EXECUTIVE SUMMARY

1 During December 2005, South Africa experienced a series of interruptions to fuel supplies. There were stockouts at many locations throughout the country, including shortages of jet fuel at Cape Town International Airport (CTIA). Supply interruptions negatively impacted many sectors of the economy with the severity of the hardship ranging from relative inconvenience to loss of business and reputational damage. Urban motorists, some of whom had to visit a number of sites before finding the fuel they required, fall into the former category. In the latter category were the airlines that had to postpone and cancel flights and the agricultural sector where losses were incurred because farmers could not harvest at the optimal time. In addition, certain companies in the manufacturing sector attributed production losses to the fuel shortages.

2 Government and public concerns about the fuel crisis led to the intervention by the Minister and the Department of Minerals and Energy (DME) to establish the causes of the shortages. Advocate M.T.K. Moerane SC was appointed to head the investigation. The Investigating Team reviewed submissions from all the major oil industry participants, the airlines, agriculture and other interested parties. The Investigating Team also reviewed the relevant regulatory and legal documentation. In some instances, specific additional information was requested from the parties concerned. This extensive range of information has been studied and analysed, and forms the basis for the conclusions reached. In order to expedite the production of this Report and subsequent implementation of the recommendations contained herein, the Investigating Team decided not to conduct oral hearings involving interested parties or to publish a draft report for comment.

3 In accordance with its Terms of Reference the Investigating Team focused on the following areas:

3.1 Logistics infrastructure capacity (pipelines, rail, road and storage);

3.2 Refining capacity and state of repair;

3.3 Refinery shut-down planning;

3.4 Wholesaler-retailer relationships;

3.5 Communication channels;

3.6 Handling of phase-in period towards upgraded specifications (2010 specifications);

3.7 Obligations of Basic Fuel Price (BFP) on holding finished products; and

3.8 Compensation of consumers during this fuel crisis.

4 The Investigating Team has concluded that the fuel shortage resulted from a convergence of a number of events. Of greater importance and concern, however, is the fact that these events exposed underlying structural and regulatory weaknesses in the sector. If the weaknesses referred to in this Report are not addressed with urgency, petroleum product supply shortages will become a feature of the future economic environment. In fact, we anticipate that another supply crisis could emerge in the second half of 2006 because of scheduled refinery shutdowns. It is imperative that a plan be put in place with immediate effect to avoid this happening.

5 With regard to the events leading to the supply interruptions, the principal causes of the problems were:

5.1 The approach adopted in relation to the introduction of the January 2006 fuel specifications;

5.2 Scheduling of refinery shutdowns;

5.3 Refinery shutdown problems;

5.4 Low level of industry refined product stocks;

5.5 Inadequate logistical infrastructure;

5.6 Regulated product price decrease in December;

5.7 Poor communication amongst key stakeholders;

5.8 Tight supply/demand situation; and

5.9 Change in inland/coastal supply dynamics.

6 With reference to the introduction of the 2006 fuel specifications, the details of these specifications have been a matter of ongoing debate, lobbying and resultant delay since 2002. The DME and Industry ought to have agreed these requirements well in advance of the implementation date. A four year lead time would have been reasonable given the major modifications and capital expenditures that were required.

7 Consequently, the required modifications to the refineries and manufacturing plants were crowded into the second half of the year. This resulted in overlapping refinery closures, low stock levels and vulnerability to any short term spikes in demand. Under those circumstances, it would have been prudent to postpone or at least stagger the implementation of the new fuel specifications. In addition, there was little communication between industry members about their shutdown planning.

8 Concern by certain companies regarding some provisions of the Competition Act, together with the pending decision by the Competition Tribunal on the merger between Sasol Oil and Engen, inhibited communication among oil companies. The result was a lack of transparency about the nature and extent of the problems being experienced with refinery shutdowns.

9 It is against this backdrop that the supply crisis was triggered by operational problems at a number of refineries. This, combined with low stock levels held by oil companies, resulted in widespread supply shortages in the country.

10 It had been announced that fuel prices were to decrease on 7 December and many customers held back on their purchases, thereby

causing a spike in demand after the price change. This was further aggravated by media announcements concerning the shortages, which triggered panic buying.

11 Due to serious constraints in the country's storage and transport infrastructure, major difficulties were experienced in supplying and delivering "emergency" product to many affected areas. These are discussed in detail in the Report.

12 The increase in demand growth had not been expected, certainly not to the extent experienced in the past few years. This has placed the supply and distribution system under great pressure. This distribution system is now so finely balanced that any significant variation can lead to a disruption of supplies.

13 There appears to be uncertainty as to the direction that South Africa should take with regard to local production of refined product. There is the expectation within the DME that local refiners should invest the necessary capital in the country's ageing refineries to expand the refining capacity to meet total onshore demand. The oil industry might argue that the country should be prepared to import a percentage of demand as a more economically efficient approach.

14 The Investigating Team was unable to source comprehensive information about the general state of repair of the refineries and synfuel manufacturing facilities. Some of the companies which responded indicated that their maintenance spending meets international benchmarks. The Investigating Team finds it difficult to accept that historical and current expenditures have been adequate, given the high incidence of production interruptions which have been reported. It is probable that a shortage of skills, both engineering and technical, has contributed to these problems, as contended by the oil

companies. However, we suspect that there are other fundamental problems which require further interrogation.

15 From a review of the submissions it is apparent that there are a number of regulatory issues that need to be resolved.

15.1 The method of changing prices on a monthly basis, leads to large spikes in demand due to the magnitude of price changes in an environment of highly volatile crude oil prices and exchange rate fluctuations.

15.2 The basis of setting the Basic Fuel Price (BFP) should be revisited, given the lack of clarity with regard to who has the obligation to hold stocks. Other components of the pricing mechanism should also be reviewed to ensure equity between industry participants.

15.3 Given the possible increase in the long term in imports of refined product, the current principle that only refiners are entitled to import refined product needs to be reviewed.

15.4 Consideration should be given to a more flexible approach to the future introduction of new fuel specifications rather than the "big bang" approach.

15.5 A holistic review needs to be conducted of tariffs and pricing structures in relation to all modes of transport, with a particular focus on the Durban to Inland market.

15.6 Measures to encourage investment in fuels-related infrastructure need to be considered.

15.7 There is a need for a special regulatory dispensation for the oil industry, in the interests of the country, for information sharing to the extent necessary to ensure security of supply of petroleum products.

16 Transport capacity limitations restrict the ability to move product inland from the coast. These limitations apply to pipeline, road and rail capacity. The constraint on pipeline capacity - the most efficient form of transportation – is the key limiting factor on delivering supplies inland. When the inland refineries lose production it becomes impossible to adequately supplement inland fuel supplies from the coast. Expanded pipeline capacity inland is urgently required to relieve this bottleneck.

17 South Africa's major liquid fuels pipeline transport infrastructure is a monopoly. South Africa is also in the unusual position of having a large proportion of its economic activity located a considerable distance from the coast. Much of South Africa’s liquid fuels have to be transported distances before use. The government should consider implementing policies to ensure that costs for the transportation of fuels are not excessive. This might require regulation of pipeline tariffs.

18 Since the expiry of the Main Supply Agreement (MSA), oil companies have sought to minimise their offtake from the Sasol operated facilities, preferring to use their own refined product. However, due to the logistics constraints described above, this may put security of supply in the inland regions at major risk. Therefore, until new pipeline capacity from the coast comes on stream, some form of Government intervention is necessary to ensure that the inland market is kept wet.

19 There is a need to create as many channels as possible for oil companies to bring product into the industrial heartland of South Africa. This need is presently frustrated by logistical and pricing distortions that inhibit competition inland and comprise, *inter alia*, the Petronet Gas transportation Agreement with Sasol, which results in sub-optimal

use of the pipeline network, Petronet tariffs that appear to be excessive, and the appropriateness of the level of crude oil pipeline tariffs applicable to Natref *(Natref Neutrality)*.

20 In line with international practice, Government is responsible for holding strategic crude oil stocks to protect the country's economy against possible disruption in global crude oil supplies. The country does not hold strategic refined product inventories. Instead, the oil companies hold commercial quantities of refined product inventories to enable them to supply their customers timeously. These stocks proved to be inadequate in December 2005.

21 The Investigating Team believes that it is reasonable for Government and the consumer to expect that the oil Industry would apply sound commercial principles to ensure that the market is fully supplied at all times. Stockouts are not in the interests of the oil companies or their customers. It is therefore reasonable to expect that the oil companies will try to ensure that the stockouts will not recur in future. However, the Government, through the DME, would be well advised to assume a monitoring role, to ensure that this in fact happens. The range of information which should be covered includes storage capacity, Industry and commercial stock levels, production levels and overall imports required.

22. Paradoxically, whilst storage capacity has not kept pace with demand growth it also appears that the tankage that is available is not fully utilised. The oil companies' view is that it is not in their commercial interest to hold stock in excess of “prudent” levels, given the high cost of holding stocks. If, indeed, there is excess storage capacity available – as indicated by the statistics supplied by the Industry - consideration should be given to providing third party access to such capacity in line with the provisions of the Petroleum Pipelines Act No 60 of 2003. This will facilitate the entry of new companies into the market.

23. On the issue of compensation, the Investigating Team considers that there is no legal basis for requiring the oil companies to compensate consumers for the fuel shortages experienced in December 2005. This is because there is no evidence that the allowance for stock holdings included in the BFP can be translated into a commitment by the oil companies to hold these stocks. Indeed, it appears that very few customers of oil companies have submitted claims for compensation. To the extent that individual customers believe that they have suffered loss due to breach of contract by their suppliers, they are at liberty to submit claims for compensation to the companies concerned. The Investigating Team expresses no opinion on the prospects of success of any such claim.

24. The overall picture emerging from the Investigating Team's investigations reveals that whilst the December fuel shortages resulted largely from the cumulative impact of an unfortunate set of circumstances existing at the time, there are serious underlying issues in the oil industry referred to above which, if not urgently addressed, are likely to lead to more serious disruptions, both in the short and longer term. Specific intervention will be required in the short term as the three to four year lead time required to address the major infrastructural constraints constitutes a great risk to security of supply.

25. Our recommendations are set out below:

25.1 <u>Security of supply</u>

25.1.1 A major lesson from the December 2005 shortage is that the DME should review the responsibilities of stakeholders in relation to security of supply. Government needs to review its policy with regard to strategic stocks.

25.1.2 The policy on commercial stock in relation to the delineation of responsibilities between Industry and the DME should be reviewed. A qualitative assessment of the risks of supply interruption and South Africa's ability to cope is recommended.

25.1.3 Oil companies and the synthetic fuel plants should be obliged to hold prudent commercial levels of refined product stock.

Minimal finished product imports

25.2 It is recommended that Government review its policy objectives with regard to the refining industry and synthetic fuels manufacturing. If it is considered important that the bulk of demand for petroleum products should be supplied by local manufacture, then policies reflecting such preferences should be considered. It is also important that it be made clear whether the manufacture of synfuels, bio-fuels and renewables is to be promoted.

Changes in Fuel Specifications

25.3 It is recommended that the DME should urgently facilitate final decisions relating to the 2010 fuel specifications as well as the granting of import permits. It is furthermore recommended that the full details of any product specification changes proposed be agreed at least four years in advance of the proposed implementation date so that the Industry can plan appropriately.

National and Regional Product Supply / Demand Balance

25.4 It is recommended that a group be constituted and be given the responsibility of making future supply and demand projections in order to establish requirements for additional refinery investments. Such a group should comprise the DME and relevant Industry stakeholders.

25.5 Encourage investments in infrastructure.

25.5.1 The private and public sectors should be encouraged to invest in expanding infrastructural capacity. Given the urgency of the current infrastructural requirements, state owned enterprises (SOEs) can play a leading role in these developments. Some options which may be considered are:

25.5.1.1 The role state-owned entities can play in expanding storage capacity;

25.5.1.2 The consolidation of the petroleum logistic assets of Transnet in one unit within Transnet to enable benefits of scale and the holistic management thereof, for the benefit of South Africa as a whole; and

25.5.1.3 A review of the policy, economics, commercial arrangements and efficiency of Petronet to ensure security of supply from the coast into the inland market.

25.6 Additional pipeline capacity is urgently required to supply the inland markets.

25.6.1 It is recommended that Petronet expedite the development of the new pipeline from Durban to Gauteng.

25.6.2 Other options such as the conversion of parts of the existing pipeline infrastructure, investment in additional rail tank cars and the extension of road transport fleets should be urgently considered to address security of supply to the inland market. The present pipeline capability of supplying only 33% of the inland demand volumes is a critical weakness in the transport system.

25.6.3 It is recommended that the extension of the Gas Transportation Agreement between Sasol and Petronet be investigated.

25.7 <u>Logistics Planning Team</u>

25.7.1 The logistics planning team (LPT) chaired by the DME, requires legal authority to enable it to be effective in dealing with potential short term supply disruptions such as those which occurred in December 2005. The Investigating Team recommends that the LPT should become a permanent feature of regulation in the Industry and that legislation should make provision therefor. The proposed legislation should be consistent with the provisions of the Competition Act.

25.7.2 Regulations under the Petroleum Products Act No 120 of 1977 may also need to be promulgated to provide the necessary legal authority.

25.7.3 The Investigation Team recommends that the DME convene regular meetings with the petroleum companies to discuss industry related matters such as the submission of production and stock data, refinery shutdown planning, supply disruptions, pipeline or infrastructural damage, or any other matter that is necessary to secure the stability of the Industry and the economy.

25.7.4 To the extent that these meetings could contravene the Competition Act, the Investigating Team recommends that, as a temporary measure, application be made to the Competition Commission for an exemption in terms of s.10 of the said Act.

<u>Action plan to deal with crisis situations</u>

25.8 It is recommended that an Action Plan be put in place to address all aspects associated with any potential future supply shortages. The

Plan should cover recommended actions, responsibilities and the handling of communications.

Recurring shortages of diesel supplies to farmers at harvest times

25.9 It is recommended that the representative organisations of the farmers meet with the members of the oil industry to find a solution for their recurring seasonal shortage problems.

Storage availability at the major airports

25.10 The airline companies and the Airports Company of South Africa (ACSA) have identified the need for additional storage facilities at the major airports to accommodate adequate stock levels of jet fuel. This should be addressed urgently.

Comprehensive review of the Regulatory Framework

25.11 It is recommended that a comprehensive review of the petroleum pricing regime be done to address the matters referred to in this Report, including but not limited to –

25.11.1 the appropriateness of the BFP import parity pricing system;

25.11.2 the zone differential to remove inefficiencies and indirect transport subsidies;

25.11.3 service differential and its role in facilitating the development of storage and transportation infra-structure; and

25.11.4 the appropriateness of the MPAR market returns, i.e. return on assets of 15% between a range of 10% and 20%.

Timing of Regulated Product Price Changes

25.12 It is recommended that the DME give consideration to increasing the frequency of price changes to avoid panic buying that creates short term stockouts at fuel stations.

Importation of Product by Independent Players

25.13 It is recommended that DME give consideration to amending the current policy regulating the importation of refined petroleum products to include third party suppliers. This will open up the market and will facilitate the entry of new players, especially Black Economic Empowerment (BEE) companies.

Removing Barriers to Entry for New Entrants

25.13 As part of the comprehensive review of regulation, it is recommended that the DME investigate the removal of regulatory barriers that restrict the entry of new players into the market.