

# Study on the Fuel Supply Shortages in Bhutan

## 1. Abstract

Fuel supply disruption occurs due to various factors such as road blocks caused by landslides and transportation issues, temporary closure of international border gates, low national reservoir capacity and low storage capacity at the Petroleum Retail Outlets, equipment malfunctions and delays in shipment from source due to payment delays.

Fuel supply disruptions have significant socio-economic consequences on the country. In any economy, ensuring the reliability and efficiency of fuel supply chains is paramount to sustaining economic activities, transportation networks, and daily livelihoods. Bhutan totally depends on fuel imports from India making it vulnerable.

Persistent supply disruption and shortages have surfaced where numerous outlets are reported to be without sufficient fuel stock to meet demand. Shortages have been reported in Samtse, Gedu, Tingtibi and Lhamoidzingkha in recent times.

This study was undertaken to study main factors that create shortages and what the government could do to address some of constraints. The study reveals several vulnerable links in the supply chain which lead to disruption. Diesel fuel disruption is more frequent than petrol and the capital region experiences more frequent supply disruptions and shortages.

## 2. Background

During the past six months, the following reports on fuel supply distribution and shortages in retail outlets were featured in the media or discussed in the Dzongkhag Tshogdu meetings (Tab. I)

**Table I: Media reports and DT discussions pertaining to fuel shortage in the last six months**

Location where shortages occurred	Description of issue (s) highlighted
Tashichholing Dungkhag, Samtse	Persistent fuel shortages.
Gedu, Chhukha	Unreliable fuel services at the local depot
Lhamoidzingkha Dungkhag, Dagana	Persistent fuel crisis for several years. Residents have repeatedly raised concerns at Gewog and Dzongkhag Tshogdu meetings.
Tingtibi, Zhemgang	Continuous and recurring fuel shortages at the depot.
Romtokto & Chukha	STCBL has posted more than 15 updates on their social media page since January 2024, notifying public about temporary stock outs in Romtokto and Chukha
Dangdung, Trongsa	The 5 <sup>th</sup> DT discussed issue of irregular fuel supply and frequent disruptions at POL, Dangdung. ROICE, Trongsa had issued reminders to depot managers to ensure consistent supply.
Samtse Town	The DT has decided to limit fuel sales to foreign vehicles due to fuel shortages.

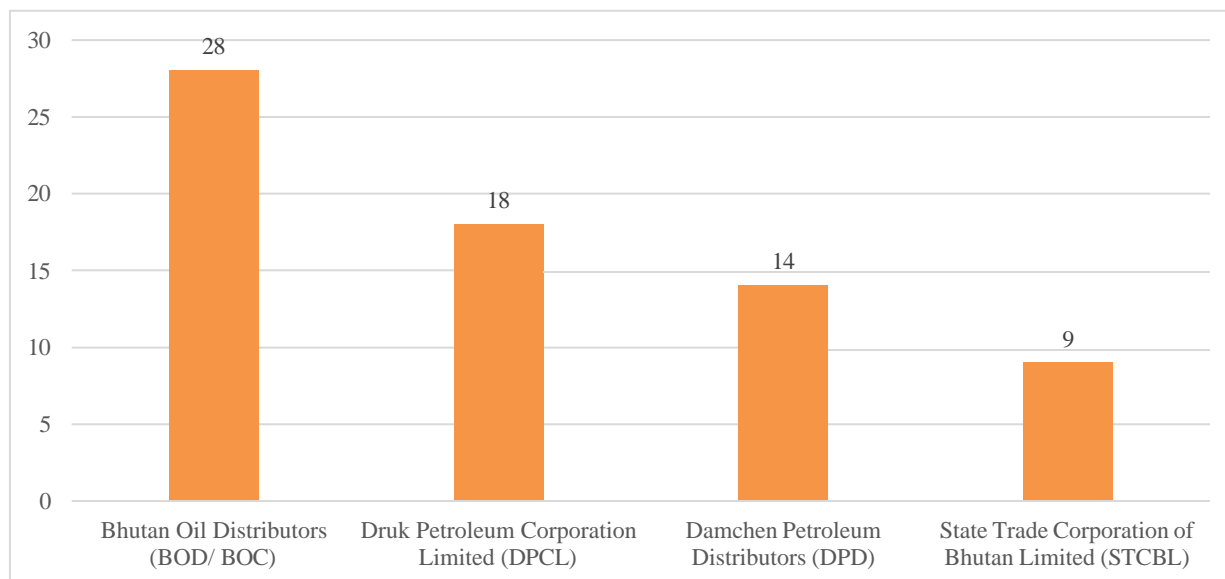
## 3. Methods and Materials

Information was collected from PROs across the country using a questionnaire, comprising of both closed and open-ended questions. Past media reports of shortages were also reviewed.

#### 4. Findings and Discussions

The four authorized dealers – Bhutan Oil Distributor (BOD/ BOC), Druk Petroleum Corporation Ltd. (DPCL), Damchen Petroleum Distributor (DPD) and State Trading Corporation of Bhutan Ltd., (STCBL) - currently operate 69 PROs across the country (Fig. I)

**Fig. I: Number of PROs operated by various distributors**



The Indian Oil Corporation Limited (IOCL), the Bharat Petroleum Corporation Limited (BPCL) and the Hindustan Petroleum Corporation Ltd. (HPCL) are the three principal companies that export fuel to Bhutan.

The fuel supply into Bhutan is fairly simple. It begins with the Principal Companies delivering fuel to border towns (Phuentsholing, Gelephu & Samdrup Jongkhar) using their own tankers. Once the fuel reaches the border towns, following border clearance protocol, fuel enter Bhutan and is either transshipped immediately or decanted into the authorized distributors' storage tanks. The fuel is then distributed to different PROs based on demand.

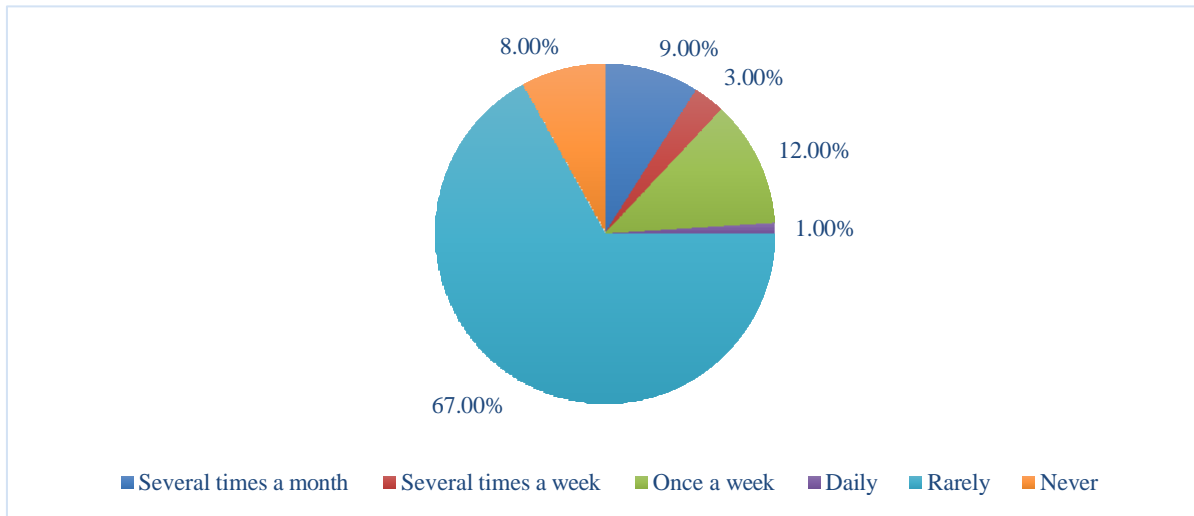
67% of the PROs rarely faced any shortage of fuel during the last six month, while 4 % faced daily or several times a week shortage (Fig. II). Only 8 % had no shortage issue.

When comparing between distributors, it was evident that distributors that operate a greater number of PROs experience more shortages on the average. This is expected since they also of PROs operate in more remoter parts where distance is farther from source and transportation is more expensive.

Thimphu Region<sup>1</sup> experienced the most frequent (daily to several days a week) shortage, while 18.75% of the PROs in Phuentsholing Region had a weekly shortage occurrence. PROs at Samdrup Jongkhar and Trongsa Regions never or very rarely faced fuel shortage during the period (Fig. III). The frequent shortages in Thimphu and Phuentsholing Regions can be attributed to failure to meet the higher demand consistently which is due to greater number of vehicles and industries.

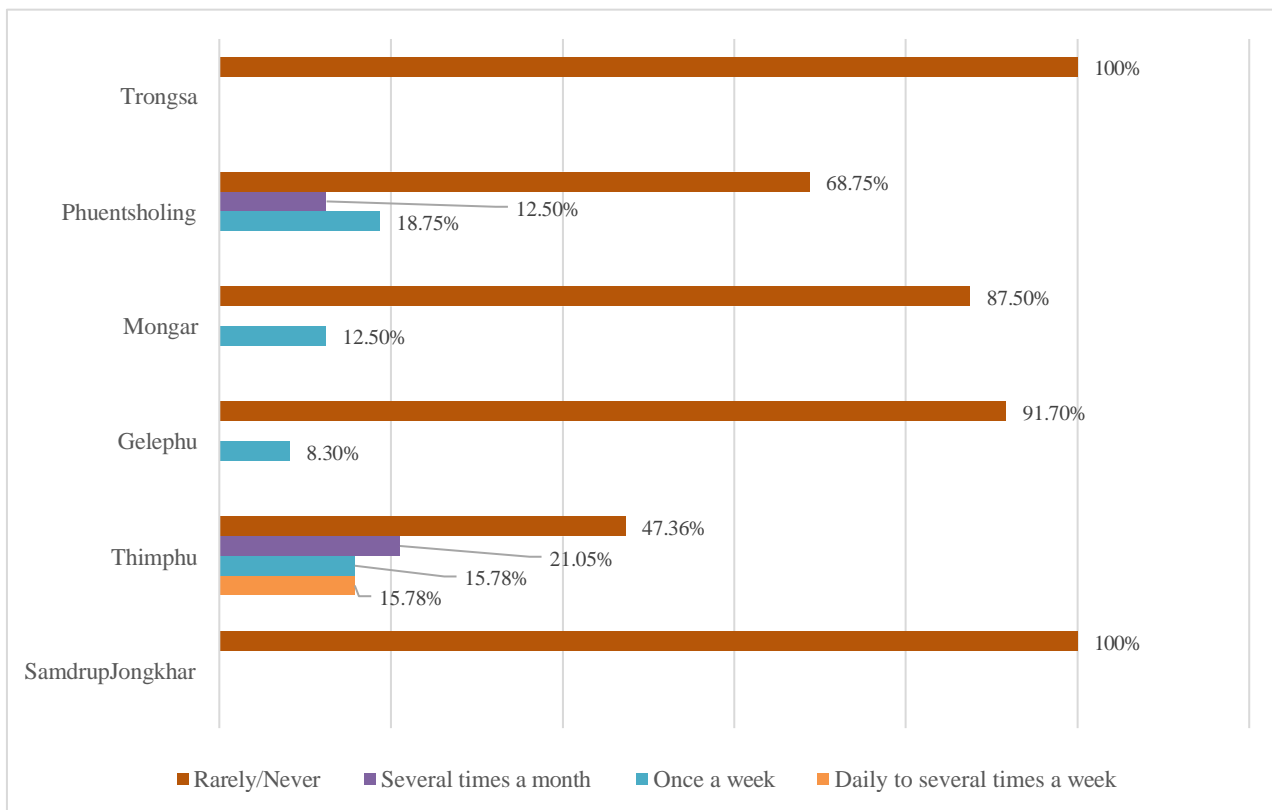
<sup>1</sup> 'Region' consist of Dzongkhags under ROICE's jurisdiction

**Fig. II: Frequency of fuel shortage faced by PROs across the country in the last 6 months**



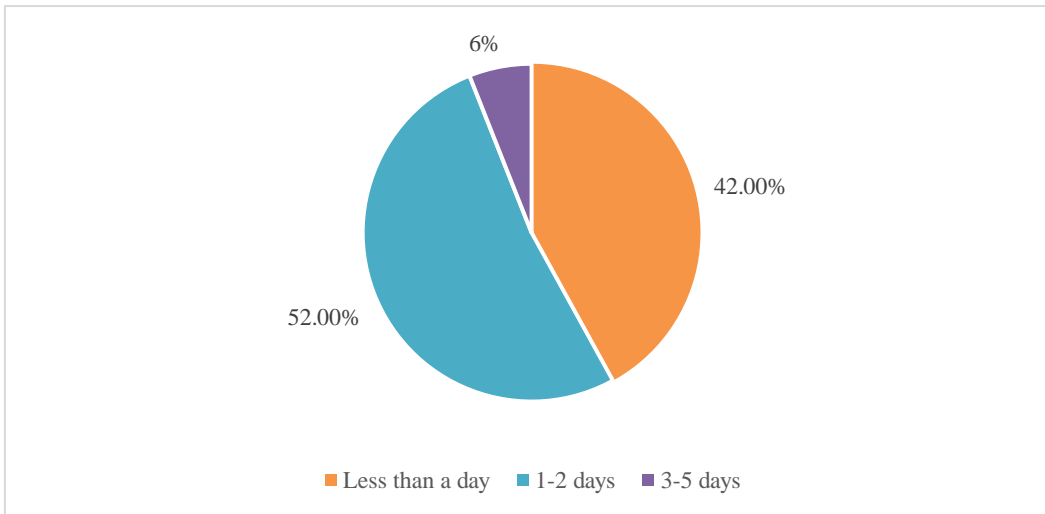
Lack of adequate storage capacity in the PROs appears to be the biggest problem leading to shortage in supply. While the number of vehicles has surged and the number of industries has grown, storage capacity has not grown in tandem. While the number of vehicles has increased from 75,190 (in 2014) to 126,501 (in 2023), in all likelihood the national fuel storage capacity would not have kept up proportionately.

**Fig III: Frequency of fuel shortage across regions**



Restocking varies among dealers. On the average 52 % of PROs are able to restock fuel within a day or two while 42 PROs claim their ability to restock within a day after fuel shortage occurs. However, possibly because of the distance, it takes been three to five days for fuel to reach some locations (Fig. IV).

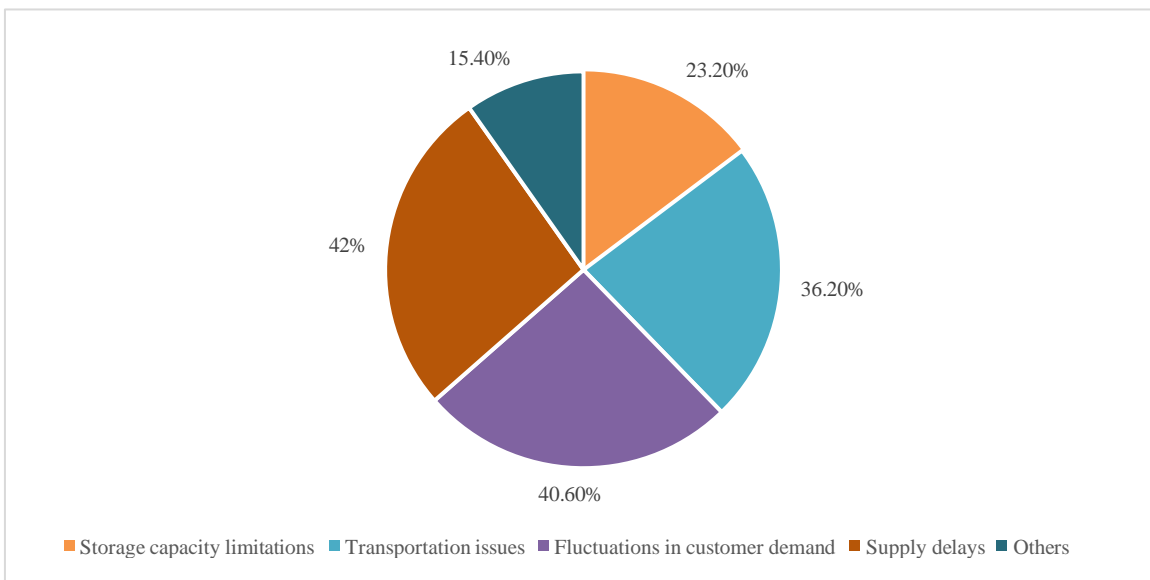
**Fig IV: Time taken to restock the fuel**



Restocking time depends on the distance from source. PROs located in areas bordering India such as Phuentsholing, Gelephu and Samdrup Jongkhar are able to restock much faster than those located in the interiors.

According to PROs, the shortage stems from factors such as delays in supply and limited onsite storage capacity (Fig. V). Other reasons cited are transportation issues such as road blocks, sometimes due to sudden increase in demand and lack of space to install additional UG tanks.

**Fig. V: The factors leading to shortages.**



Since the most frequent fuel shortages occur in Thimphu and Phuentsholing Regions, the storage capacity for PROs located in urban areas in these regions needs to be increased to ensure reliable supply. All PROs are mandated to maintain a minimum stocks as per Section 124.4, Trade and Industry Rules 2023 but, according to ROICEs, who monitor stocks, some fail continually to maintain that.

Relevant government agencies must mandate dealers/distributors to beef up their total storage capacity to cater to intermittent shortfalls due to various reasons but more so to cover for shortfalls during monsoon where frequent roadblocks over protracted periods disrupt supply severely.

Dealers must also pay attention to remittance of payment to principal companies in time to prevent supply delays, since this is one considered as one of the reasons. Planning ahead is critical to ensure delivery schedules do not coincide with days when principal companies or banks are closed or ordering in larger quantities before monsoon or by avoiding delivery during festive periods when transportation might be impeded.

## **5. Conclusion**

Ensuring a reliable fuel supply at all times is an important socio-economic consideration to be made by the government. As an important dependent country, adequate fuel stocks have to be maintained both by the government and the private sector. Private dealers have to invest more to expand storage capacity. Supply and demand forecasting would also mitigate shortage during different times of the year.

## **6. Acknowledgement**

*The CCAA would like to thank the Managers and their representatives in PROs all over the country for their co-operation in providing honest feedback, with the intention to improve the fuel supply and distribution system in the country.*

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