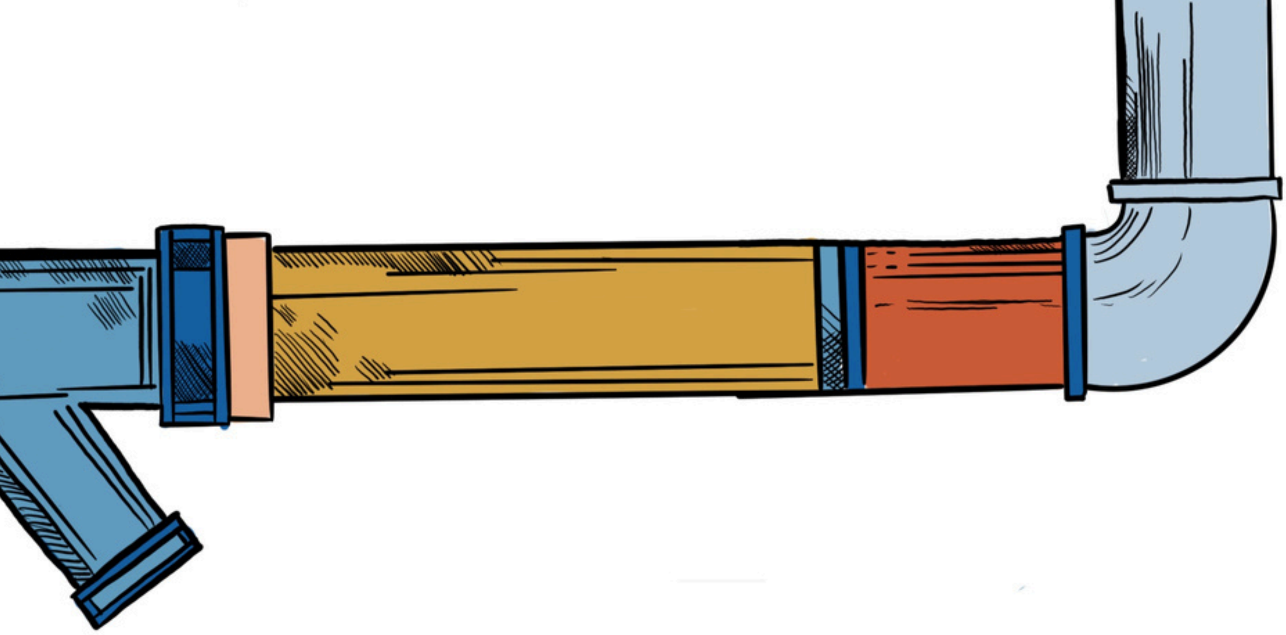

Analysing Policies and Laws Encouraging Natural Gas Utilisation in Pakistan's Energy Mix
A Sectoral and Constitutional Overview

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Produced by The Knowledge Forum

Alliance for Climate Justice & Clean Energy

ALTERNATIVE LAW COLLECTIVE

THE KNOWLEDGE FORUM

Alternative Law Collective

The Alternative Law Collective (ALC) comprises of lawyers and academics committed to social, economic and environmental justice. The Collective understands the work of law in the widest possible sense. Recognizing the possibilities and limitations of formal legal processes, ALC aims towards creative law-doing that is grounded in research that encompasses a range of pedagogical exercises, and ultimately leads to sustained engagements and interventions on issues of justice.

The Collective has a history of working on issues of environmental justice, labor law and indigenous rights. This has included working with fishing communities against the historical enclosure of waters, with communities displaced by large scale water infrastructure, and with communities in struggle over common lands. Each has involved innovating law-doing which whilst also invoking formal legal petitions, has focused on (re)-creating alternative discourses and practices such as those of the Lok Sath.

Currently, ALC is focusing on issues of just transition, large-scale land acquisition associated with renewable energy projects, and seeking remedies for communities affected by faulty infrastructure through the loss and damage facility. ALC's efforts encompass research, working with the communities on the ground, case filing, and advocacy, aiming to bring about meaningful change and uphold principles of justice.

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The Knowledge Forum

The Knowledge Forum (TKF) is an independent organisation that seeks to produce knowledge-based resources to assist in interventions and advocacy for communities' rights. TKF has been founded by a group of human rights practitioners, development professionals, activists and legal experts.

Through high quality research and discourse curation, TKF aims to assist in the creation of a more informed perspective on complex themes that have a bearing on communities' access to rights and participation in political, democratic and development processes.

Website:https://www.theknowledgeforum.org/about-us/

Glossary

E&P: Exploration & Production is a specific sector within the oil and gas industry linked to the early stage of energy production, which generally involves searching for and extracting oil and gas.
TAPI: The Turkmenistan-Afghanistan-Pakistan-India Pipeline
SSGC: Sui Southern Gas Pipeline
LNG: Liquefied Natural Gas
RNLG: Re-Gasified Liquefied Natural Gas
NTDC: National Transmission & Despatch Company
ROR: Return on Revenue
IGCEP: Integrated Generation Capacity Expansion Plan
SNGPL: Sui Northern Gas Pipeline Limited
SSGCL: Sui Southern Gas Pipeline Limited
UFG: Unaccounted for gas

Foreword

In Pakistan, the utilization of natural gas has long been a cornerstone of the country's energy strategy, contributing significantly to its primary energy supply mix. Despite challenges such as depleting reserves and geopolitical complexities hindering efforts to secure additional resources, not to mention the volatile spot prices of LNG, natural gas maintains its pivotal role, constituting over one-third of the energy supply mix.
However, the energy landscape is evolving, prompting a critical reassessment of energy policies. An uncertain future with regard to gas has already unleashed substantial economic cost on various sectors dependent on gas to power their engines.

There is an emerging shift in Pakistan away from a gas-centric approach, with emphasis placed on expanding alternates (primarily coal) for the purpose of power generation. Yet, amidst this potential transition, the intrinsic value of natural gas cannot be overlooked. Its entrenched position in Pakistan's energy infrastructure, supported by extensive transmission networks, highlights its enduring significance. Moreover, the country's strategic location between energy-rich regions and burgeoning markets continues to position it as a pivotal player in regional energy dynamics.

This research dissects the intricate web of policies and governance frameworks underpinning the utilization of natural gas across various sectors, from the residential to the industrial sectors. It explores how despite significant financial ramifications for the national exchequer, and the economic and social costs borne by the consumers, the existing gas tariff regime continues to incentivize investment in the sector. Moreover, the federation’s domination over policy coupled with poor political will to implement the 18th Constitutional Amendment limits provinces from benefiting from natural resources within their territories, further entrenching the status quo.

Introduction

The purpose of this brief is to analyse the policies and laws that encourage the utilisation of natural gas in Pakistan's energy mix. Despite the significant pressure on the supply side owing to the depletion of existing resources and the lack of substantial additions to new resources, natural gas remains a leading energy source, contributing to approximately 40 percent of the primary energy supply mix in Pakistan.[1] The country's Federal Government has attempted to address this shortfall by negotiating deals with gas-rich countries, including Iran for the Iran-Pakistan gas pipeline. However, due to various geopolitical circumstances, such as decade-old sanctions on Iran, security issues in Afghanistan, and the deepening gas crisis in Europe, these efforts have not been entirely successful.[2]

As Pakistan struggles with dwindling gas reserves, the government is hinting at a rethink of the energy policy, which in its current form, prioritises gas as the fundamental energy source. The former energy minister Khurram Dastgir Khan said in February 2023 that "LNG is no longer part of the long-term plan." Instead, Pakistan plans to shift from gas to coal for power generation, with coal-fired generation set to increase from 2.3GW to 10GW.[3] Nevertheless, this could abruptly change in the future considering Pakistan's geostrategic location — trapped between the energy-hungry South Asia on the one hand and the energy-rich Middle East and Central Asia on the other. The country has been courted multiple times to serve as an energy bridge to India.[4] Given the consistent use of gas in Pakistan's energy mix, which has also led to the development of an expansive gas transmission infrastructure, it would be difficult to give a final word on whether gas will remain the primary energy source or will there be a shift to more sustainable energy options.

To better understand the infrastructure and policies supporting the use of natural gas, this brief explores the network of policies and governance regimes that incentivize the utilisation of gas in sectors as diverse as the residential, commercial, industrial, fertiliser, energy, and transport. Additionally, this brief will delve into constitutional debates around natural gas and its impact on the Federation and Federating units of Pakistan, particularly in the aftermath of the 18th amendment.

1. Page 3. Pakistan Energy Outlook Report (2021–2030). For more details refer to "Share of gas in the energy mix section below)
2. In 2009, Iran and Pakistan formally signed an agreement to build a gas pipeline. The National Iranian Oil Company (NIOC) and Pakistan's Interstate Gas System (ISGS) were chosen to lead the project. However, Pakistan's commitment to fulfilling its obligations has been inconsistent. Recently, Commerce Minister Naveed Qamar expressed renewed commitment to the project during a meeting with Vahid Jalalzadeh, the Chairman of the Commission of National Security and Foreign Policy of the Majlis of the Islamic Republic of Iran. Qamar promised to take measures to revive the Iran-Pakistan gas pipeline project. Refer to the following report: https://www.dawn.com/news/1752216
3. "Govt Plans to Quadruple Domestic Coal-Fired Energy," The Express Tribune, February 15, 2023, https://tribune.com.pk/story/2401260/govt-plans-to-quadruple-domestic-coal-fired-energy.
4. Seb Kennedy, "Zombie Pipelines Taunt Pakistan," Energy Flux, April 14, 2023, https://www.energyflux.news/p/zombie-gas-pipelines-taunt-pakistan?utm_source=post-email-title&publication_id=74367&post_id=114655783&isFreemail=true&utm_medium=email.

Gas as a Constitutional Subject

The constitutional history of gas in the context of Pakistan is marked by the predominant control of the federation over the mineralized resources, which has resulted in a long drawn struggle for the federating units to gain legitimate control over these resources in their territories. The Mines Act 1923[5] was perhaps the first act to lay the foundation for the management of minerals, followed by the Petroleum Act 1934[6]. The Government of India Act 1935[7], and many constitutions[8] promulgated and abrogated after the creation of Pakistan extensively discussed the subject matter of minerals. The study of these statutes and constitutions reveals continuity in the treatment of oil and gas as federal subjects, with provinces having little to no role in the management, control, and disposal of these resources. However, this continuity was disrupted by the promulgation of the 1973 Constitution, which initially extended the oil and gas royalty and excise benefits to the provinces. Later, it also declared them to be the co-owners of oil and gas fields erupting within their respective territories to the 12 nautical miles.[9] Before the formal declaration of provinces as co-owners, the role of the provinces was conceived through representation in the Council of Common Interests (CCI), a constitutional body with a mandate to formulate policies and guidelines for natural resources, including petroleum and natural gas. This trajectory is a testament to provinces receiving constitutional recognition of the resources that underlie their territories. While there has been limited clarity on the meaning and scope of this co-ownership, the issue is far from settled; matters including implementation, legislative authority, and managerial control are still competing spaces and are awaiting constitutional clarity. This lays the basis for the constitutional framework on oil and gas which has led to several disputes.

Article 172 (3) of the Constitution conceives the idea of joint ownership vis-à-vis mineral oil and mineral gas under the 18th amendment. According to the Article, minerals within the jurisdiction of any particular province and not beyond the territorial waters vest jointly in the Federation and that Province. However, existing commitments and obligations in the form of prospective licences, concession agreements, or otherwise, have been excluded from Article 172 (3).

The exact ambit of this exclusion constitutes a contentious matter. The Ministry of Petroleum and Natural Resources argues that all agreements and contracts with oil and gas companies before the operation of Article 172 (3) have been saved permanently and absolutely from the interference of

Natural Resources argues that all agreements and contracts with oil and gas companies before the operation of Article 172 (3) have been saved permanently and absolutely from the interference of the provinces under the 18th Amendment, and the provinces under the 18th Amendment, and the federation has the exclusive right to amend pre-existing agreements with oil and gas companies without any involvement of the provinces. On the other hand, provinces, in this case, the Province of Sindh, differ from this position and argue that the exclusion of pre-existing contracts from the operation of Article 172 (3) is limited to existing contracts with any amendments subject to Provincial oversight and review. (Following the 18th amendment), any amendments to these pre-existing original contracts shall automatically create room for the Provinces to have their voice heard under Article 172.

5. “Section 3 subsection(aa) defines the appropriate government as such: ‘Appropriate Government’ means in relation to mines of [nuclear substances mineral oil, natural gas and liquids, and substances declared by Federal Law to be dangerously inflammable oil fields and gas fields] the [Federal Government] and in relation to other mines the Provincial Government;”

6. Section 5 of the said Act, delegates to Federal Government the power to frame rules for production, refining or blending of petroleum products.

7. Under the said act: “Entry No. 36, Federal Legislative List, Seventh Schedule, Government of India Act, 1935, shows oilfields and minerals as Federal subjects.

8. The 1956 Constitution, provided Oil and Gas as Federal subjects vides Entry No. 15, Federal List, Fifth Scheduled. Article 134 of the said constitution also declared federation as the owner of all minerals underlying the ocean within the territorial water of Pakistan. Similarly, the “President’s Order No. 8 of 1961” namely, - “The Minerals (Acquisitions and Transfer) Order 1961” transferred all minerals to the Central Government free from all encumbrances. The 1962 Constitution also placed oil & gas in the Central Legislative List. Entry No. 24 is relevant here. Article 146 (2) of the said Constitution also placed all the minerals under the territorial waters of the country to be under the disposal of the Federation alone.

The reverberations of this matter can be seen in the 2017 ruling of the Chairman Senate on the operationalization of Article 172 (3).[10] While this ruling does not have a binding effect, it is instructive on several fronts. In the interest of clarity and to measure the range of outstanding issues associated with the interpretation and implementation of Article 172 (3), the Sindh government's response is reproduced below for its rich constitutional points. This reply was submitted in response to the contention of the Ministry of Petroleum and Natural Resource that Article 172 (3) stands implemented, that power to legislate on Oil and Gas exclusively resides within the Federation under Article 142[11] (a); the rights of the provinces under Article 172 (3) are limited to ownership and the royalties arising out of the minerals under Article Article 161 (1).[12] The Province of Sindh emphatically rejected the ministry's stance. A summary of its position is as follows:

"The 18th Amendment to the Constitution of Pakistan, specifically the insertion of Article 172(3), has given the provinces joint and equal power and authority in the executive, administrative, and regulatory affairs related to mineral oil and natural gas located within the Province or the territorial waters adjacent thereto. This new role is, in addition to the role delegated to provinces through the Council of Common Interests (CCI). Despite the mineral oil and natural gas appearing in Entry No. 2, Part II, Federal Legislative List (FLL), the related matters fall within the exclusive domain of CCI, which formulates and regulates policies and exercises supervision and control over related institutions. The Ministry of Petroleum and Natural Resources (MoPNR) has erred in claiming the Federal Government's exclusive executive authority over oil and gas matters, as it has always been subject to the decisions of the CCI and the consent of the provinces. The inclusion of Article 172(3) has further redefined the "extent" of the Federation's executive authority on oil and gas matters, and now the Federation is required to exercise its jurisdiction with provinces equally and jointly. Article 172(3) only protects existing agreements, licences, or leases as long as they are being operated and implemented with the original terms and conditions. Any change, alteration, addition, deletion, conversion, or amendment in the terms and conditions of the old agreements, licenses, or leases after the promulgation of the 18th Amendment requires approval from provinces. The ownership rights of the provinces over mineral oil and natural gas has always been with the Provinces, and Article 161(1) recognizes the rights of the provinces over mineral oil and natural gas in terms of transferring to them all the monies collected on account of royalty and federal duty of excise. It is, therefore, clear that Article 172(3) read with Article 154(1) and Article 161(1) has redefined the "extent" of the jurisdiction of the Federation in mineral oil and natural gas-related matters, and the Federation is required to exercise the authority in the executive, administrative, and regulatory sphere jointly and equally with the provinces."

> Provinces expect to play a more meaningful role in the administration, regulation, and management of mineral reserves.

From this self-explanatory response, it is apparent that provinces feel betrayed by the ministry's interpretation of Article 172 (3) and expect to legitimately play a more meaningful role in the province's administration, regulation, and management of mineral reserves. To materialize that, they are also demanding substantial amendments in

9.172. (1) Any property which has no rightful owner shall, if located in a Province, vest in the Government of that Province, and in every other case, in the Federal Government.
(2) All lands, minerals and other things of value within the continental shelf or underlying the ocean 1 [beyond] the territorial waters of Pakistan shall vest in the Federal Government.
(3) Subject to the existing commitments and obligations, mineral oil and natural gas within the Province or the territorial water adjacent thereto shall vest jointly and equally in that Province and the Federal Government.]
10. Operationalisation of joint ownership of mineral oil and natural gas; implementation of Article 172 (3), Constitution, 1973: http://senate.gov.pk/uploads/documents/1582527957_947.pdf
11. 142. Subject to the Constitution— (a) 1 [Majlis-e-Shoora (Parliament)] shall have exclusive power to make laws with respect to any matter in the Federal Legislative List;
12. Natural gas and hydro-electric power 161. 1 [(1) Notwithstanding the provisions of Article 78 (a) the net proceeds of the Federal duty of excise on natural gas levied at well-head and collected by the Federal Government, and of the royalty collected by the Federal Government, shall not form part of the Federal Consolidated Fund and shall be paid to the Province in which the well-head of natural gas is situated.

the regulatory statutes and bodies so that provinces can also play their part.[13] The 2017 ruling of the Senate Chair eventually accepted the interpretation of the provinces in the following words:[14]

"Clause (3) of Article 172 of Constitution 1973, provides for equal ownership of mineral oil and natural gas within the province or the territorial waters adjacent to a province (fifty percent belonging to the Federal and fifty percent to the province) and the Federation is required to exercise its authority in the executive, administrative and regulatory sphere jointly and equally with the province."

Regardless of the ruling of the chairman of the Senate, the permanent solution lies with the Council of Common Interests, which is mandated to resolve differences, problems, and conflicts between the provinces and federation regarding matters specified in Part 2 of the Federal Legislative List. Any attempt to resolve these complex issues by any other body shall be a futile exercise and robbery on the mandate of CCI.

On a much lower level, the constitutional debate around gas also involves the question of rights of citizens over gas. Without going too deep into it, it is instructive to note that the superior courts have repeatedly held that the right to life includes the right to the provision of electricity and gas.[15]

> Provinces rich in mineralized gas oppose the weighted average cost of gas, demanding a distribution formula that prioritizes their needs.

This idea suggests that gas has become essential for everyone's needs and that no one can be deprived of it. However, the exact meaning of this is unclear considering the limited availability of gas and disparity in the share of provincial natural resources, including gas and its legal management. One key question is whether gas resources should be distributed equitably or if provinces with well-head resources should have preferential rights. The judiciary's interpretation of this matter remains vague and contradictory, leaving these important questions unanswered. The Council of Common Interests is better equipped to address issues related to gas ownership, management, and distribution.

Provinces such as Sindh, Khyber Pakhtunkhwa, and Baluchistan possess vast energy resources compared to the federation or the province of Punjab. Therefore, the gas distribution and pricing formula requires careful consideration and handling. Some crucial questions need to be addressed: Should gas, irrespective of its source, have a weighted average cost? Should domestically-produced gas be priced differently from imported regasified liquefied natural gas (RLNG)? Moreover, it is essential to assess the implications of these decisions on the economies of the provinces. In February 2023, the then government received Senate approval for the weighted average cost of gas bill, aiming to address circular debt issues and reduce the subsidy bill to comply with IMF requirements. However, this bill has not been enacted yet. Under the shadow of Article 158 of the Constitution, provinces rich in mineralized gas oppose the weighted average cost of gas, demanding a distribution formula that prioritises their needs. They argue that their territories house the well-heads and therefore their households and industries should have a constant supply of cheaper domestic gas. On the other hand, the Federation and Punjab have contested this, claiming that compliance with such demands would have severe implications for their economies. They would be required to consume costly RLNG gas, placing their gas-dependent industries at a disadvantage.[16] Pending resolution before the CCI, judicial interpretations tend to support the concept of giving precedence to the provinces having functional well-heads.[17] Nevertheless, provinces continue to advocate for that.[18]

> The superior courts have repeatedly held that the right to life includes the right to the provision of electricity and gas

Next, we will discuss the policies shaped by the regulatory bodies to examine the range of policies that pave the way for the promotion of gas in the energy mix.

14. The ruling of the chair is also important in another respect- apart from the constitutional discussions around the Article 172 (3), the role of the World Bank is also highlighted as being adverse to the rights of Provinces. In this respect, it is demanded that the Federal Government should come clean and explain its relationship with the Bank. The chairman urges the federation to prepare a policy and determine the extent of the World Bank/donor organisations into the internal affairs of federation.

15. OGRA through Secretary v. Midway II, CNG Station (2014 SCMR 220) and Iqbal Zafar Jhagra and Senator Rukhsana Zuberi v. Federation of Pakistan (PTD 2014 SC 243)

16. https://www.dawn.com/news/1737220

17. 2017 C L C Note 141

18. https://tribune.com.pk/epaper/news/Karachi/2023-04-07/NjVhNTRlNzM4NmU4YzVmODQxNDM3MWVkMjY2N2MwYjAucG5n

Exploration and Production Policy

The Petroleum Exploration and Production Policy, 2012 regulates the affairs of the upstream industry.[19] Driven by dramatic changes in the cost and price of crude oil and gas in the international market and realizing the adverse impacts of previous petroleum policies[20] and the need to discover more gas to meet the growing needs of the country, the policy introduces a range of benefits for investors as well. Setting the royalty ratio at 12.5% of the value of the petroleum at the field gate, it also introduces the following measures:

- Replacing the US $100/barrel[21] ceiling with US $110/barrel followed by a commitment to revision every five years reflecting the changing petroleum markets.
- The windfall levy was reduced from 50% to 40%.[22]
- Possibility of renewal of the lease for another five years after the expiry of the lease term (25 years) subject to the payment of 15% of the well-head value.[23]
- Binds the government to buy 90% of the volume produced by E&P companies through the designated buyers and leaves the remaining 10% at the discretion of the E&P companies to sell it to the buyer of their choice.[24]
- Extends the bonanza of US$ 1/MMBTU for the first three discoveries in offshore area.[25]
- Extension of the same terms and conditions (gas pricing) for additional 10% production over and above the commitment of the development plan approved by the government.[26]

For pricing and delivery obligations for natural gas, it sets the outlet flange to be the delivery point. And if the E&P companies construct a pipeline beyond that, they have been made entitled to 12% as the rate of return on equity "with the capital cost being amortized over a minimum of 15 years".[28] By offering a range of benefits for investors, including revised royalty ratios, reduced windfall levies, and the possibility of lease renewals, the policy creates a favorable environment for exploration and production companies. Moreover, by setting pricing and delivery obligations for natural gas, the policy ensures a stable gas supply to the market. The policy also incentivizes the discovery and production of gas by offering bonuses and extensions for additional production. On top of that recently, the Economic Coordination Committee (ECC) of the cabinet also delegated its power to approve Declaration of Commerciality (DoC) and Field Development Plan (FDP) to the Petroleum Division in order to fast track the process of exploration. Ultimately, these measures are designed to promote the process of exploration[29] and the use of gas in Pakistan's energy mix and support its economic growth.

> By offering a range of benefits to investor, including revised royalty ratios, reduced windfall levies, and the possibility of lease renewal, the Petroleum and E&P Policy, 2012 creates a favourable environment for exploration and production companies.

19. For the historical perspective on gas exploration kindly refer to the following article: https://www.dawn.com/news/147981
20. The Petroleum policy 2001 introduced regressive fiscal terms for the industries involved in exploration and production in breach of contracts in place. For an overview of the issues go to the following link: https://www.dawn.com/news/1728225
21. 10.2 Ibid
22. 4.1 (3) Petroleum Exploration and Production Policy, 2012

Note- Section 3b and 4 of the Regulation of Mines and Oil-Fields and Mineral Development (Government Control) Act, 1948 also provide security with non-obstante clause to the petroleum concession agreements from the vicissitudes of tax liabilities which keep changing every year. To better appreciate the matter in context, refer to 4.2 of Writ Petition no.4027 of 2022 of Islamabad. In this respect, perhaps mentioning of an interesting observation by the Hon'ble Court seems warranted: "The 1948 Act was a special law in so far as it provided for taxation of a special subject, being the taxation of petroleum exploration companies. The Ordinance is a general law on income tax which applies to all persons liable to tax."

23. 4.1 (8) Ibid
24. 9.4 Ibid
25. 5.2 Ibid
26. 4.1 (5) Ibid

Share of Gas in the Energy Mix - Analysis of IGCEP 2022-31

Since the discovery of the Sui gas field in Balochistan in the early 1950, gas has been the leading energy source in almost all sectors including fertilizer where it is used both as a feedstock and fuel. However, due to the depletion of local natural gas resources, the energy balance for natural gas in the country is in danger. It is estimated that natural gas demand in the country will increase from 3,563 MMCFD in 2020 to 4,237 MMCFD by 2030.[30] Net supply will reduce to 2,102 MMCFD by 2025 and 1,627 MMCFD by 2030. The solution for the country has been the scramble for more gas in the form of LNG. Currently, the installed generation capacity of gas including RLNG on the NTDC system is 28%. Nineteen percent of this consists of RLNG while the remaining 9% rests with local gas. On the other hand, K-electric's generation capacity for RLNG reaches a whopping 84% followed by a meagre 3% for gas. The graphs for both have been shared below giving a holistic picture concerning the share of other fuels as well.

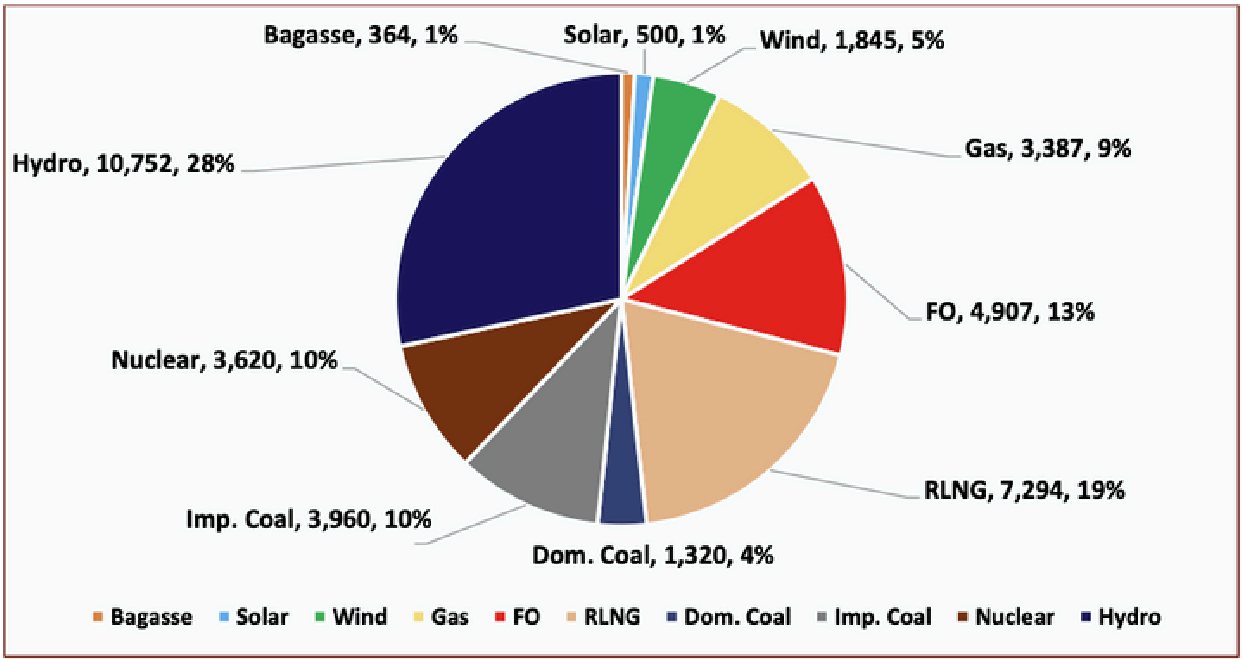

Chart 2-2: NTDC System Installed Capacity (MW)

Source: Indicative Generation Capacity Expansion Plan (IGCEP) 2022-31

27. 9.3 Ibid
28. 9.5 (4) Ibid
29. https://tribune.com.pk/story/2410393/ministry-to-approve-ep-field-plan
30. 4.5 Pakistan Energy Outlook Report (2021–2030)

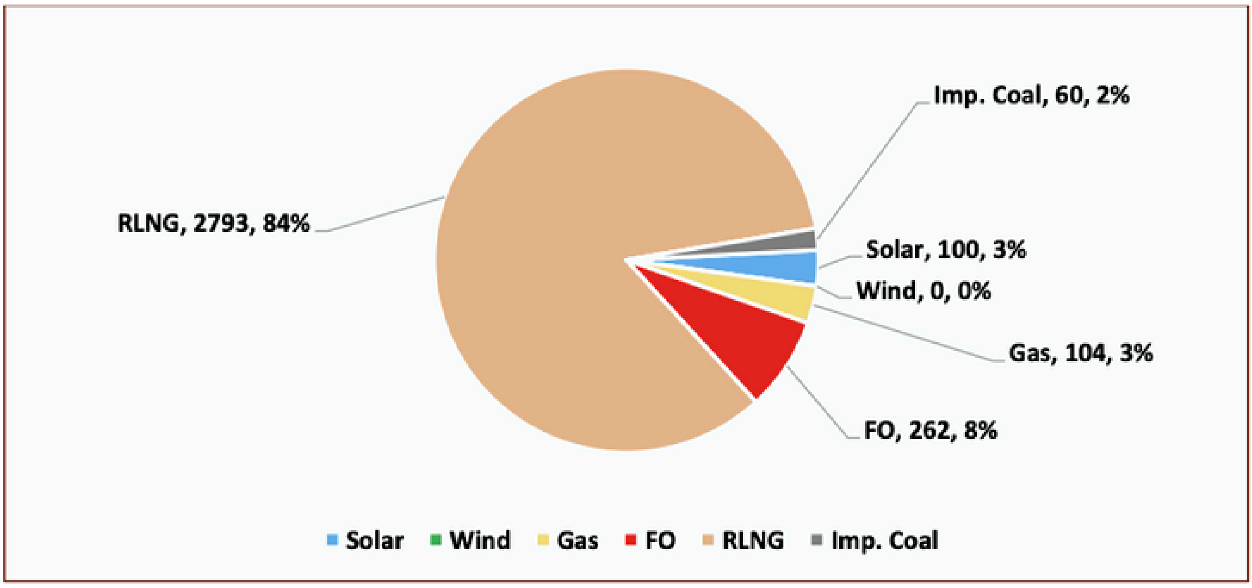

Chart 2-4: K-Electric System Installed Capacity (MW)

Source: Indicative Generation Capacity Expansion Plan (IGCEP) 2022-31

The Question of LNG

Although the Ministry of Petroleum has issued sporadic reports about increasing reliance on domestic coal for electricity production and avoiding the construction of new gas-fired power plants [31] due to a shortage of LNG in international markets, the matter is far from settled and requires perusal in the context of energy planning. The energy planning mechanism is a complex process that involves analysing various factors, such as current and future energy demand, available energy resources, and environmental concerns. It also considers economic and social factors, as well as geopolitical considerations. How this process looks in Pakistan is explained below in the context of RLNG.

The National Electricity Policy 2021 sets out the vision of integrated energy planning for all future energy additions. The focus of the policy is the optimum utilization of local fuels and minimum reliance on imported fuels, while considering the least-cost option. What this comes down to is: in order to determine the levelized cost of any energy project the IGCEP ordinarily looks at the capital expenditure, operating expenses (CAPEX, OPEX), fuel cost, indexation costs, etc. The cost assessment is usually exclusive of targeted social, and environmental costs in the long and short run. Based on these assumptions, despite being imported, expensive, and unreliable as experienced over the last two years, RLNG figures as a competitive fuel over the next ten years in the calculations of IGCEP.

The price indexation factors quoted in Table 3-1 shown below [32] indicate that the generation cost for RLNG will decrease further positioning it as a competitive fuel over the next ten years. However, the generation mix projection graphs over the next ten years, as mentioned in (section) H-8 “IGCEP Generation Mix 2023-31 (MW)”, show a remarkable decline in the share of RLNG in the energy mix. Based on these findings, the Integrated Energy Planning Outlook 2021-2030 recommends that more LNG terminals should be constructed. It also considers

31. https://www.reuters.com/business/energy/pakistan-plans-quadruple-domestic-coal-fired-power-move-away-gas-2023-02-13/
32. Page 33 IGCEP 2022-31

Although the Ministry of Petroleum, in its public statements, has demonstrated an inclination towards increasing reliance on domestic coal for electricity production and avoiding new gas-fired power plants due to LNG shortage in international markets, the matter is far from settled and requires perusal in the context of energy planning.

LNG as a cheaper substitute for natural gas as opposed to LPG.[33] However, this logic suffers from several flaws:

First, factors such as the erratic geo-political situation, the imminent climate change threat, the commitments of the state under the Paris Agreement, and the abundance of opportunities vis a vis renewable have not been calculated well. In this regard, mentioning the experience and conduct of South East Asian countries seems pertinent. The 2022 energy/gas crisis caused by the Russia-Ukraine war saw LNG suppliers skirting away from their promises made to large Asian countries including Pakistan, Bangladesh, and several others.[34] Not only has it earned LNG a bad reputation in general, but it has also pushed Vietnam, the Philippines, and Thailand to look for other commodities/solutions for their energy problems. They are angry at the hypocrisy of the suppliers for making profit their only priority at the expense of everyone else in Asia in distress.[35]

Secondly, while calculating the cost of electricity generation from gas or the profit thereof from gas, the applicable procedure does not internalise the cost of carbon allowance or pollution cost. In energy parlance, the method of calculation is known as the clean spark spread. At the more basic level, even the impacts of LNG terminals supposed to receive, store, and regasify the imported LNG on the communities or the environment are not factored into. For example, in Pakistan, the approval of LNG terminals at Port Qasim by the Oil and Gas Regulatory Authority was not seen favourably by the local fishing communities. To block financing for LNG terminals, these communities approached the financiers repeatedly and highlighted the impacts of these projects on their socio-economic and ecological life.[36] The price logic, even if prima facie admitted, needs to be judged and evaluated in this broader context that complicates the utilisation of gas in the energy mix. Unless these complexities are internalised, the scales shall keep tipping in favour of gas utilisation.

While calculating the cost of electricity generation from gas or the profit thereof from gas, the applicable procedure in IGCEP does not internalise the cost of carbon allowance or pollution cost.

33. 4.7 IEP OUTLOOK 2021-30
34. In 2022 and 2023, companies sanctioned by the state of Pakistan to procure oil and gas faced a terrible issue as major oil companies, including the State Oil Company of the Republic of Azerbaijan, reneged on their promises. The kind of contract SOCAR entered into with Pakistan is also instructive — SOCAR had promised distressed cargoes as equity LNG is no longer available. For more details, refer to the article: "Are We Headed for a January Gas Crisis?" available at https://profit.pakistantoday.com.pk/2023/11/13/are-we-headed-for-a-january-gas-crisis/. A Bloomberg story is also instructive to understand how and why Gunvor and Eni left Pakistan high and dry, banking on hyper technicalities. See: https://www.bloomberg.com/features/2023-how-commodity-traders-switched-off-pakistan-energy/. Also, refer to footnote 59 for additional information.
35.https://eandt.theiet.org/content/articles/2023/05/the-lng-dilemma-fuelling-global-imbalance?utm_source=Inside+Gas&utm_campaign=bdbb203f26-EMAIL_CAMPAIGN_2023_05_19_03_32_COPY_01&utm_medium=email&utm_term=0_-2f069a1d6c-%5BLIST_EMAIL_ID%5D
36. https://acjce.com/letter-campaign/?cat_id=73 and https://acjce.com/wp-content/uploads/2022/03/Letter-Concerns-on-Tabeer-LNG-by-ACJCE-Pakistan-January-21-2022.pdf

Table 3-1: Fuel Price Indexation Factors

Year	Furnace Oil	Local Gas / RLNG	Imported Coal	Uranium	Thar Coal	Bagasse
	Variable Price Index for Fuel Based Technologies					
2021-22	1.000	1.000	1.000	1.000	1.000	1.00
2022-23	0.961	0.936	0.992	1.003	1.001	1.00
2023-24	1.029	0.862	0.991	1.004	0.994	1.02
2024-25	1.044	0.820	0.967	1.007	1.009	1.02
2025-26	1.057	0.819	0.951	1.009	0.937	1.04
2026-27	1.089	0.841	0.950	1.012	0.951	1.04
2027-28	1.101	0.878	0.945	1.013	0.949	1.06
2028-29	1.109	0.899	0.949	1.016	0.942	1.06
2029-30	1.116	0.919	0.947	1.019	0.948	1.08
2030-31	1.137	0.931	0.946	1.020	0.935	1.08

Source: Indicative Generation Capacity Expansion Plan (IGCEP) 2022-31

Challenges and Complexities around Gas Price Determination

The price regime is another important component that promotes heavy reliance on the use of gas. Under the applicable regime, Oil and Gas Regulatory Authority regulates the midstream and downstream industries while the Ministry of Petroleum plays a crucial role in running the affairs of the upstream. For the determination of the gas price at the wellheads, the producer of natural gas submits an application to OGRA under Rule 5 of Natural Gas (Well-head Price) Regulations, 2009 to review, determine and notify the prices in the gazette. OGRA examines the contracts and notifies the prices in accordance with the dictates of the Petroleum Exploration and Production Policy, 2012 under Section 6(2)(w) of the Ordinance 2002. Para 10.2 of the Petroleum Exploration and Production Policy, 2012 is relevant to the pricing conversation at the upstream level.

It fixes or indexes the gas price for both associated and non-associated (technical terms which mean either the gas that comes out with petro or without it) other to the Cost and Freight price of the basket of Arabian/Persian crude oil import in Pakistan during the first six months period of the seven months immediately preceding the relevant price notification period (import Basket), as published in an internationally recognized publication acceptable to the parties. At the time when Petroleum Exploration and Production Policy, 2012 was passed, the reference commodity price (RCP) was set at USD 110/barrel to be reviewed every five years or when the price dynamics changed significantly. The competitive nature of this pricing is evident - thus creating the potential for large investments in these projects as discussed above.

Determination of price downstream

Concerning midstream and downstream, all activities including the pricing are regulated by the OGRA under the OGRA Ordinance, 2002 and the rules made thereunder. Under the prescribed procedure, the final decision is made by the federal government. Currently, Sui Northern Gas Pipeline Ltd and Sui Souther Gas Company Ltd are the main public utilities that transmit and distribute gas to the overwhelming majority of consumers.[37] As merchant pipelines, they buy gas from the wellhead source and transmit and distribute the gas to a diverse range of categories of consumers - domestic, commercial, industrial, fertiliser, and power plants.

Section 7 and 8 of the 2002 Ordinance, along with the Natural Gas Tariff Rules 2002 framed under section 42 of the 2002 Ordinance, outline the process of tariff determination. Section 7 of the Ordinance 2002 establishes the fundamental framework and guidelines for the regulator in determining tariffs. The prescribed parameters include:

1. Protection of consumers against monopolistic charges.
2. Consideration of research and development costs.
3. Provision of a reasonable return to attract investments for quality and quantity improvements in regulated activities.
4. Encouragement and rewarding of efficiency.
5. Appropriate price signalling to reflect the relative abundance or scarcity of gas.
6. Minimization of economic distortions.
7. Consideration of the costs of alternate or substitute sources of energy.

37. Initially, these public utilities were given the right to operate exclusively in the predetermined franchised areas. However, that right has expired. In the case of SNGPL refer to: 1.1 of Case No. OGRA-6(2)-1(5)/2022-ERR

Overall, these tariff determination principles aim to strike a balance between the interests of consumers, energy companies, and the broader energy market. They promote fairness, efficiency, innovation, and sustainability in the pricing of energy services. Their strict implementation has the potential to decrease dependence on gas, crucial gas losses and shrink the bludgeoning circular debt.

> Strict implementation of tariff determination principles has the potential to decrease dependence on gas, crucial gas losses and shrink the bludgeoning circular debt.

That said the process commences with licensees/public utilities - engaged in the regulated activity of transmission, distribution and sale of gas - submitting the proposal of their estimated revenue requirement for their services with the Regulator each year. The Regulator examines that proposal, invites the general public to record their objections,[38] prescribes the Tariff for these utilities provisionally, and eventually sends the matter off to the federal government for approval. The federal government, depending on the circumstances and taking into consideration the socio-economic agenda, makes changes in the proposal and requests the Regulator to notify the prices in the official gazette. [39] This is the stage where the tariff logic promoted in the Ordinance 2002 is usually overturned. Usually, the amendments made by the federation pertain to providing relief and subsidies to different classes.

The existing contracts promise the public utilities (SNGPL AND SSGCL) 17% rate of return (ROR) approximately on net fixed assets.[40] Despite these massive returns on the investment, these utilities are hardly ever a profit-making entity. Failure to keep the unaccounted-for gas losses within the prescribed limit is a major challenge. For market experts, 17% ROR is a calamity for the gas sector. In their opinion, the ROR should be linked with efficiency so that the focus is more on curtailing gas losses and less on network expansion. While some improvement has been made in this respect, the volume of gas losses stands extraordinary causing a loss of billions to both the environment and the national exchequer.[41]

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38. Rule 5 (4) (a) of the Natural Gas Tariff Rules, 2002 frames the idea of inviting the general public likely to be affected by the decision of the Regulator to record their views on the petition submitted by the Public Utilities on the estimated revenue requirement in optional terms. However, the Hon'ble Courts have considered it mandatory especially if it is likely to have an adverse impact on the consumers. For the detailed discussion on that see: P L D 2020 Lahore 261

39. 4.1 of the 2023 OGRA decision on the petition by SNGPL with respect to estimated revenue requirement for the financial year 2023-24, describes the process in the following words:

"The Authority is obligated to determine the total revenue requirement of the licensee under Section 8(1) of the Ordinance for a particular year after going through the due process of law. This primarily involves scrutiny of the petition, in-depth analysis of the estimates, the examination of operating and capital items, issuances of the notices to receive the valuable input/comments of al stakeholders, the opportunity of a public hearing and then determination of the total revenue requirement as per mandate under the legal framework. The Authority further notes that it has been able to curtail the petitioner's uneconomical costs to a greater extent through the introduction of efficiency benchmark and effective scrutiny and diligence. Accordingly, the Authority decision surely strikes a balance among the divergent interests of all stakeholders. Total revenue requirement of the licensee determined by OGRA under Section 8(1) or 8(2) of the Ordinance is sent to FG (Federal Government) to seek the advice regarding revision in sale price in respect of various categories of natural gas consumers."

40. Section 8 subsection 6 (h) of the Ordinance 2002 puts an obligation on the Regulator to determine a natural gas price for the retail consumers in a way that the rate of return guaranteed to Public Utilities in their licenses is accrued to them. As for the 17% rate of return ration please refer to the License condition 5.2 of SSGPL.

41. In Case No. OGRA-6(2)-1(4)/2022-RERR, the latest decision on the Estimated Revenue Requirement for SNGPL, the regulator approves the whopping 10,076 Million Rupees under UFG. Page 42

In its decision regarding SNGPL's petition for the determination of the estimated revenue requirement for the financial year 2023-24, the regulator includes a table that provides a list of net operating costs for SNGPL for both 2023-24 and the previous year. The UFG (Unaccounted for Gas) figures in the table are particularly noteworthy, especially when compared to previous years. According to the table, SNGPL is requesting 750 million rupees for UFG, which approximately represents 0.18844% of the cost of gas.[42] However, these figures shoot up in the final analysis.[43]

The current applicable UFG benchmark allows 0.36% for the transmission network and 6.25% for the distribution network, subject to further revision based on the following factors:

i) Findings of the UFG Audit determining the actual UFG of gas companies in relation to both indigenous and imported RLNG.
ii) Policy guidelines from the Federal Government regarding the recent amendment in the OGRA Ordinance, specifically the Oil and Gas Regulatory Authority (Amendment)Act, 2022 dated March 3, 2022.[44]

From an initial analysis, it is evident that the regulator has taken several measures to address the issue of gas losses. In the case of SNGPL, some of these steps include implementing separate benchmarks for distribution and transmission operations, as well as investing in system rehabilitation and UFG control activities. For the Financial Year 2023-24, the regulator has approved an allocation of Rs 1,672[45] million for the former and Rs 570 million[46] for the latter. These figures are reflected in the approved tariff for the financial year 2023-24.

Explaining the reason behind this marked reduction in UFG expenses, the Regulator refers to Rule 20(1) of Natural Gas Tariff Rules 2002 which imposes penalty on utilities for contravening the provisions of Ordinance, rules and their licences.

In this respect, reference to Rule 17(1)(c) of Natural Gas Tariff Rules 2002 is crucial. This rule introduces yardstick regulations for UFG, capacity utilisation, and operation and maintenance in the tariff of natural gas for public utilities. The Regulator determines a benchmark for UFG, capacity utilisation, and operation and maintenance and allows the utilities to either reap benefits or suffer a loss based on their compliance with these benchmarks. For example, if the Regulator sets the UFG benchmark for any public utility at 4.5%, then this means that the Regulator shall allow the transference of gas losses to the extent of 4.5% onto the consumers, but not beyond that.[47] Given the exacerbated subsidies on tariff rates already in place, the condoning of such huge volumes under UFG is an added burden on the fledgling economy of our country which requires more efficiency in the operations of these utilities.

Subsidies Formula

Perhaps, the next important issue is that of subsidies which are quite complex and have gone through various stages of consideration and proposals. The perusal of "SNGPL - Determination for Review of Estimated Revenue Requirement for F.Y. 2022-23- Dated 09th January 2023", a decision by OGRA reveals that the Regulator approved the average prescribed price at Rs 1,238.68 per MMBTU regardless of the consumer category.[49] However, the Federal Government, in line with historical practice, did not approve them as is apparent from the gas sale

42. 2.1.7 of Case No. OGRA-6(2)-1(5)/2022-ERR
43. UFG is a complex matter. The money claimed under this head is multifaceted. For example, to control UFGs, improve the system efficiency and to detect the events of gas losses, these utilities charge separately for all these heads and the money claimed runs in millions.
44. 7.17 and 7.18 of Case No. OGRA-6(2)-1(5)/2022-ERR
45. 5.6.5 of Case No. OGRA-6(2)-1(5)/2022-ERR
46. 5.6.9 of Case No. OGRA-6(2)-1(5)/2022-ERR
47. Based on this, the UFG claims beyond these benchmarks made by the utilities in their estimated revenue requirement proposals are disallowed by the Regulator. The disallowance of UFG claims beyond the benchmarks was also agitated in front of the Sindh High Court Karachi. However, it was dismissed. For detailed discussion, refer to: 2017 PLD Sindh 567
49. In its petition, SNGPL had claimed Rs. 2,977.51/MMBTU reflecting the aggregate average prescribed price. This includes the recovery of previous year shortfalls as well. Furthermore, the petitioner also claimed Rs. 221,447 million on account of unrecouped cumulative impact of diversion of RLNG moleculesto domestic consumers. The differential between the price prescribed by OGRA and the price claimed by the petitioner mainly reflects the subsidy equation inserted into the notified price by the Federal Government. When the federal government does not adhere to the recommendations of OGRA, the shortfall accumulates into the revenue requirements of the upcoming years. In the case of RLNG, it is even more crystal clear.

Table 3: Comparison of Projected Operating Expenses with Previous Years

Rs. in Million

Description	FY2020-21	FY2021-22	FY2022-23	FY2023-24	Inc/Dec over RERR	%age
	FRR	FRR	RERR	The petition		
Sales volume (BBTU)	347,771	310,325	367,806	350,670	18,289	-5%
Cost of gas	179,682	183,333	264,020	398,071	134,051	51%
UFG adjustment	3,092	(4196)	(9821)	(750)	9,071	-92%
Transmission & distribution Cost	15,947	14,644	17,178	28,106	10,928	64%
Depreciation	16,355	14,731	18,342	20,072	1,730	9%
Late payment Surcharge (payable) & cost of short term borrowing	698	875	-	33,334	33,334	
Total Operating cost including cost of gas	209,590	209,387	289719	478,832	189,113	65%

price Notification No. OGRA-10-3(8)/2020, dated February 15, 2023, by OGRA. While OGRA is driven by the market and other economic grounds as exemplified by section 7 of Ordinance 2002, these factors are not of priority for the federal government. The biggest challenge for the Federation is the provision of gas at a price that people can afford, and rationalisation may not achieve that end. Therefore, it is not uncommon to see a difference between the prices prescribed by the OGRA and those determined by the Federal Government.

> The biggest challenge for the Federation is the provision of gas at a price that people can afford. Therefore, it is not uncommon to see a difference between the price of gas prescribed by the OGRA and those determined by the Federal Government.

The Federal Government finds a balance - based on cost realisation and driven by the agenda of keeping the public happy. This balance is reflected in the logic of "cross-subsidies" under which the power sector and the industrial sector end up paying the subsidy for the domestic and fertiliser sectors. For example, the schedule provided in gas sale price Notification No. OGRA-10-3(8)/2020, dated February 15, 2023, states Rs. 121 per MMBTU for the domestic sector. However, this price goes up to Rs. 1,650 and Rs. 1,805 per MMBTU for commercial units and CNG off-takes respectively. For the fertiliser and cement industries, it notifies Rs. 510 and Rs. 1,500 per MMBTU. Under the said notification, Roti Tandoors are perhaps the most subsidised category availing per MMBTU gas at Rs. 110.

While there are several other categories availing either the subsidised prices or the unsubsidized depending on their placement in the spectrum, the purpose was to shed light on the workings of cross-subsidy. Under this logic, CNG stations, cement factories, and commercial units other than the Tandoors pay more to cover the deficit caused by the subsidy to the domestic sector, fertiliser sectorr, and other important small units.

While these policies may not be favourable to some industries, such as commercial units, CNG off-takes, and cement, they ultimately promote gas utilisation in one way or another. Furthermore, imposing higher costs on certain categories does not necessarily mean that there is no flexibility. During the previous government's reign, a delegation from the business community met with then-Prime Minister Imran Khan to request statutory relief from their outstanding gas dues, which had resulted in widespread litigation against manufacturing units for their failure to pay. The government was on the verge of providing relief to them through an ordinance. However, it could not be implemented due to widespread public outcry.[50] That was a period when the world at large was under the grip of COVID-19 and therefore, the government and the public were sensitive against giving any relief to the industrial sector. Despite that, the gas sector is still heavily subsidised considering the circular debt reaching a whopping Rs.1.64 trillion.[51]

> While the policy of cross subsidies may not be favourable to some industries, such as commercial units, CNG off-takes, and cement, it ultimately promote gas utilisation in one way or another.

50.https://caravanmagazine.in/politics/imran-khan-pakistan-military-general-bajwa?utm_source=mailer&utm_medium=email&utm_campaign=current_issue&utm_id=131
51. https://www.brecorder.com/news/40226324

World Bank vs. OGRA and the Federation

It is no secret that OGRA and other financial institutions have expressed their reservations about the way the Federal Government determines prices. However, it must be mentioned that the World Bank's approach differs from that of the Regulator or the Federation regarding investment or allocation priorities. According to the World Bank, investment should be directed towards high-yielding sectors, and the fertiliser and domestic sectors may not necessarily fall into this category. As a result, in World Bank's logic, these sectors should not be prioritised for gas provision, let alone subsidised prices. The Federation's logic would be to keep the money where the mouth is i.e. investing more in the Public. The following excerpt from the report by the World Bank, titled "Pakistan Oil and Gas Sector Review", spells out the empirical grounds for why subsidising fertiliser is problematic:

"Moreover, notwithstanding the low gas price, imported fertilizers have been cheaper at times; hence, the benefits of the gas price subsidy do not necessarily reach the farmers, presumably the intended target group of the subsidy scheme. Lastly, in some years, there has even been a surplus of fertilizer, which had to be exported at a considerable loss to Pakistan's economy… Under the circumstances, the rationale for supporting the fertilizer industry through low gas prices is highly questionable."[52]

Furthermore, the report also observes why extending subsidies to the household sector can cause double damage to the state - on the one hand, it deprives the state of a Gas Development Surcharge, [53] on the other hand, Public Utilities are forced to build a low-pressure pipeline at an exorbitant cost to be utilised efficiently only during the winter season.[54]

In the case of the Regulator, as natural gas reserves continue to diminish, the trend is shifting towards weighted average price for both natural gas and RLNG. If implemented, the tariff shall be determined after combining the price of natural gas and RLNG together. Additionally, the federation has also taken measures to reduce the volume of protected categories. Other proposals, such as bringing parity to electricity and gas prices, are being considered as ways to further promote the use of gas and reduce import costs. If implemented this will allow the government to enhance further the share of gas in the production of electricity and save millions of dollars worth import bill.[55] Nevertheless, the issue is far from settled. Despite the differences in the approach, there is no difference in that they all promote the usage of gas. Whether the price of gas goes up or down, some buyers are ready to outbid each other to secure the maximum volume of gas.

Additionally, the price determination is also guided by the allocation formula which is explained below.

52. Page 12- Pakistan: Oil and Gas Sector Review
53. Section 3 (1) of THE NATURAL GAS (DEVELOPMENT SURCHARGE) ORDINANCE, 1967 states that every company shall pay a development surcharge equal to the differential margin in respect of natural gas sold by it. However, if the retail price is lower than the prescribed price, the public utility companies cannot pay the Gas development surcharge because the difference is in negative.
54. Ibid page 95
55. https://www.pakistantoday.com.pk/2023/01/27/government-aims-at-raising-gas-prices-at-par-with-electricity/

Allocation Formula

The next issue is natural gas allocation and management. Launched in 2005, the Natural Gas Allocation and Management Policy provides guidelines and priority orders for consumers. From the table mentioned below, the domestic sector comes first followed by fertiliser and then other categories. However, the implementation of this order is complicated by various factors, especially in the context of Article 158 of the Constitution. For example, most recently, in Peshawar, the supply of natural gas was stopped at several CNG stations to meet the needs of domestic consumers. The decision was challenged before the Peshawar High Court[56] contending that the needs of Khyber Pakhtunkhwa should be met first considering it produces more gas than its needs. Even though the petition is allowed by the Hon'ble Court, the issue is far from settled and requires the urgent gaze of the Council of Common Interests.[57] As mentioned earlier, a Priority Order can be changed depending on the overall needs of the country subject to the approval of the Cabinet Committee on Energy. For example, a threat to food security, especially in the context of the 2022 floods, may require the country to allocate a significant chunk of gas to fertiliser at the cost of other sectors.

However, public utilities have been accused of breaching the Priority Order without due procedure raising questions of accountability and transparency. In 2022, a Secretary General of Pakistan Association of Large Steel Mills wrote a series of letters to the high-up's including Chairperson of the Task Force on Energy, Shahid Khaqan Abbasi and the Minister of State (Petroleum Division) Musaddiq Malik in which they agitated against SSGC for providing more domestic natural gas to the captive power plants, and less and costly RLNG to the K-Electric power producers in utter violation of the Natural Gas Allocation and Management Policy. The following statement gives the complete gamut of what is at risk here:

Presently, 200 MMCFD natural gas supply is being supplied to captive power plants at the rate of PKR 1087/MMBTU and PKR 852/MMBTU for zero rated export industries which are generating electricity at PKR 13/kWh and PKR 11/kWh respectively. On the other hand, KE is being provided 0 MMcfd Gas and 100 MMcfd RLNG at the cost of PKR 4,656/MMBTU pushing them to produce electricity at an overblown cost because of which 25 million residents of the city and 40.000 industries continue to suffer.
Even the Transparency International took notice of this flagrant violation of the Priority Order and wrote a letter to the Prime Minister Mian Muhammad Shehbaz Sharif to investigate the affair and ensure compliance with the Natural Gas Allocation and Management Policy.

The conduct of SNGPL is also questionable. The projected volumes provided by SNGPL for the financial year 2023-24 reveal a change in the Priority Order. Section 6.1 of Case No. OGRA-6(2)-1(5)/2022-ERR, gives a comparison of the BBTUs (Billion British Thermal Units) provided by SNGPL over the duration of the last many years. The examination of the table would reveal that the allocation formula proposed in the Natural Gas Allocation and Management Policy is largely followed by the SNGPL, with one exception: the cement industry's allocation for the FY 2023-24 shows an inexplicable increase of 5,126% compared to the FY 2022-23, without any providing any explanation.

The change in the allocation formula raises significant questions of accountability which needs to be probed by the relevant authorities. The entire web of policies - whether they be about exploration, price rationalisation, network expansion, Priority Order, or gas allocation - supports the idea of the exhaustion of gas. The Priority Order could change - the domestic side may find itself constrained to utilise electricity for space heating, but it will not affect the overall outlook on gas.

56.https://www.dawn.com/news/1730956. The debate can also be gleaned from the following case law: W.P No.226-B of 2013 Muhammad Asif Vs. Federation of Pakistan Through Secretary Ministry of Pakistan and Natural Resources, and 4 others.
57. Ban on the supply of CNG has also happened in the past. On one such occasion, the main reasoning was the safety of the public as it was observed that many of the fire-related incidents using CNG were mainly because of the poor installation practices. Refer to page 3 of the proceedings of the National Assembly 7th session, 2013.

Category of Consumers	Priority Order
The domestic and commercial sector	First
i) Fertilizer Sector; and ii) Industrial Sector to the extent of their process gas.	Second
i) Independent Power Plants as well as WAPDA and KESC's Power Plants having firm gas supply commitment under GSAs (Gas Sales Agreements)	Third
i) General Industrial and CNG Sectors.	Fourth
i) WAPDA's and KESC Power Plants other than those listed against S.No. 3 above. ii) Captive power sector	Fifth
Cement sector	Sixth

Source: Natural Gas Allocation and Management Policy, 2005

The entire web of policies - exploration, price rationalisation, network expansion, priority order, or gas allocation - supports the idea of the exhaustion of gas.

Comparasion of the BBTUs provided by SNGPL --

Category	FY 2019-20 FRR	FY2020-21 FRR	2021-22 FRR	FY- 2022-23 FRR	FY 2023-24 The petition	Increase/(Decr) Over RERR	%
Domestic	209,969	204,235	204,039	161,524	235,872	64,348	40%
Bulk Domestic	13,707	12,691	12,703	13,204	13,900	696	5%
Fertilizer (fuel and feed)	31,782	32,033	29,361	34,578	33,341	1,237	-4%
Power including IPPs	23,957	20,335	20,931	31,763	33,445	1,682	5%
Commercial	13,138	12,343	11,235	15,342	6,253	9,089	-59%
Gen. Industry	9,141	8,954	8,957	6,611	5,853	758	-11%
CNG	21,906	19,205	18,408	17,490	14,631	2,859	-16%
Zero Rated	21,096	26,256	24,094	19,303	12,437	6,866	-36%
Cement	139	105	63	35	1,829	1,794	5126%
Sp. Commercial	2,937	2,888	3,087	3,118	3,109	9	0%
Grand total	347,771	339,045	332,878	302,968	350,670	47,702	16%

Gas Infrastructure Development Fee

Perhaps giving reference to the gas infrastructure development fee is also to further understand the conduct and relationship of the State towards Gas. This also refers to the Iran-Pakistan pipeline project mentioned above. In the year 2011, the Gas Infrastructure Development Cess Act, 2011 (GIDC Act, 2011) was imposed as a specie of 'tax' on industrial and commercial consumers of natural gas. The purpose was to finance the cost Pakistan has to bear for laying the overland pipelines through which natural gas was to be imported into the country from Iran and Turkmenistan. Apart from the import of natural gas from the above two countries, the transportation of regasified LNG imported from Qatar through a pipeline called the North-South Pipeline was also to be financed through this mechanism.

Ignoring the long history where the GIDC Act, 2011 was successfully challenged and repealed, was re-enacted again[58] and stricken down, the matter of fact is the State continued to collect a large sum of money from a large set of commercial and industrial consumers on the vague pretext of providing these consumers the service in the remote future without having any clear timeline. In the final round of litigation, the Hon'ble Supreme Court in CA 1113/2017 directed the state to return the fee collected concerning the gas infrastructure development fee to the consumers on the following grounds: the legislative act imposed the fee without providing a clear timeline during which the service shall be provided. The Hon'ble Court also noticed that finding the right balance and proportionality between the fee imposed and the service provided is the sine qua non. We are not concerned with the outcome although the conduct of the state is of paramount importance to us. It shows the willingness on the part of the State and the extent that it can go to ensure the provision of gas.

As of present, all LNG projects whether approved or in the pipeline are to be off-shore which means a colossal loss of livelihoods to sea communities not to mention the impact on mangroves and the sea ecology.

58. t's important to note that not all sums under this ordinance were collected by the Government. Some were collected by Independent Power Producers (IPPs) and the fertilizer sector but were never deposited in the treasury. In 2019, the PTI government promulgated an ordinance amending the GIDC Act, waiving off 50% of what the IPPs and fertilizer industry had collected from consumers under GIDC but had not deposited in the treasury. However, it was repealed due to mounting public pressure and uproar in the media. Ultimately, the matter was referred to the apex court where it is still pending. For greater details, refer to "Pakistan: The Reckoning Begins" by Shahid ur Rehman.

LNG Policy

Considering the accelerated rush on the part of the State to secure LNG volumes to meet the growing needs of the country, the study of the framework that structures the process of LNG procurement becomes imperative. The LNG Policy 2011 primarily intends to promote the participation of the private sector in the import of LNG to meet the rising demand for gas for various energy and non-energy related purposes in the country. Being a regulated activity, it is the responsibility of the OGRA to ensure compliance of all the activities in the value chain with its rules and regulations.

The 2011 policy conceives both integrated project structures as well as unbundled structures for LNG business by the private sector.[59] Based on this, OGRA has granted licences to private investors to not only procure LNG but also find buyers using the existing network of pipelines and thus releasing the government from the obligation of guaranteed buying, etc. Nevertheless, these integrated structures have been seen unfavourably by the SNGPL and SSGCL for it compromises their monopoly over the distribution and transportation of gas. While on paper, the problem has been overcome by the declaration of Third-Party Access Rules 2018, however, the issue of access persists. Earlier the Tabeer LNG and Energas had licences for integrated structures. According to their statements, they would have been deep into the business much earlier, had there been no roadblocks by the Sui companies vis a vis capacity allocation.[60] (It is to be noted that Tabeer Energy has now been acquired by the UAE-based Bison Energy FZCO.)

Furthermore, the 2011 policy also sets out a range of incentives for the promotion of LNG business in the country. LNG businesses have been given the following incentives: exemption from customs duty on the procurement of LNG; complete exemption from sales tax; exemption from customs duty above 5% on all the equipment needed for LNG; permission to claim 50% allowance in depreciation for the first year, etc. Apart from that, the government also undertakes to provide active support in obtaining the land required for LNG business. Lastly, the government also proclaims that it will seek the assistance of multilateral banks and other financial institutions to protect the LNG business.

As noticed above, the focus on socio-economic considerations is also lacking here. As of present, all the projects whether approved or in the pipeline are to be off-shore which means a colossal loss of livelihoods to sea communities not to mention the impact that they will have on mangroves and the sea ecology. However, unfortunately, these considerations are never given sufficient attention.

> The spate of cross country projects, even if implemented to the fullest, will not bridge the gap between the diminishing supply and the rising demand. Therefore, the dependency on LNG and the challenges associated with that will remain in place unless the country makes a bold leap to shift to cleaner fuels.

59. We have limited our focus to the private side of the business. LNG policy 2011 also states the procedure for the procurement of gas by Public entities such as Pakistan LNG LTD and Pakistan State Oil. These entities have been inviting bids for LNG cargoes from the spot markets but their efforts have hardly borne any fruits. In a few cases, the bidding companies even defaulted after participation in the bids and after the submission of security bonds. For more details refer to: Guvnor Singapore PTE Ltd Versus Pakistan LNG Limited.
60. https://www.dawn.com/news/1698111

Conclusion

Over the preceding pages, we explored the different contexts of gas in Pakistan. These contexts pertained to geostrategic location, constitutional trajectories, future projections, exploration policies, price determination, and LNG policy to name a few. Regardless of their approach, trajectory and texture, all of them make gas a permanent fixture of our everyday life. Geo-strategic location standalone is significant to consider. The most recent entente between the Kingdom of Saudi Arabia, Iran, and Syria brokered by the People's Republic of China means an opportunity for Iran and Pakistan to reconsider the old projects in a zombie state. Similarly, a better security situation in Afghanistan and a slight improvement in the relationships between India and Pakistan would also provide an unprecedented impetus to the TAPI pipeline. In fact, Pakistan and Turkmenistan have recently signed a joint implementation plan to accelerate the pace of infrastructural development. However, these cross country projects alone, even if implemented to the fullest, will not bridge the gap between the diminishing supply and the rising demand. Therefore, the dependency on LNG and the challenges associated with that will remain in place unless the country makes a bold move and shifts to cleaner fuels.

Domestically, we also witnessed how the cost plus model of tariff regime is causing tremendous losses to the national exchequer with the Regulator and the leading financial institutions pushing the federation to substitute it with the rationalised model. For all intents and purposes, given the existing tariff structure the gas venture is almost risk free - all the expenses are passed through to the consumers with the utilities enjoying a handsome ROR on their investment at the cost of efficiency and national exchequer. Despite these measures, the health of the sector and the Utilities is deeply critical, requiring rethinking of the sector. That said, the question of whether the health of the companies if unbundled would be different under the same tariff regime is open for debate. However, the role of management, administration and the stakeholders cannot be ruled out.

Management and administration of gas also figured as a competing space between the provinces and the federation. While the Judiciary does intervene in how the resources should be distributed, the matter is far from settled. Whether it be the provinces producing gas or the industries craving for the commodity, allocation remains a thorny issue. Amidst all this, one thread that runs consistently is: they promote and understand gas as an important and coveted source of fuel. The state apparatus both legal and executive appear steady and consistent in this respect.

Lastly, the gas industry as a whole also thrives on the absence of environmental standards regulating the value chain. For example, C (II) OF Schedule (I) of the Sindh Environmental Protection Agency (Review of Initial Environmental Examination and Environmental Impact Assessment) Regulations, 2014 stipulates that oil and gas extraction projects including exploration and production located outside the environmentally sensitive areas were subjected to Initial Environmental Examination alone. These regulations also fail to compel the mammoth pipeline projects to stringent social and environmental scrutiny. Not only that, the official documents brazenly regard gas as clean and friendly to the environment. It is probably because of this logic that there are no standards whatsoever to monitor, control or fine methane emissions. While it would have only been fair to push the category under Schedule II of SEPA, which requires EIAs, its exclusion paves the way for gas projects to proceed headlong without any regard to the ecology, communities, and the commitment of the State to the Paris Agreement.