associated with the item will flow to the entity; and the cost of the item can be measured reliably. Depreciation is the systematic allocation of the depreciable amount of an asset over its useful life and the depreciation charge for each period is recognized in profit & loss statement as an expense.

During special audit of LNR / RLNG supply chain for the period from March 2015 to June 2021, Lahore for the FY 2018-19, it was observed that management of SNGPL and SSGCL claimed "Transportation Charges" of RLNG by including depreciation on RLNG pipeline to the tune of Rs 5,542.5 million in FRR 2017-18, FRR 2018-19 up to September, 2018 despite the fact

that RLNG pipeline was not operational for supply of RLNG. The economic benefits associated with the RLNG pipeline had not since yet flowed to the company. Therefore, charging of depreciation amounting to Rs 5,542.5 million from RLNG consumers was unjustified because RLNG pipeline / other assets were not being used in transport / supply of RLNG as detail below:

	(Rs million)	
	SNGPL	SSGCL
FRR 2017-18	2,550	1,551
FRR 2018-19 (1 st quarter September 2018)	1026	415.5
Total	3,576	1,966.5
Grand total	5,542.5	

Audit was of the view that due to charging of depreciation of such fixed assets which could not be operationalized till September, 2018, extra burden of higher RLNG prices was being passed on to RLNG consumers.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs. In DAC meeting held on July, 25-26, 2022, management of SNGPL explained that segment wise RLNG pipeline were commissioned and were in operation and being utilized for transporting additional flows received at custody transfer points. Management of SSGCL explained that under the swapping arrangements when dedicated lines were not laid. Existing network were utilized for transportation of gas to SNGPL. The return and depreciation of existing network were built in RLNG price and similar return and depreciation were offloaded from natural gas price.

DAC directed the management of SNGPL to share the transmission / flow gas reports with Audit. DAC further directed to SSGCL to get the stated stance verified from Audit.

During verification, it was found that SNGPL pipeline was constructed in segments on different dates and utilization of developed segments in transportation of swapped volumes prior to September, 2018 was yet to be got verified. Further, SNGPL network specifically used to handle additional swapped volumes was required to be segregated because simultaneously this network was being used for transportation of indigenous gas as well. Besides, SSGCL's stance was not verified from Final Revenue Requirements of natural gas for the FYs 2017-18 and 2018-19. No further progress was reported till finalization of report.

Audit recommends that depreciation charged on RLNG which were not being used in transport / supply of RLNG be reversed in Transportation Charges.

5.5.7 Non-recovery of outstanding amount on account of RLNG withheld by SSGCL – Rs 124,193.169 million (Entities: SNGPL, SSGCL)

According to Section 3 and 4(4) of Natural Gas Regulated Third Party Access (TPA) Rules, 2012 read with GTA executed between SNGPL and SSGCL, transportation service consists of taking delivery of the gas available by a shipper at one or more entry points along the gas pipeline transportation system and delivering an equivalent quality of gas to shipper. Transporter shall arrange to deliver gas at exit point to shipper and shall provide facilities including measurement equipment at exit point.

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that the management could not receive RLNG worth Rs 199,992.771 million from SSGCL which was due under Gas Transportation Agreement (GTA) as summarized below:

(Rupees)

March-15 to June-21	According to SNGPL record	According to Invoices issued to SSGCL by SNGPL	According to SSGCL record
RLNG Qty withheld by SSGCL (MMBTU)	145,401,077	141,119,540	144,487,944
Amount of RLNG withheld	199,992.771 million		

SSGCL was retaining RLNG for sale in its franchise area without executing any agreement with SNGPL or with the suppliers. In compliance of OGRA's directive, SSGCL started payment of RLNG withheld from January, 2019 and paid an amount of Rs 79,873.841 million against withheld quantity of 56,811,831 mmbtu leaving a balance of Rs 120,118.929 million outstanding for withheld quantity of 84,307,709 mmbtu. On intervention of Petroleum Division, an agreement was under execution since June, 2020 which was still pending. Moreover, the difference between RLNG notified prices and invoiced price (deferential) amount of Rs. 4,074.240 million was outstanding.

Audit was of the view that intervention of Petroleum Division and OGRA was delayed, due to this, SSGCL started payment in June, 2020 after almost five

years but continued to withhold RLNG without executing any agreement. Resultantly, huge amount of Rs 124,193.169 million remained outstanding.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs. In DAC meeting held on July, 25-26, 2022, management explained that terminal charges cost of supply of gas and LSA margin was adjusted against the invoices issued by SNGPL on account of RLNG withheld by SSGCL. In addition SSGCL had raised counter claims of Rs. 27 billion relating to increase in UFG losses due to RLNG handling. Net amount of RLNG withheld was Rs. 47 billion against which SSGCL claimed Rs. 10 billion for cost equalization agreement and balance amount of gas not sold to LNG consumers.

Audit was of the view that both the companies stopped payment of due amounts against each other but no reconciliation of net payable amount by SSGCL as explained by SNGPL was carried out.

DAC directed the SNGPL and SSGCL to resolve the disputes through Petroleum Division and OGRA besides providing reconciliation of net payable amount by SSGCL to Audit for verification. No further progress was reported till finalization of report.

Audit recommends implementation of DAC decision.

5.5.8 Unjustified charging of indigenous gas volume on account of energy equivalence from indigenous gas consumers – Rs 23,211.873 million
(Entity: SNGPL)

According to ECC decision dated February 10, 2016, RLNG pricing will be ring-fenced and all directly attributable costs will be charged / recovered to / from the RLNG consumers without affecting the consumers relying on domestically produced gas.

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that due to non-availability of dedicated pipeline from CTS Sawan onwards, SNGPL was comingling both RLNG and indigenous gas in the pipeline for transmission and distribution of gas. SNGPL sold indigenous gas volume of 32,681 MMCF (FY 2020-21 14,063 MMCF FY 2019-20 11,322 MMCF FY 2018-19 7,286 MMCF) to RLNG consumers on account of energy equivalence due to difference in BTU (calorific value). RLNG BTU value (1025 to 1075) was higher than that of indigenous gas

(925 to 970). Comingled RLNG and indigenous gas were being transported through one pipeline and GCV / BTU of comingled gas was changed. GCV of RLNG were decreased from its standard GCV i.e. 1055 and to make up the decreased GCV, more indigenous gas (32,671 mmcf / 34,467,905 mmbtu) was sold to RLNG consumers. Hence, indigenous gas valuing Rs 23,211.873 million was reduced for sales to indigenous gas consumers during the period. This extra volume shifted from indigenous gas segment to RLNG consumers to meet the BTU deficiency should have been borne by the RLNG consumers in line with ECC decision dated February 10, 2016, wherein ring fencing of RLNG business without affecting indigenous gas consumer was ensured. Cost of gas on account of energy equivalence was charged to indigenous gas segment but sold to RLNG consumers and no corresponding benefit was extended to indigenous gas consumers. Sales value at prescribed price required to be recovered from RLNG consumers and other income of Rs 23,211.873 million included in Final Revenue Requirement for the FY 2020-21.

Audit was of the view that due to absence of dedicated pipeline for RLNG, comingled gas was supplied to end consumers i.e. industry / commercial as well as domestic consumers. Extra indigenous gas of Rs 23,211.873 million was shifted to RLNG consumers to meet with deficient BTU value of comingled gas. This created shortfall in indigenous gas segment.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs. In DAC meeting held on July, 25-26 2022, SNGPL explained that after comingling of RLNG in system gas GCV of system gas got improved and as a result they got more energy units (MMBTUs) in the same volume of gas which they used to get before comingling of RLNG. Since billing was done on energy terms i.e. per MMBTU basis, therefore, consumers were billed according to the energy units they received and not according to the volumes. RLNG segment contributes towards improving the GCV of the system gas while the system gas segment compensates the RLNG segment by providing the energy equivalence volume so that RLNG energy inject into the system was balanced.

The DAC directed the management of SNGPL to share the average GCV of blended gas for the FY 2017-18 to 2020-21 and work out energy content of system gas on the average GCV of blended gas (sales revenue) as claimed by SNGPL for determination of FRRs by OGRA.

Audit verified from the Final Revenue Requirements for the FYs 2017-18, 2018-19 and 2019-20 that the GCV of indigenous gas was 952, 963 and in 969 respectively and no significant improvement observed as stated by SNGPL. Indigenous gas segment could only be traded off when sales revenue would be offered on higher GCV as claimed or sales value of energy equivalence would be declared as other income. No further progress was reported till finalization of report.

Audit recommends implementation of DAC decision.

5.6 Pricing of RLNG

Federal Government started importing LNG in March, 2015 through its designated PSEs and imported LNG is re-gasified at two terminals (FSRUs) established by private sector entities after issuance of licenses under LNG Policy, 2011 read with LNG Rules, 2007. But Federal Government introduced a separate legal regime for RLNG business in the country by making an amendment in Petroleum Products Ordinance, 1961 (Schedules-First and Second) to include RLNG and gas companies therein. Petroleum Products Ordinance, 1961 takes RLNG as petroleum product under which pricing is done on monthly basis. RLNG is being transported from the same pipeline along with NG for supply to end consumers, but both the products are subject to two different prices.

Due to pricing of RLNG as petroleum products under Petroleum Products Ordinance, 1961, OGRA notifies its prices on monthly basis. On other hand, OGRA deals indigenous gas under OGRA Ordinance, 2002 and its prices are notified twice a year. Moreover, one component i.e. “Transportation Charges” of RLNG pricing is also determined by OGRA under OGRA Ordinance, 2002 along with determination of indigenous gas prices. This duality of legal regimes impedes the whole supply chain of RLNG as the RLNG being costlier as compared to indigenous gas has erratic demand and difficulty in spot buying due to market volatility. Due to gas shortage especially in winter and according to socio economic agenda of GoP, RLNG is also sold on subsidized tariff to domestic and commercial consumers and to export / fertilizer sectors.

Despite ECC’s instructions in October, 2012, April, 2015 and May, 2018 to amend OGRA Ordinance, 2002 for bringing RLNG pricing there-under to calculate Weighted Average Cost of Gas” (WACOG) by taking into account the blended costs of both indigenous and imported gas, the subject duality of regime could not be removed at the end of FY 2020-21. Further, consensus on the proposed pricing mechanism could not be developed because of reservations from the gas producing provinces on the proposed price mechanism. Price mechanism through consensus among stakeholders is pre-requisite to streamline the supply chain of gas sector.

5.6.1 Non-determination of final RLNG prices by OGRA due to non-compilation of components of RLNG prices (Entities: OGRA & SNGPL)

MPNR (Policy Wing) vide letter No. NG(II)-16(I)/15-RLNG-IPP-Vol-II dated June 23, 2015 conveyed the decision of ECC to OGRA / Gas Utilities / PSO for implementation that the RLNG price will be determined on similar lines as that of Petroleum Products Pricing. Further, ECC decision in case No. ECC-07/11/2015 dated June 06, 2015 conveyed to OGRA as policy guidelines under Section 21 of the OGRA Ordinance, 2002 comprising of components of RLNG Price i.e. LNG DES price, import related cost, PSO's margin, terminal charges, SNGPL/SSGCL cost of service and administrative margin, T&D losses.

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that the OGRA notified provisional RLNG prices under Petroleum Products (Petroleum Levy) Ordinance, 1961 in line with other petroleum products since October, 2015 and notified final prices of RLNG till April, 2017. OGRA did not finalize the already approved provisional prices despite lapse of more than 04 years. OGRA directed PSO and PLL on December, 8, 2021 to take up the issues related to RLNG pricing with their RLNG buyers i.e. Sui Gas Companies under the prevalent regulatory framework and contractual arrangements. OGRA also advised Sui Gas Companies to compute and submit month-wise final RLNG prices by December, 31, 2021 since its inception till June, 2020 reversing already finalized prices from October, 2015 to April, 2017. SNGPL reported that PSO / PLL did not furnish necessary information with supporting documents, hence RLNG prices could not be finalized till June, 2022.

The computation of components of RLNG prices was pending on the part of stakeholders i.e. SNGPL, SSGCL, PSO and PLL (**Annexure-4**). Net financial impact of this reconciliation exercise would be given to RLNG prices. Provisional figures were being provided by PSO / PLL, SSGCL and SNGPL which could not be compiled by SNGPL. In addition to this, Petroleum Division could not resolve the policy related issues such as duality of legal regime, implementation of OGRA (Amendment) Act, 2021 and ring-fencing of RLNG prices under which only incremental cost was allowed to form part of RLNG price whereas gas companies were demanding for allocation of T&D cost to RLNG business on proportionate basis.

Audit was of the view that after delaying finalization of RLNG prices for more than 04 years, OGRA entrusted the responsibility to SNGPL in December, 2021 but the other stakeholders did not submit their data to SNGPL for finalizing RLNG prices up to June, 2020. Non-resolution of policy related issues over the years resulted in non-finalization of RLNG price.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs. In DAC meeting held on July, 25-26, 2022, management of SNGPL explained that costing sheet had been provided by PLL and PSO. However, supporting documents were not provided completely. Moreover, entire data required from SSGCL was awaited. The management of PSO explained that required record was provided. The management of SSGCL explained that RLNG received and delivery meters data was already available with SNGPL and SSGCL and it was reconciled. Internal consumption data and supporting documents had been compiled and would be sent to SNGPL within a week.

DAC expressed concern on non-provision of requisite record within target date. DAC directed the management of PLL, PSO and SSGCL to share the requisite information along with supporting documents to SNGPL for compilation of RLNG price components. DAC further directed Petroleum Division / DG Gas to expedite the implementation of OGRA (Amendment) Act, 2021. No further progress was reported till finalization of report.

Audit recommends implementation of DAC decision.

***5.6.2 Loss due to payment of demurrages charges on LNG cargoes–
Rs 630.995 million (Entities: PSO, SNGPL, SSGCL)***

According to Clause 11.7.4 of Long Term Sale Purchase Agreement between Qatar Liquefied Gas Company Ltd. and Pakistan State Oil Ltd. dated 08.02.2016, if completion of unloading and departure of LNG vessel does not occur within the allowed laytime, the Buyer shall pay to the Seller demurrage at Agreed Demurrage Rate in US\$ per day for each day of delay in completion of unloading and departure of the LNG vessel beyond such allowed laytime and pro rata for any partial day of delay to the nearest hour. According to Clause 11.7.5, the Agreed Demurrage Rate for any LNG vessel shall be equivalent to the daily charter rate under the charter party agreement between the Seller and the Seller's Transporter for such LNG vessel applicable as the relevant date on which a

liability to pay demurrage hereunder arose. Further, according to clause 10 of Confirmation notices for the sale and purchase agreement with Gunvor dated 07.01.2016 “The rate of Demurrage for the purpose of Clause 12.5 of the MSPA3 shall be United States Dollars thirty thousand (30,000 USD) per day and pro rata for any begun day”.

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that due to delay in completion of unloading and departure of LNG vessels within allowed laytime as set out under Clause 12.1.6 (c) of SPA with QG and Clause 9 (c) of agreement with Gunvor, suppliers imposed demurrages of US\$ 3.171 million (Rs 630.995 million), \$2.263 million (*equivalent to Rs 450.313 million*) on 29 consignments relating to QG and \$0.908 million, (*equivalent to Rs 180.682 million*) relating to supplies by Gunvor. Despite taking extraordinary security measures for LNG vessels, payment of demurrages to the tune of Rs 630.995 million was unjustified because extra burden would be transferred to end consumers by making it part of the RLNG prices.

Audit was of the view that due to mismanagement in scheduling of LNG cargoes, demurrages of Rs 630.995 million were imposed, resultantly extra burden would be transferred to end consumers.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs. The DAC in its meeting dated 25-26 July, 2022, directed the Petroleum Division to conduct fact finding inquiry to ascertain the exact reasons of imposition of demurrages and share the report with Audit and OGRA / SNGPL for taking its effect on RLNG prices. No further progress was reported till finalization of report.

Audit recommends implementation of DAC decision.

5.6.3 Non-dredging of navigation channel for LNG vessels causing exorbitant port charges due to closure for other traffic – Rs 3,053.049 million
(Entities: PD, DG LGs, PSO & PLL)

According to paras 4.1(d), 4.2 & 4.3 of LNG Policy, the site (either land based terminal or offshore terminal of any type) for setting up an LNG terminal shall be selected by LNG Developer or LNG TO/O, as the case may be, taking into account the criteria. In applying for the licence, the LNG Developer or LNG TO/O will have the onus of demonstrating compliance with the criteria through

risk assessment and simulation studies. Port Authorities will convey their decision on acceptance of site within one month of submission of NOC from SEPA, QRA study and navigational simulation study.

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that at the time of summary submitted by MPNR on 25.02.2014 for soliciting approval of EETPL terminal and execution of LSA between EETPL and SSGCL, Port Qasim Authority, Karachi highlighted that for LNG carrier, navigation channel would be closed for other traffic and traffic of other terminals would be hampered which cause financial loss to PQA. To cater for LNG carrier, PQA must open alternate channel i.e. Chara Chan Waddo Channel for which PQA imposed Channel Development Cess but the amount collected of Rs 2,950 million could not be spent because work on channel widening was not initiated. Further, penalties of Rs 103.050 million were imposed on LNG vessels by PQA owing to excess length which was permissible on other ports. Hence, an amount of Rs 3,053.049 million paid to PQA were borne by the RLNG consumers being part of RLNG prices.

Audit was of the view that due to non-dredging of navigation channel, PQA had to close all navigation traffic to accommodate berthing of LNG vessels which caused financial losses. Resultantly, PQA charged port charges at exorbitant rates which were included in RLNG prices. Furthermore, Q-Flex ships were not used for import of LNG by PSO / PLL owing to terminal constraints, hence possible savings in port charges could not be made.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs. In DAC meeting held on July, 25-26, 2022, the management of PLL explained that capital and maintenance dredging of navigation channel was the responsibility of PQA. Therefore, the matter should be referred to PQA through M/o Maritime Affairs.

The DAC directed the Petroleum Division to refer the matter to Port Qasim Authority (PQA) through M/o Maritime Affairs for early dredging of navigation channel.

Audit recommends implementation of DAC decision.

5.6.4 Exorbitant port charges as compared to regional ports - \$ 244.801 million
(Entity: PD, OGRA, PLL, SSGCL)

Cabinet Committee for disposal of legislative cases (CCLC) in its meeting held on May 23, 2018 decided that Petroleum Division may bring a summary for the ECC of the Cabinet for further reduction in the pilotage fee for LNG specified by the Port Qasim Authority. PSO while delivering a presentation to National Assembly Standing Committee on Port and Shipping highlighted the port charges across the region as follows:

Name of Port	Country	Charges (US\$) per LNG vessel
Hazira	India	122,000
Mina Al Ahmadi	Kuwait	14,000
Ras Laffan	Qatar	114,752
Jabel Ali	UAE	70,000

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that M/s Port Qasim Authority (PQA), Karachi was charging port dues US \$ 563,107 per call on average basis which was much on the higher side as compared to port of Ras Laffan Qatar which charged only US \$ 114,752 per call. Thus PQA was charging an excessive payment of US \$ 448,355 per call and had excess charged US \$ 244,801,715 on all 546 consignments arrived at port from March 2015 to June 2021 and \$0.14 per mmbtu (**Annexure-5**).

Audit was of the view that inadequate site selection / approval, closure of navigation traffic of other terminals at PQA and non-resolution of issues like night navigation, dredging / widening of existing channel or development of new channel etc. resulted in higher port charges which were ultimately borne by end consumers.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs. In DAC meeting dated 25-26 July, 2022, the management of PLL explained that dredging of navigation channel was the responsibility of PQA and the matter would be referred to PQA through M/o Maritime Affairs. DG (LGs) explained that the matter had already been taken up with M/o Maritime Affairs.

DAC directed the Petroleum Division to refer the matter to Port Qasim Authority (PQA) through M/o Maritime Affairs for taking steps for dredging of navigation channel by utilizing the funds (CDC) collected by PQA for that

purpose and follow up the matter of higher port charges. DAC further directed that best possible efforts be made for saving of cost by using fully laden Q-flex ships by taking up the matter with PQA and terminal operators for necessary arrangements.

Audit recommends to take up the matter with concerned Ministries / Port Authorities to resolve the issue so that exorbitant port charges be reduced.

5.6.5 Potential saving in port charges by berthing of Q-flex ships - \$102.568 million
(Entity: SSGCL, PLL, DG LGs)

According to clause 11.1 of LNG Policy, 2011, the design, construction and operation of the LNG import project facilities will comply with internationally recognized and proven codes and standards for LNG installations including those specified therein. As per SIGTTO guidelines recommendations, the width of berthing basin shall be 5 times of the Q-flex beam length (50 meters) i.e. the width clear of FSRU shall be 250 meters.

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that two terminals including depth & dimensions of channel, berthing basin and turning basin were constructed in compliance of international codes and standards after validation of by PQA & OGRA. But berthing basin / dredging area was not widened up to 250 meters to accommodate the berthing of Q-flex on both terminals i.e. EETPL (Terminal-1) & PGPCL (Terminal-2). Hence, only 386 and 160 conventional ships were berthed having quantity of 140,000 m³, and no Q-flex LNG ship having 210,000 m³ was berthed since operation of both terminals. Port charges and incidental charges could be saved if Q-flex LNG ships were docked because number of Q-flex ships would be reduced to 357 from 546 conventional ships. Port charges and other charges incidental to docking of each ship could be reduced which were estimated to \$102.568 million (**Annexure-6**).

Audit was of the view that due to port / terminal constraints, mooring of Q-flex ships could not be entertained and excess port charges of \$102.568 million were paid to both terminal operators.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs. In DAC meeting dated 25-26 July, 2022, the management of PLL explained that practicability of cost saving due to Q-flex ships would be explored subject to contractual arrangement with LNG supplier.

DAC directed the management to make best possible efforts for saving of cost if possible.

Audit recommends Petroleum Division to take up the matter with Ministry of Maritime Affairs / Port Authorities for dredging of navigation channel by using CDC collected amount and development of any other channel to accommodate berthing of Q-flex ships.

**5.6.6 Non-passing on the effect of recovery of excess port charges -
Rs 4,020.750 million (Entities: PSO, PLL)**

According to LNG Sale and Purchase Agreement between PSO and M/s Gunvor International, port charges of up to US\$ 500,000 per vessel were to be borne by the suppliers and any excess was to be paid by the importer.

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that PSO signed a contract with Gunvor in January, 2016, for delivery of 54 LNG cargoes from March, 2016 to June, 2020. Under the contract, port charges up to US\$ 0.5 million per vessel were required to be borne by the seller and any excess payment was required to be paid by the importer. Hence, during the period from March, 2016 to June, 2020, port charges in excess of US\$ 0.5 million were provisionally claimed by the suppliers and reimbursed by PSO without confirming admissibility of the claims according to agreement. As these payments were made by PSO on provisional basis, therefore, excess amount of Rs 1,861.750 million paid to supplier was recovered by the management. But the financial impact of this recovery was not passed on to consumers through RLNG pricing.

Similarly PLL paid excess port charges of Rs 2,159 million to its LNG suppliers and charged the same to the end consumers. Later, the management recovered the excess payment from its suppliers but did not pass the relief to the end consumers. Audit contended that port charges had already been included in RLNG price component, thus, payment received from LNG suppliers in connection with excess payment of port charges required to be passed on to end consumers through adjustment.

Audit was of the view that lapse occurred due to non-reporting of recovered port charges from suppliers by PSO and PLL to OGRA, resultantly RLNG prices could not be reduced.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs. In DAC meeting held on July, 25-26, 2022, management of PLL explained that undisputed port charges required from supplier had been included in actualization working submitted to OGRA. Remaining disputed charges were pending for arbitration at LCIA. The management of PSO explained that the amount of excess port charges had been deducted from the supplier. The supplier initiated arbitration proceedings at LCIA. Adjustment would be made after the outcome of the arbitration proceedings.

DAC directed the management of PLL to share the working of undisputed and disputed port charges for verification to Audit. DAC further directed the management of PSO / PLL to pursue the arbitration case vigorously and net effect of recovery would be given to RLNG prices after decision of arbitration. No further progress was reported till finalization of report.

Audit recommends implementation of DAC decision.

5.7 Sales

Main Buyer of RLNG is SNGPL for sales in its franchise area especially to Power Sector and RLNG not picked by Power Sector is sold to other Sectors such as CNG, General Industry, Fertilizer, Captive Power, etc.,. RLNG is diverted to Commercial / Domestic Sector under GoP directives at tariff of domestic consumers and differential amount is claimed from the GoP. Neither any public sector enterprises i.e. SSGCL nor any private sector entity has any direct gas purchase agreement with PSO and PLL. But SSGCL is selling RLNG in its franchise area without executing any agreement with LNG Buyers. Now PLL also started sales of RLNG to KE directly.

5.7.1 *Overstated claim of differential amount of RLNG diverted to domestic sector - Rs 35,192 million* (Entities: DG Gas, SNGPL, OGRA)

ECC decision vide its decision dated 27.11.2018 has allowed SNGPL to inject RLNG volumes for consumption by domestic and commercial consumers. Further, according to para (ii) of ECC decision dated 25.05.2018, SNGPL and SSGCL be allowed to manage gas loads on their system through RLNG-System gas swap mechanism for which necessary provision of volumetric adjustment and financial impact may be made on cost neutral basis in the Sales Price of RLNG on a multi-year and ongoing basis through setting up of a deferral account by SNGPL.

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that according to EEC decision, SNGPL was diverting the RLNG volumes to domestic and commercial consumers in winter season and indigenous gas was diverted to RLNG consumers in summer season. SNGPL claimed differential amount for two diversions during July 2018 to June 2021 as follows:

(Amount Rs in million)

	Differential Claim according to	
	SNGPL	Audit*
Indigenous Gas Diversion to RLNG Consumers		
MMCF	18,342	60,500
MMBTU	18,533,903	61,105,000
Energy Equivalence (EE)	-	
MMCF	EE not taken into	42,158
MMBTU	account	42,579,580
Claim payable to FG	15,097	50,289
GCV (BTU/Scf)	1010	1010
RLNG Diversion to Domestic Consumers		
MMCF	111,826	111,826
MMBTU	107,180,508	107,180,508
GCV (BTU/Scf)	958	958
Claim receivable from FG	110,931	110,931
Net Financial Impact	95,834	60,642
Claim overstated		35,192

*Source: Diversion Sheet- email dated July 01, 2022

The above position depicted that:

- i. SNGPL showed quantity of 18,342 mmcf (18,533,903 mmbtu) indigenous gas diverted to RLNG consumers but it did not take into account the indigenous gas diverted as Energy Equivalence (42,158 mmcf equal to 42,579,580 mmbtu) to RLNG consumers to make up the deficient energy content of RLNG segment. Hence, SNGPL actually diverted quantity of 60,500 mmcf to RLNG consumers and understated the claim payable by Rs 35,192 million by taking 18,533,903 mmbtu instead of 61,105,000 mmbtu (average price Rs 823 / mmbtu) to indigenous gas segment / Federal Government.
- ii. On the Other hand, SNGPL diverted quantity of 111,826 mmcf (107,180,508 mmbtu) RLNG volume to domestic sector. RLNG valuing Rs 110,931 million was claimed as receivable from the FG. Net claim came to Rs 95,834 million in which value of indigenous gas (18,342 mmcf) diverted to RLNG consumers i.e. was adjusted and remaining quantity of 42,158 mmcf (42,579,580 mmbtu) indigenous gas sold to RLNG consumers was not adjusted. By this way, SNGPL overstated the net claim of differential amount as receivable from FG to the tune of Rs 35,192 million.

In addition to this, SNGPL made diversion of RLNG without any measurement of RLNG volume diverted to consumers, without issuing any bill to consumers for RLNG diverted / differential amount. Further, SNGPL did not provide the bifurcation of diversion volumes to domestic & commercial sectors.

Audit was of the view that due to absence of any measurement of RLNG diverted to domestic sector and non-billing to any consumer, differential claim was irrational/baseless. Further, energy equivalence volume was included in its claim as receivable from the FG whereas this volume was shifted from indigenous gas segment without giving any corresponding benefit. Thus, first gas shortage was created in indigenous gas segment by shifting of energy equivalence to RLNG segment and then RLNG was diverted to mitigate the shortage in indigenous segment. Resultantly, the claim of SNGPL was overstated by an amount of Rs 35,192 million to be receivable from FG.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs. In DAC meeting held on July, 25-26, 2022, management of SNGPL explained that the diversion volume was calculated based on available molecules and actual volume billed to different categories of consumers. There was no difference in the calculation of diverted energy contents. Moreover independent forensic auditor appointed by OGRA is also validating the company stance.

Audit highlighted that indigenous gas volume (42,158 mmcf / 42,579,580 mmbtu) was added in RLNG segment as Energy Equivalence which was not adjusted in working out the net claim of differential amount. Further, DG (Gas) explained para 5.3.2 that an amount of Rs. 60 billion were released on account of differential amount of RLNG diverted to domestic sector during the last FY 2021-22 and Rs. 25 billion was budgeted in financial year 2022-23.

DAC directed the management of SNGPL to get the stated stance verified from Audit within one week and share forensic audit report showing validation of SNGPL claim by OGRA. No further progress was reported till finalization of report.

During verification, it was found that no proper mechanism for validation of SNGPL's claim existed in the Ministry and the issue of energy equivalence was yet to be decided before making final payment of differential amount to

SNGPL on this account in future because this phenomenon of diversion of RLNG would continue.

Audit recommends SNGPL to justify the net financial impact of its claim and non-adjustment of 42,158 mmcf indigenous gas from this claim besides providing forensic audit report showing validation of SNGPL claim by OGRA.

5.7.2 Less curtailment of indigenous gas to CNG / General Industry sectors
(Entities: DG Gas, SNGPL)

According to clause 3.1 of Natural Gas Allocation and Management Policy, 2005 read with EEC in its meeting dated 17.09.2018, approved revision in the gas supply priority order as under:

Sector	Revision in Priority Order
Domestic & Commercial	First
Power Sector-Zero Rated Industry	Second
General Industry, Fertilizer & Captive Power	Third
Cement including its captive power	Fourth
CNG	Fifth

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that SNGPL made gas curtailment to manage shortfall of gas during winter seasons at around 40, 92 & 18 MMCFD in CNG sector and 31, 10 & 18 MMCFD in general industry for the months of December, January & February in FY 2018-19, 2019-20 & 2020-21 respectively. SNGPL did not implement curtailment schedule approved by the FG under Winter Load Management and supplied gas without keeping priority orders during winter seasons (**Annexure-7**). Some of the observations were summarized below:

- i. SNGPL provided NG to CNG, General Industry, Captive Power, Fertilizer sectors in violation of curtailment schedule and priority order of the Federal Government announced in Winter Load Management;
- ii. Due to non-observance of priority orders / curtailment schedules, savings in NG could not be made to meet with the high demand of domestic sector;
- iii. Resultantly, more RLNG was injected to manage the shortfall of domestic gas consumers. Accordingly huge differential cost was accumulated during last three financial years. Diversion of RLNG could be reduced by

observing the priority orders / curtailment schedule announced by the Federal Government.

Audit was of the view that SNGPL was not implementing the Winter Load Management and Curtailment Schedules in letter and spirit as depicted from above table. Resultantly, savings of indigenous gas could not be achieved and more RLNG volume / energy was diverted which increased the claim of SNGPL against Federal Government.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs. In DAC meeting held on July, 25-26, 2022, management of SNGPL explained that while implementing the load management plan number of factors were considered which included but not limited to provision of Article 158 of the Constitution of Pakistan, GOP priority to run fertilizer and export-oriented sectors.

Audit contended that according to clause 3.1 of natural gas allocation and management policy 2005 read with ECC decision 17.09.2018, approved gas supply priority order gave first priority to domestic and commercial consumers and zero-rated export industry was given second priority.

DAC directed to provide the province-wise sales of system gas for verification of Audit. No further progress was reported till finalization of report.

Audit recommends to probe the reasons for non-implementation of curtailment schedule and quantity of indigenous gas supplied in excess thereof and corresponding diversion to domestic sector be worked out for reduction in the claimed differential amount.

5.7.3 Inadmissible diversion of RLNG to domestic sector in summer months in violation of Winter Load Management – Rs 14,262 million

(Entities: DG Gas, SNGPL)

According to clause 3.1 of Natural Gas Allocation and Management Policy, 2005, Gas supply to consumer in the Domestic Sector will be as per yearly target determined by the Federal Government. Gas supply to industries will be for nine months. Federal Government announces Winter Load Management and Gas Curtailment Schedule in the month of November / December every year for 03 winter months. According to Winter Load Management according to decision of the Cabinet for the FY 2020-21, gas/

RLNG supply of CNG sector on SNGPL's network has been suspended w.e.f 06.12.2021 till further orders. Gas / RLNG supply of Captive Power units was suspended till further orders, in line with the decision of the Cabinet on Winter Load Management.

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that SNGPL diverted RLNG (11,526,411 mmbtu) to domestic sector during the months of March, 2019 / 2020 / 2021, April, 2020 / 2021, and May, 2020. For supply of indigenous gas first priority was to be given to domestic sector and RLNG was required to be diverted only in case of higher demand than available for supply. Further, during the month of March every year temperature raises and extra gas demand for heating the environment and water reduces. SNGPL claimed the differential amount of Rs 14,262 million on account of diversion of RLNG in summer months in the overall claim lodged with Federal Government / OGRA.

Audit was of the view that Winter Load Management was meant for the months of December to February each year and diversion of RLNG in other months did not come under the ambit of Winter Load Management and required specific approval of the competent authority.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs. In DAC meeting held on July, 25-26, 2022, management explained that priority order as well as a various decision of the cabinet in respect of supply of gas to various sectors of the economy be examined in totality to understand the load management mechanism of the Federal government. Management further explained that gas supply was being managed on the directions of the Federal Government under extreme constraints supply situation and may be treated as such.

During DAC meeting Audit stressed to enforce the clause 3.1 of natural gas allocation and management policy 2005 read with ECC decision 17.09.2018 wherein gas supply to domestic / commercial consumers was given first priority and zero-rated export industry was given second priority.

DAC directed the management of SNGPL to share the relevant directions of the Federal Government. No further progress was reported till finalization of report.

Audit recommends either to provide specific approval of the competent authority regarding diversion of RLNG to domestic sector in months of March, April and May or reduce the claim of diversion.

5.7.4 Irregular RLNG sale and purchase by SSGCL - Rs 166,273 million
(Entity: SSGCL)

According to condition 39.1 of license read with provisions of the Sale of Goods Act, 1930 and the Contract Act 1872, the licensee shall not sell gas to consumers without a contract. All agreements or contracts should be negotiated, entered into or amended on an arms' length basis and in accordance with the provisions of the Ordinance and the Rules.

During special audit of LNG / RLNG supply chain for the period from March 2015 to June 2021, it was observed that SSGCL withheld RLNG (145,401 mmbtu) during transportation of RLNG which was delivered by EETPL / PGPCCL at CTS Bin Qasim. SSGCL did not enter into any agreement for purchasing RLNG from SNGPL or from PSO / PLL. SSGCL sold RLNG (111,637 mmcf / 113,423,535 mmbtu) amounting to Rs 166,273 million to general industry, CNG, captive power, commercial consumers and M/s K-Electric without executing any GSAs. SSGCL did not raise demand for its sales either to SNGPL or LNG importers PSO / PLL. SSGCL obtained approval of allocations of RLNG from ECC equal to the volume sold by it. But no GSPA with SNGPL or PSO / PLL was executed and similarly GSAs with the end consumers were not provided during audit.

Audit was of the view that due to absence of GSA with the SNGPL (the owner of RLNG sold by PSO / PLL), SSGCL's sales of RLNG in its franchise area was irregular.

The matter was reported on July, 14, 2022 to the Ministry of Energy (Petroleum Division) and PSEs. In DAC meeting held on July, 25-26, 2022, management of SSGCL explained that GSA for sale of RLNG to customer's general industry / capital power / CNG and commercial customers with RLNG sale were made. Further, in respect of execution of agreements, KE usually asked for firm commitments on take or pay basis. SSGCL started supplying RLNG to K- Electric in April 2018 in circumstances where SSGCL was not able to meet the requirements of KE through indigenous gas. Accordingly, the matter was

taken up at the level of Cabinet Committee of Energy and SSGCL started supplying 60 MMCFD RLNG.

DAC directed the management to share the relevant GSAs executed with end consumers / general industry and to execute the GSPA with PSO, SNGPL, PLL and KE to formalize the RLNG transaction. No further progress was reported till finalization of report.

Audit recommends SSGCL to implement DAC decision.

6. Recommendations

- i. Petroleum Division should implement OGRA (Amendment) Act, 2021 to remove duality of legal regime and determination of pricing model for blended gas. (Para No. 5.1.1)
- ii. LNG Policy, 2011 be reviewed holistically with a view to addressing structural gaps, ensuring private sector participation and streamlining LNG / RLNG supply chain. (Para No. 5.1.2)
- iii. SNGPL should assess demand on accurate basis by taking into account demand of all sectors' consumers. (Para No. 5.2.1)
- iv. Reconciliation of LNG quantity imported, re-gasified, retainage, delivered to SSGCL, transported by SSGCL to SNGPL among the stakeholders should be ensured. (Para No. 5.3.1 & 5.4.9)
- v. RLNG related circular debt be reduced by resolving the disputes among the stakeholders, timely payment of subsidies, clearance of power sector circular debt etc besides finalization of agreement between PSO, SSGCL & SNGPL for RLNG supply. (Para No. 5.3.2, 5.3.3 & 5.3.4)
- vi. Petroleum Division should intervene to resolve disputes between SNGPL and SSGCL. (Para No. 5.4.1 & 5.5.7)
- vii. Petroleum Division should take initiatives for executing G2G agreements through PLL. (Para No. 5.3.7)
- viii. Petroleum Division should justify excessive terminal charges and fix the responsibility for awarding contract to EETPL on the basis of defective bid evaluation. (Para No. 5.4.2)
- ix. Petroleum Division / SSGCL should justify award of contract to EETPL in two phases in uneconomical manner and fix the responsibility. (Para No. 5.4.3)
- x. PLL should expedite the recovery of excess paid amount of capacity charges and pursue the case in LCIA regarding recovery of LD charges from the PGPCL. (Para No. 5.4.4 & 5.4.5)
- xi. Petroleum Division is required to ensure utilization of GIDC for the intended purposes. (Para No. 5.5.1)

- xii. OGRA and Petroleum Division should resolve the issues impeding early finalization of RLNG prices. (Para No. 5.6.1)
- xiii. Petroleum Division should take up the matter with Ministry of Maritime Affairs and Port Authorities for rationalizing port charges and dredging of navigation channel by using CDC collected amount. (Para No. 5.6.3 & 5.6.4)
- xiv. DG Gas should make deduction from SNGPL's claim on account of RLNG diverted to domestic sector in summer months and indigenous gas diverted to RLNG consumers as energy equivalence besides ensuring proper validation of claim of SNGPL for RLNG diversion to domestic sector. (Para No. 5.7.1)
- xv. SNGPL should strictly follow the winter load management and curtailment schedules to avoid excess RLNG diversion to domestic sector. (Para No. 5.7.3)

7. Conclusion

Pakistan's dependence on imported LNG has increased during recent years due to depleting indigenous natural gas reserves. However, RLNG Supply Chain had been marred with inefficiency and mismanagement since the early days. From Legal Regimes to RLNG sales, there exist various factors which had led mishandling of the LNG / RLNG regime. The duality of legal regime envisaged that two prices for gas were prevalent in the country and one was cheaper, thus making the demand of RLNG erratic and causing other supply chain issues including accumulation of huge circular debt. Further, the GSAs/TA-I that were abstracted between/among the parties to ensure provision of demand were yet to be finalized, hence, the importing PSEs received delayed demand which led to excess expenditure on spot purchases, the expenditure which was ultimately borne by the general public. Similarly, no finalization of GSA/TA-I resulted into piling up huge receivables payable among the stakeholders, thus inflicting the financial health of the PSEs. Due to delayed development of RLNG infrastructure and absence of dedicated pipeline for RLNG, the business was being carried out on makeshift basis by utilizing existing natural gas infrastructure which had resulted in disputes of energy equivalence and quantity of RLNG between the parties involved.

In order to mitigate the inefficiency and mismanagement in the LNG / RLNG supply chain, the government needs to play its role from demand assessment to sales to end consumers. The government must carry out a holistic review of LNG Policy, 2011 and determine economic cost / ceiling and target floor for LNG procurement, enhance the private sector participation and minimize the delay between establishment of terminal and augmentation of existing pipeline infrastructure and finalization of new SPAs.

As RLNG has proved an important component of energy mix of the country and appears to remain so in foreseeable future, it is imperative that RLNG business is carried out efficiently. The government needs to pay special attention to the sector with the intention to streamline the system instead of managing the sector on makeshift arrangements.

8. Annexures

Annexure-I
(Para No 5.3.6)

**Unjustified cancellation of bids and rebidding resulting in higher LNG prices
– Rs 983 million**

Month	July 2021						
Tender	T36	T37	T38	T36	T37	T38	T40
Date of Bid Opening	02-Jun-21	08-Jun-21	18-Jun-21	02-Jun-21	08-Jun-21	18-Jun-21	28-Jun-21
Original Delivery window	08-09 July 2021	08-09 July 2021	07-09 July 2021	12-13 July 2021	12-13 July 2021	11-13 July 2021	11-13 July 2021
Lowest Commercial Offer (US\$/mmbtu)	11.7747	No bid	11.97	11.6612	12.7777	19.7464	13.45
Name of Lowest Bidder	Trafigura	-	QP Trading	Vitol Bahrain	Vitol Bahrain	Trafigura	Vitol Bahrain
Status	not Awarded	-	Awarded	not Awarded	not Awarded	not Awarded	Awarded
Lowest Bid between contract awarded and not awarded (\$/mmbtu)	11.7747	-	11.97	11.6612	-	-	13.45
difference of rates US\$/MMBTU	0.1953		1.7888				
Qty. delivered (MMBTU)	3,410,430		2,899,380				
Excess Amount US\$	666,056.98		5,186,410.94				
Rates Rupees per US \$	168		168				
Excess amount paid in PKR	111,897,572		871,317,039				
Total excess payment due to non-awarding Lowest Bidder PKR	983,214,611						

Excessive terminal charges due to award of contract on the basis of defective bid evaluation

i. Comparison with Bottom-up Costing of EETPL Proposal:

In this comparison, consultant estimated cost of FSRU (\$215 million-\$275 million) offered by EETPL by taking into account price of new FSRU (\$410-\$300 million) prevailing in 2014 instead of taking price of FSRU in 2005 and reduced by 9 years (depreciation). Consultant fixed upper and lower limits for estimated cost without giving any justification of:

- Upper price limit of \$275 million was given because lower limit \$215 million was based on depreciated (9 years) value of \$300 million;
- Pipeline cost including equipment was estimated from \$30 million to \$40 million without giving any break up;
- Jetty cost, including jetty platform, fenders, dolphins, dredge berth pocket, HP gas transfer arms, mooring hooks etc, without giving any break up;
- An aggregating Capex of \$320-\$410 million and estimated Opex of \$12-15 million was estimated;
- Upper price limit of \$410 million was given because lower limit \$320 million was based on depreciated (9 years) value of \$300 million;

In overall scenario, EETPL price proposal (levelized charges \$0.66 per mmbtu) fell beyond lower limit and no justification of upper limit for FSRU price, pipeline cost and jetty cost was given by the Consultant.

ii. Comparison of bid with SSGCL LPG Plant Retrofit Project;

- LPG Plant Retrofit Project was initiated in December 2012 for construction of LNG Terminal for 20 years at proposed price of \$0.84/mmbtu for capacity of 500 mmcf. This bid was rejected in September, 2013 by SSGCL and project was discarded. Same Consultant evaluated the price proposal of 4 Gas Asia for this project;

- Comparison was not relevant due to time lag and difference in specifications of these two projects, as the earlier project consisted of 30 years old Floating Storage Unit (FSU) and a new Floating Regasification Unit (FRU) whereas EETPL terminal would consist of 9 years old FSRU;
- Its completion period was 24 months whereas EETPL completion period was 11 months;
- In addition to \$ 0.66/mmbtu, in case of regasification beyond 95% availability factor, there would be flexibility charges equal to 25% capacity charges (i.e. \$228,016 per day) even few mmbtu surpasses the 95% limit and this factor was not taken into account by the Consultant in comparisons;
- Retainage of first project would be 0.6% whereas retainage of EETPL terminal would be up to 1% and its impact was \$0.04/mmbtu; and
- The consultant was uncertain in assessing exact impact of these difference in both price proposals but he compared EETPL proposal favorably with Gas Asia's price proposal given in December, 2012. Hence, making comparison of both the projects pointless in the subject bid evaluation.

iii. Comparison with other international FSRU projects;

- The Consultant compared EETPL price proposal with three international FSRU projects ranging \$0.66 to \$0.83 per mmbtu at 15% RoR whereas ETPL gave price proposal i.e. 0.66/mmbtu with 9 years old FSRU;
- These three international FSRU projects ranging Capex FSRU \$325-400 million with other Capex of \$100 million with provision of new FSRU whereas EETPL gave price proposal with 9 years old FSRU;
- The Consultant added \$100 million in implied tariff for infrastructure i.e. pipeline, equipment and jetty cost without taking into account the actual ground facts and this cost might be lower than that of required for in case of EETPL in the light of dynamics of these countries;
- Impact of retainage of new and old FSRU was not taken into account; and

- The consultant concluded that EETPL price proposal was competitive even after reckoning the fact that FSRU of EETPL was old and cause more retainage than new FSRUs which should had been installed on lower cost.

**iv. Comparison with LNG imports terminals in neighboring countries
i.e. India**

- The Consultant compared the EETPL price proposal with four land based terminals established in India (two in 2013 and other in 2004 & 2005) which include large onshore storage tanks and hence were more expensive to develop;
- The four land based terminals established in India were of capacity equal to 5 mpta on tariff ranging from \$0.45- \$0.62/ mmbtu and two established in 2013 were on \$0.77-\$.85/ mmbtu;
- The comparison was totally irrelevant because neither FSRU specifications nor was quantity to be re-gasified matched with EETPL terminal and its price proposal could not be compared with Re-gasification units with land based large storage tanks without making adjustments on some assumptions which were not given in the report;
- Consultant concluded that EETPL price proposal compared favorably with LNG terminals in India which was based on statement that the main component of EETPL's cost was an existing FSRU at lower estimated cost than for a new vessel; and
- The statement was not based on facts given by the Consultant in its own report because he took estimated cost of \$300 million the market price which was prevailing in the recent market in 2014 and he also stated that costs had increased over the years as showed in graph during his comparison.

**Annexure-3
(Para No 5.4.5)**

**Over Payment to PGPCL on account of Capacity Charges -
US\$ 3,278,443 million**

Month	Days	Profile Factor according to payment invoices	Paid	Due @96%	Diff Excess Payment
Jan-18	28	96%	\$6,603,337	\$6,591,514	\$11,823
Feb-18	28	96%	\$6,591,514	\$6,591,514	\$0
Mar-18	31	96.44%	\$7,330,816	\$7,297,747	\$33,069
Apr-18	30	96%	\$7,062,336	\$7,062,336	\$0
May-18	31	97.52%	\$7,413,166	\$7,297,747	\$115,418
Jun-18	30	98.94%	\$7,278,745	\$7,062,336	\$216,409
Jul-18	31	98.94%	\$7,521,370	\$7,297,747	\$223,623
Aug-18	31	98.94%	\$7,521,370	\$7,297,747	\$223,623
Sep-18	30	98.94%	\$7,278,745	\$7,062,336	\$216,409
Oct-18	31	98.94%	\$7,521,370	\$7,297,747	\$223,623
Nov-18	30	98.94%	\$7,278,745	\$7,062,336	\$216,409
Dec-18	27	98.62%	\$6,529,240	\$6,356,102	\$173,138
	358	98.00%	\$85,930,753.15	\$84,277,209.60	\$1,653,543.55
Jan-19	21	93.08%	\$4,793,120	\$4,793,189	\$0
Feb-19	28	96.04%	\$6,593,928	\$6,591,514	\$2,414
Mar-19	31	96%	\$7,297,747	\$7,297,747	\$0
Apr-19	30	96%	\$7,062,336	\$7,062,336	\$0
May-19	31	99.80%	\$7,586,236	\$7,297,747	\$288,489
Jun-19	30	100.00%	\$7,356,600	\$7,062,336	\$294,264
Jul-19	31	100%	\$7,601,820	\$7,297,747	\$304,073
Aug-19	31	100%	\$7,601,820	\$7,297,747	\$304,073
Sep-19	30	98.07%	\$7,214,372	\$7,062,336	\$152,036
Oct-19	31	96.52%	\$7,336,982	\$7,297,747	\$39,235
Nov-19	30	96.13%	\$7,072,145	\$7,062,336	\$9,809
Dec-19	31	99.03%	\$7,528,254	\$7,297,747	\$230,507
	355	97.55%	\$85,045,360.47	\$83,420,529.85	\$1,624,899.62
Total					\$3,278,443.17

***Annexure-4
(Para No 5.6.1)***

Non-determination of final RLNG prices by OGRA due to non-compilation of components of RLNG prices

Main Components of RLNG prices and details of actions pending

- i. Delivery Ex-Ship (DES) prices (Weighted Average) were final according to Supplier Invoices but adjustment on account of Exchange Gain or Loss were not settled between SNGPL and PSO / PLL;
- ii. Port Charges on the basis of provisional invoices issued by PQA and adjustments in the light of final PQA invoices was not done by PSO;
- iii. PSO and PLL recovered excess reimbursement of Port Charges from Gunvor and other International Suppliers but its impact could not be passed on to the RLNG consumers;
- iv. Incidental cost reported by PSO, SSGCL and PLL to OGRA / SNGPL includes:
 - In disregard to LNG Policy, 2011, FG imposed Customs duty on LNG @5% and withdrawal of WHT exemption on imports by LNG importers increased the RLNG prices.
 - Matter relating to payment of Sindh infrastructure Cess was not finalized with GoS whereas PSO was not paying Cess on petroleum products.
 - Demurrages imposed by the Sellers and its final settlement and its impact in RLNG prices.
 - Final adjustment of wharfage be made and its impact in RLNG prices.
- v. Terminal Charges paid by SSGCL and PLL according to invoices issued by EETPL and PGPCL and payment made by SNGPL to SSGCL / PLL. Settlement of disputes with Terminal Operators and SNGPL was pending;
- vi. Adjustment of Retainage already charged and determined after audit according to agreement between SSGCL / PLL with terminal operators;

- vii. PSO and PLL margin to be taken 2.5% or 3.75% to be decided by OGRA;
- viii. SSGCL and PLL / PLTL margin @ \$0.025 per mmbtu and its payment by SNGPL. Margin of SSGCL and PLL were superfluous just increasing the RLNG prices because this only for executing LNG Service agreements with terminal operators which can be done by PSO or PLL which were earning their margins @ 2.5% to 3.75%;
- ix. T&D losses up to 0.50% for transmission and actual of last year for distribution: its quantities to be determined and corresponding amount was to be included in RLNG prices; SSGCL / SNGPL could not work out the T&D losses;
- x. Claim of SSGCL relating to higher UFG losses due to RLNG handling was yet to be validated;
- xi. Issue of charging T&D Losses (UFG) on distribution network by Gas Companies to the extent of admissible benchmark instead of actual of last year was yet to be finalized;
- xii. Transportation Charges / Cost of Supply were to be determined by OGRA: In case of SNGPL, these were determined up to the FY 2020-21 whereas SSGCL's cost of supply had been determined up to FY 201-20;
- xiii. Decision on treatment of inventory gain or loss in RLNG prices is pending with OGRA as the same was not included in guidelines issued by ECC / FG;
- xiv. Gas Companies were required to finalize the volume adjustments due to energy equivalence;
- xv. OGRA could not validate quantity / volume of RLNG diverted to domestic and commercial consumers by SNGPL and its financial implication (including settlement of deferral account) also not finalized yet through Third Party Audit due to non-completion of this audit; and
- xvi. Reconciliations between SGNPL and SSGCL were not carried out as yet despite lapse of more than 06 years:

- Quantity of RLNG withheld by SSGCL and its payment.
- Payment of Terminal Charges, LSA margin and cost of supply.
- Total LNG / RLNG handed over by PSO / PLL to SSGCL, quantity re-gasified, delivered by terminal to SSGCL and delivered / swapped by SSGCL to SNGPL after taking into account retainage, energy equivalence, gas internally consumed and UFG losses.
- Pipeline Inventories at CTS Bin Qasim and CTS Sawan.

Annexure-5
(Para No 5.6.4)

Exorbitant port charges as compared to regional ports -\$ 244.802 million

No. of Cargoes	546
Port charges per ship according to Ras Laffan Qatar Port	\$ 114,752
Total Port Charges	\$ 62,654,592
Port Charges Paid according to PQA	\$ 307,456,307
Difference of Port Charges	\$ 244,801,715
LNG Quantity imported (MMBTU)	1,746,667,364
Per MBBTU Difference	\$ 0.14

	No. of Cargoes	Port charges paid (\$)	Average of port charges (\$)
PSO	386	245,195,507	635,222
PLL	160	62,260,800	389,130
Total	546	307,456,307	563,107

Annexure-6
(Para No 5.6.5)

Potential saving in port charges by berthing of Q-flex ships - \$102.568 million

	PLL (Dec-17 to June-21)		PSO (March-15 to June-21)	
	Conventional Ship	Q-Flex	Conventional Ship	Q-Flex
No. of Cargoes	160	107	386	257
Standard Quantity	140,000m ³	210,000m ³	140,000m ³	210,000m ³
Port Charges per ship (Pilotage + Towage)	\$ 389,130	\$ 389,130	-	
Average Port Charges per ship (March 2015- June 2021)	-		\$ 635,222	\$ 635,222
Total Port Charges	\$ 62,260,800	\$ 41,636,910	\$ 245,195,692	\$ 163,252,054
Diff. Cost Saving	\$ 20,623,890		\$ 81,943,638	
Total	\$ 102,567,528			

*Annexure-7
(Para No 5.7.2)*

Less curtailment of indigenous gas by CNG / General Industry

Priority Order	Sector / Month	2018-19			2019-20			2020-21		
		Dec	Jan	Feb	Dec	Jan	Feb	Dec	Jan	Feb
1	Domestic including (RLNG)	831 (173)	1,028 (347)	946 (284)	971 (303)	1,289 (449)	718 (268)	912 (325)	1,056 (476)	803 (230)
	Commercial	55	52	56	63	37	50	44	44	43
2	Power	151	117	119	63	76	28	26	39	33
	Zero Rated Sales	13	13	20	15	14	15	16	14	13
3	GENERAL INDUSTRY:									
	Captive Power	11	12	1	3	4	7	6	8	7
	Textile	7	1	(0)	0	0	0	0	0	0
	Other Industry / (curtailment)	7 (2)	29 (2)	32 (0)	26 (29)	29 (0)	27 (0)	26 (0)	27 (8)	25 (0)
	Fertilizer	124	114	77	115	114	117	113	112	114
4	Cement	0	1	0	1	0	0	0	0	0
5	CNG / (curtailment)	72 (9)	64 (23)	67 (9)	69 (21)	66 (37)	68 (9)	50 (10)	52 (32)	54 (0)

Note: As per ECC decision dated 17.09.2018 approved revision in the gas supply priority order, gas supply to domestic sector was to be given first priority.