

# Strategic Sourcing of Lubricant Oil for TNB Power Plants: Lessons Learnt

**ILSAS Conference on Learning & Development 2019**

Fadzillah Md Fadzil

Norliza Md Darus





# Contents

- 01 Introduction & background
- 02 Strategic sourcing of lubricant oil
- 03 Lessons learnt
- 04 Conclusion

# About us



**Norliza binti Md Darus**  
**Category Strategy**  
**Procurement & Supply Chain – Hub 1**  
**Procurement & Supply Chain Division, TNB**



**Fadzillah binti Md Fadzil**  
**Category Strategy**  
**Procurement & Supply Chain – Hub 1**  
**Procurement & Supply Chain Division, TNB**

# Introduction & background

01

02

03

04

Lubricant oil is used to reduce friction between surfaces in mutual contact, and ultimately reduces the heat generated when the surfaces move

## Classification



Four (4) basic classes:

- **Solid:** Bulky solids, paint-like coatings, or loose powders.
- **Liquid:** Mineral oils, natural oils, synthetics, emulsions, or even process fluids
- **Gas:** Air or gas that will not attack the surface that it should protect or self-decompose
- **Greases:** Oils which contain a thickening agent to make them semi-solid.

## End User Segment



Major end user segments of lubricating oil comprise:

- Commercial and consumer automotive
- Industrial machinery, marine, construction and metal working application

## Production



Lubricating oil production highlights:

- Typically lubricants contain 90% base oil, and less than 10% additives
- The processes involved in producing lubricating oil are extraction, sedimentation, fractionating, filtering and solvent extraction, additives addition, inspection and packaging.

**Decentralized and transactional purchase of lubricant oil had caused limited visibility on the usage of lubricant oil across the power plants and variance in the purchase prices for the same product**

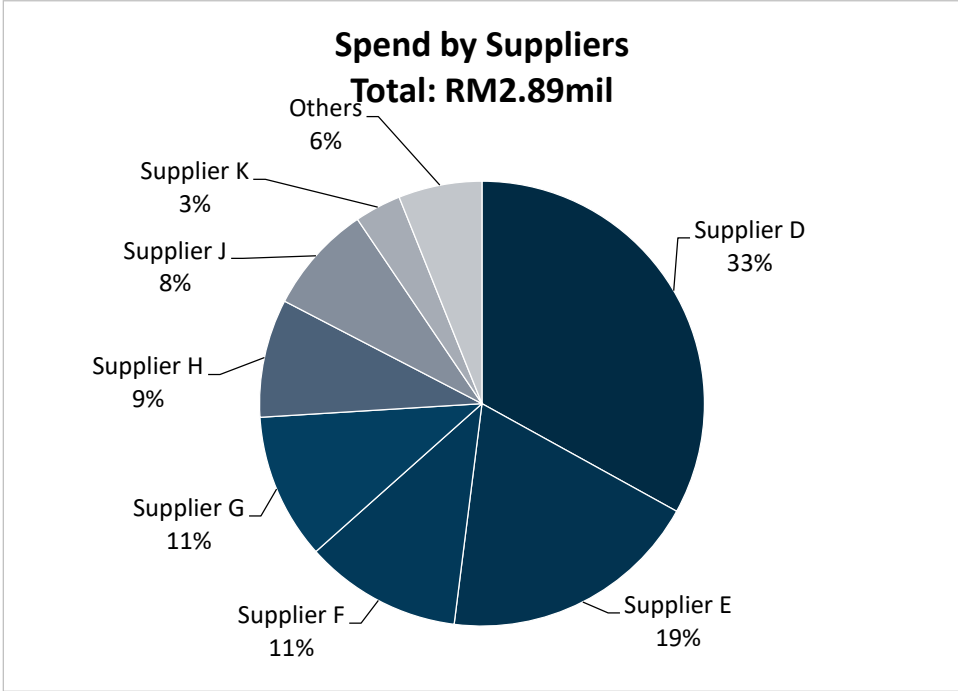
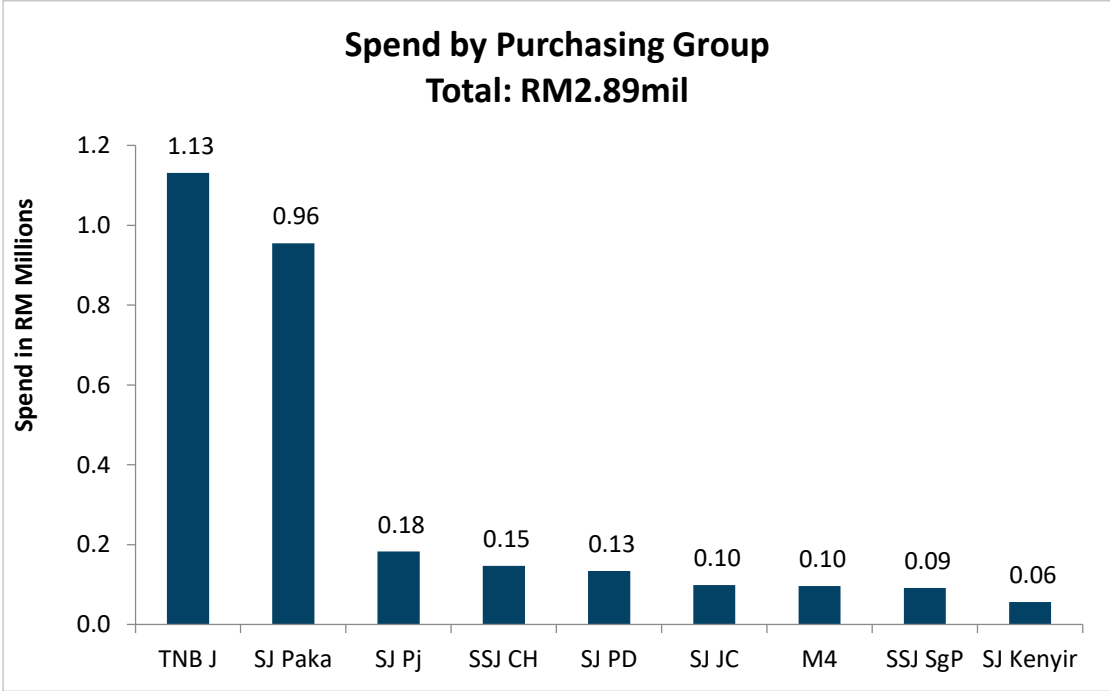
### **Previous purchasing scenario: Decentralized & transactional**

- Every plant purchased and consumed different types of lubricant oil for its main machines, based on maker's recommendation.
- Only auxiliary system using same type of lubricant oil.

### **Impacts**

- Variance in the purchase prices
- Difficulties to get direct technical support
- Low bargaining power and opportunities

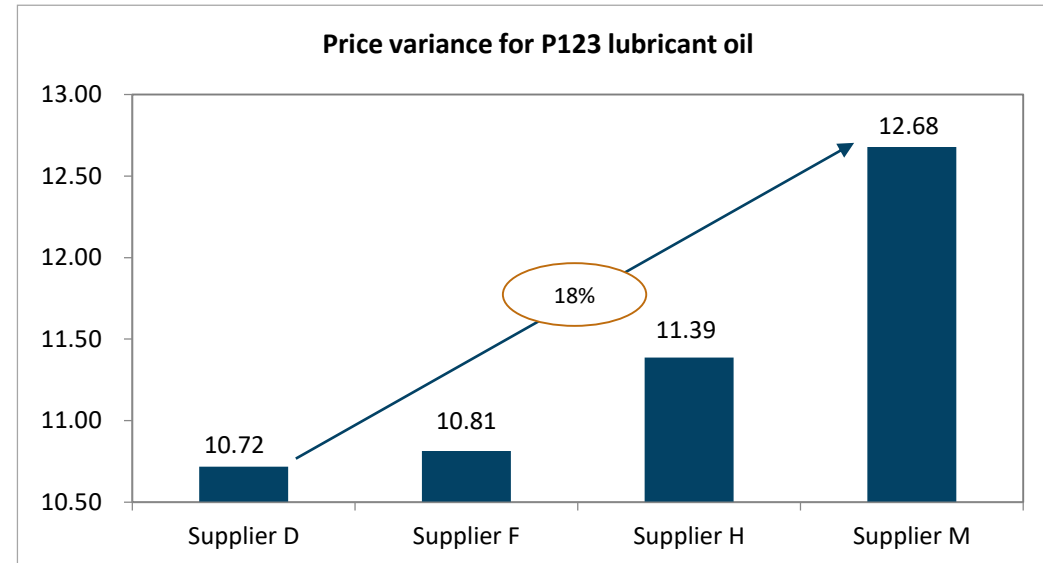
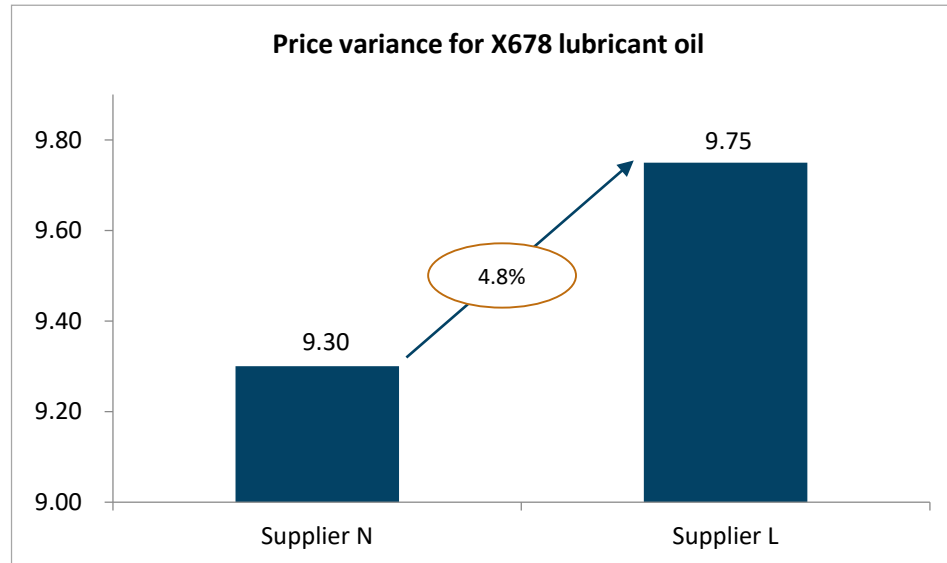
# Spend analysis was done to find out the buying pattern across power plants and the supply base for the lubricant oil



## Key observations

- TNB Janamanjung had the highest spend for lubricant oil in financial year 2015.
- There were more than ten (10) suppliers for the items, and Supplier D had the biggest spend share in financial year 2015.

While price analysis uncovered that price variance as high as 18% can be seen among the suppliers offering the same lubricating oil



## Insight

- There are opportunities to contract more competitive prices from the market and reap other advantages through a strategic approach

# Strategic sourcing of lubricant oil

## Strategic sourcing of the lubricant oil was considered as among the quick wins to realize the benefits of a strategic procurement approach during Procurement Transformation Program (PTP)

- Establish a (2+1)-year supply contract of lubricant oil to support TNB legacy power plants, special vehicle power plants (SPV) and TNB Janamanjung Sdn. Bhd.
- Negotiations were done with three (3) worldwide suppliers that are already in the market for many years for lubricant oil brands that were contributing to 80% of the spend in 2015.
- Initial offer had already saved TNB about 18% when compared with the prices offered by traders through the previous spot buys.
- Additional saving of 1.9% was achieved from the negotiations.

Supplier	Discount (%) <sup>β</sup>	Lubricant oil analysis support (%) <sup>γ</sup>	Training (%) <sup>γ</sup>
Supplier A	2.4	3.0	0.4
Supplier B	0.0	3.2	0.8
Supplier C	6.8	21.1	2.9

Note:

<sup>β</sup> Reduction from price before negotiation

<sup>γ</sup> Value of item from total awarded value



**Strategic sourcing of lubricant oil was intended to create economies of scale by consolidating demand across all power plants for better bargaining power**

### **Current purchasing scenario: Centralized & strategic**

- Centralized purchasing function
- Consolidated demand across power plants
- Focus on maximizing total value of ownership (TVO) and increase procurement spend visibility

### **Impacts**

- Reducing missed opportunity cost; less inventory
- Reduce number of suppliers, omitting the traders
- Establish strategic relationship with the main suppliers
- Optimizing value-based sourcing through after sales support and product warranty
- Streamlining and enhancing sourcing and related processes

The lessons learnt from the strategic sourcing exercise can be divided in four (4) themes; product, price, people and process



## Product

- Assured high quality products from producers
- Direct technical and after sales support
- Enhanced availability
- Potential for product standardization



## Price

- Competitive price
- Development of price database



## People

- Development of procurement personnel capabilities
- Improved communication with business units
- Enhanced buyer-supplier relationship



## Process

- Optimized inventory
- Reduced tenders and contracts
- Reduced lead time

The lessons learnt from PRODUCT point of views; high quality and genuine products, direct after sales support, enhance availability and potential for product standardization.



TNB is assured that it is getting high quality genuine products from its supply base to ensure safe and efficient operation of its machineries



Direct technical and after sales and support on any enquiries in terms of technical and commercial without going through intermediary



Early supplier involvement in lubricants usage planning to allow for timely delivery of items in full, at customers' sites



All producers were able to offer product standardization and product switching to maintain only several types of lubricant oil in a system where values can be created in terms of product usage and risk management

## The lessons learnt from PRICE point of views; competitive pricing and development of product database.



Competitive pricing by eliminating intermediaries. Initial had already saved TNB about 18%. Additional saving of 1.9% was obtained from the sourcing exercise



A user-friendly price database can be developed for ease of purchasers when doing price analysis for their sourcing activities

## The lessons learnt from PEOPLE point of views; development of procurement personnel capabilities, improved communication with business units and enhanced buyer-supplier relationship



Enhance personnel capabilities such as procurement strategic plan, big data analytics, market intelligence and negotiation skills



Frequent communication among parties involved in the strategic initiative will foster understanding and appreciation of each other's role. This lessens the work-in-silo mentality for efficient informed decision making, uplifting employees' morale and instilling a positive working culture in the organization



Nurture the buyer-supplier relationship from being an arm's length to working collaboratively and promote trust between TNB and the producers

## The lessons learnt from PROCESS point of views; optimized inventory, reduced tenders and contracts and shorten the lead time.



Inventory optimization by storing only minimum stock in the warehouses to free more floor spaces. In the long run, TNB has the opportunity to generate non-regulated income through space rentals to public.



Number of spot buys had been dramatically cut down. The number of contracts had also been reduced from thirteen (13) contracts (in year 2016) to only three (3) contracts that saved TNB in terms of overhead cost.



Reduce buying time when business units are able to raise a PR with reference to any of the three (3) contracts, and the desired PO will be automatically generated and sent to the lubricant oil producers via email.

# Conclusion

**Strategic procurement is the approach to reap many benefits for organization compared to that of doing things in transactional ways**

- Many benefits such as price competitiveness, reduction in tender exercises and contracts, closer buyer-supplier relationship and competency development of procurement personnel can be realized through strategic procurement.
- Strategic approach shall be extended to other categories of materials and services for more value creations for TNB.
- All level of workforce in P&SC Division shall be furnished with the relevant knowledge and skill set to ensure effective implementation of category management.

**Thank you**

**Τησικ λου**