

MEMORANDUM



TO:

Transnet Board Acquisitions and Disposals Committee (BADC)

FROM:

Mr Brian Molefe, Group Chief Executive, Transnet SOC

DATE:

15 October 2013

SUBJECT: MITIGATION OF MDS VOLUMES AT RISK THROUGH THE INVESTMENT IN AND PROCUREMENT OF 100 CLASS 19E EQUIVALENT DUAL VOLTAGE ELECTRIC

LOCOMOTIVES AND 60 CLASS 43 DIESEL LOCOMOTIVES.

PURPOSE

- 1. The purpose of this submission is to request the Transnet Board Acquisitions and Disposals Committee to recommend to the Transnet Board of Directors the following:
 - a) Note the risk to TFR MDS volumes through insufficient traction power resulting from the delay in the procurement of the 1064 locomotives:
 - b) To approve the investment in and procurement of 100 Class 19E equivalent electric locomotives required for the Coal Export Line in the amount of R3 871 m (excluding borrowing costs):
 - c) To approve the confinement and award of the procurement for the 100 Class 19E equivalent electric locomotives.
 - d) To approve the investment and change in the fleet plan to procure of 60 Class 43 diesel locomotives for General Freight in the amount of R1 826 m (excluding borrowing costs):
 - e) To approve an extension of the current Class 43 diesel locomotives contract for 60 additional locomotives:
 - f) The GCE be delegated the power to sign and conclude all relevant documents to give effect to the above resolutions.

EXECUTIVE SUMMARY

- 2. The TFR locomotive fleet plan was first approved by the Transnet Board in April 2011 and updated with the 1064 GFB locomotive submission. The proposed locomotive acquisitions are in line with the fleet plan and have been budgeted for in the 7 Year Market Demand Strategy (MDS) 2013/14 - 2019/20. The delay in the 1064 fleet acquisition has put General Freight Business (GFB) MDS volumes at risk.
- 3. This risk will be mitigated by the urgent acquisition of these locomotives.
 - a) The heavy haul 100 Class 19E locomotives will be deployed in the Coal Export Line and will release 125 locomotives that will be used on GFB pending delivery from the 1064 program. The 100 locomotives form part of the already approved Fleet Plan
 - b) The 60 Class 43 diesel locomotives also fill the gap pending delivery from the 1064 program. These 60 locomotives do not form part of the approved Fleet Plan and this submission requests an amendment to the Fleet Plan to include these 60 locomotives



- 4. The Class 19E dual voltage electric and Class 43 diesel locomotives recently delivered are modern capable locomotives. They have proven themselves in service and will improve service quality through improved reliability and reduced maintenance costs.
- 5. This submission proposes an accelerated procurement to mitigate General Freight MDS volumes at risk by confining 100 Class 19E electric locomotives to MARS and extending the current Class 43 Contract with GESAT by 60 locomotives. The accelerated acquisition will mitigate the MDS shortfall by at least a year with its full effect realised commencing 2014/15. The volumes mitigated increase from 6.2 mt (14/15) to 15.1 mt (16/17) and the cumulative income protected is R9 197 m (13/14 16/17).
- 6. The confinement to MARS and extension of the GE contract is motivated on the basis of urgency.
- 7. This accelerated acquisition does not put the MDS cash flow at risk and the 1064 acquisition remains unaffected. The acquisitions are funded from the current MDS. The delay in the 1064 will extend its funding to beyond the 7 year period.
- 8. The 60 Class 43 locomotives are in addition to the approved Locomotive Fleet Plan but accord with the fleet strategy. With the year delay in the 1064 procurement, the 60 locomotives fill the gap of the first year. Post the 1064 procurement, the sustaining fleet requirements based on a 30 year life are approximately 80 locomotives per annum and the last year of the 1064 procurement moves into the sustaining phase.
- 9. The programmatic element of the 1064 procurement enables locomotive quantities per annum to be adjusted to circumstances.
- 10. The proposed transactions do not increase the risk related to the 1064 tender process.
- 11. Socio-economic benefits will be realised in line with existing commitments and expectations.
- 12. The context and arguments are presented as follows:
 - a) History and Status of the TFR Fleet Plan
 - b) Status of the 1064 Procurement
 - c) Impact of the 1064 delay
 - d) MDS Risk Mitigation
 - e) Project Benefits
 - f) Procurement Strategy
 - g) Financial and budget Implications

BACKGROUND

13. The history and status of the TFR Fleet Plan and 1064 Procurement are presented to show that a genuine unforeseeable urgency has arisen and that the urgency is not attributable to a lack of proper planning. (Item 67 "Extract from Procurement Procedures Manual" refers)

History and Status of the TFR Fleet Plan

14. The TFR Locomotive Fleet and Modernisation Plan was presented to the new Board in April 2011 and predicated 776 GF locomotives by 2015/16 for GF volumes of 155.8 mt. The plan was modified in August 2011 when a further 426 locomotives were requested as the volumes increased to 176 mt by 2018/19. To mitigate the immediate shortage and facilitate the volume ramp up, 138 locomotives (95 electrics and 43 diesels) were approved by the Board in August 2011. Minor adjustments were made to the locomotive fleet plan for GFB with the presentation of the business case of the 1064 locomotives in April 2013.



15. The history and status of the TFR Fleet Plan is summarised in the table below:

Loco Fleet History and Plan	Tons	Comment and Update
Coal Fleet (26 ton axle)	
112 (100 19E)	97.5	 Probable downward volume revision. Contracts currently being signed for 10 years for 80 mt as coal reserves, sources and Eskom demand are evaluated. 112 targeted for expansion to 97.5 mt Current fleet of 10E, 7E and 11E require near term replacement. 100 (off the 112) switched to fleet replacement pending finality of and commitment to long term coal export expansion and requested per this submission Feasibility studies investigating expansion of Coal Line to Waterberg as 26ton per axle heavy haul line. This is not currently included in the Locomotive Fleet plan.
GFB (22 tor	axle)	
50 EMD		• 50 "like new" EMD diesels were delivered between December 2009 and March 2010 on open tender.
100 GE (Class 43)		 In 2008 these locomotives were identified as a "quick fix" with 81 to sustain the aging fleet and 19 for volume expansion. GE won the tender, which was confined to three companies, and the locomotives were delivered between May 2011 and January 2013.
776	155 mt	• In April 2011 the Fleet Plan was presented to the "new" Transnet Board for 776 GFB locomotives for 155.8 mt.
95 CSR and 43 GE		 In June 2011 the Board approved 138 locomotives (95 electric and 43 diesels). The electrics were for open tender. A new confined contract was entered into with GE for the 43 diesels. The 95 and 43 locomotives were determined and limited by the uncommitted funds in the then Five year Capital program The diesels were delivered between January 2013 and June 2013. The 95 CSR are planned for delivery March 2014 to March 2015.
1064	170 mt	 August 2011 the locomotive requirements for 176 mt were presented being 1202 locomotives (776+446). With the 138 already approved the balance of the GFB fleet plan was 1064 locomotives. (1202 -138) In March 2012 the 1064 approval process commenced in tabling the business case at Transnet Freight Rail Investment Committee. The 1064 procurement is expanded in the body of the document below.
60		• 60 Class 43 requested to fill the gap in the first year of the 1064 resulting from the delay in procurement.

Loco Fleet History and Plan	Tons	Comment and Update
Ore Export L	ine (30 ton	axle)
44	44 mt	• 44 15E bought open tender (Toshiba / Mitsui) to replace / supplement existing 9E locomotives and Class 34 GE Diesels with an option for a further 18 locomotives.
<u>32</u>		The option to extend by 18 locomotives was not exercised.
76	60 mt	 A new confined contract was entered into with Mitsui for a total of 32 locomotives to take the Ore Export Line to 60 mt. This confinement was motivated on standardisation of the fleet. ~ 110 Class 34 GE diesels returned to General Freight and replaced with 30 Class 43 GE.
		Potential General Freight traffic may materialise from 2013/14 on the Ore Export line and 4 9E locomotives may be retained for this traffic.
23 15E	80 mt	• The volumes are not likely to materialise in the 7 year MDS program. The FEL
and		feasibility study is on hold and there is currently no commitment to the increased
3 Diesels		volumes.
		The locomotives are also put on hold.
		 The 15E production line has shut down. As and when required, the procurement options will be evaluated against standardisation, cost and interoperability. Diesels, if required, will be provided from the GFB fleet

16. The essential points relating to this proposal are:

- a) The 100 Class 19E locomotives are for the coal line and were always part of the TFR locomotive fleet plan. See Para 35 and following. They release locomotives that can be used on GFB for the year that the 1064 program is delayed.
- b) The 60 Class 43 diesel locomotives are not part of the 1064 locomotive program.
 - They are in addition to the approved Locomotive Fleet Plan but accord with the i. fleet strategy. With the year delay in the 1064 procurement, the 60 locomotives fill the gap of the first year. Post the 1064 procurement, the sustaining fleet requirements based on a 30 year life are approximately 80 locomotives per annum and the last year of the 1064 procurement moves into the sustaining phase.
- 17. The programmatic element of the 1064 procurement enables locomotive quantities per annum to be adjusted to circumstances and this flexibility has been built into the tender and will be carried forward in the ultimate contracts.
- 18. The rationale for the 100 Class 19E and 60 Class 43 Diesel not being part of the 1064 locomotive process are covered under the Procurement Strategy Para 58.a) and following.
- 19. The future acquisitions for the expansion of the Coal Export line to 97.5 mt and the Ore Export line to 80 mt will depend on market conditions and development of the full supply chain across all stakeholders.

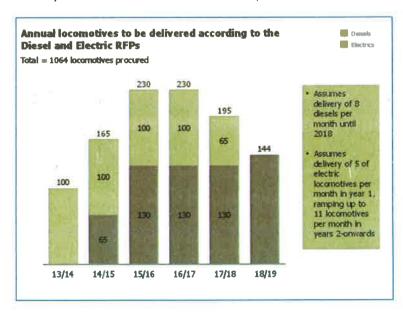
History and Status of the 1064 Procurement

20. TFR's Corporate Plan sets out the 7 Year Market Demand Strategy (MDS) 2013/14- 2019/20 to virtually double General Freight volumes to 170 mt by 2019/20. This requires an integrated and synchronised approach across locomotives, wagons, infrastructure and personnel and these aspects were covered in the 1064 business case submission.

21. The history of the 1064 procurement is depicted in the exhibit below.

	Desembles 770 to 1004	TOOL Tanders Clean	Total Tenders Close EFMA Assessed	Anno	Enotin Pressyre						
	2011/12	2012/13	2013/14	2014/15	2015/16	16/17	17/18	10/10	19/20	20/21	Total
1064	PACTOR DE LA SERVICIO	A LESC SE LES	Man Control	Miss Coct Series	M L L C C C C C C C C C C C C C C C C C		1				
Current GF Fleet Runout	1730	1746	1888	1590	1864	1832	1776	1686	1550		
March 2012			100	165	230	230	195	144			1064
Most likely	Considering current state a t	wo year delay is probable	11			165	230	230	195	144	1064
95 CSR			10	85							

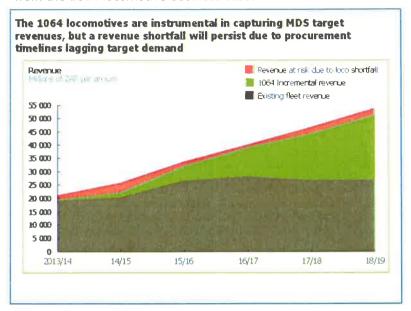
- 22. The approval process of the 1064 locomotives started in March 2011 when the business case was tabled at the Transnet Fright Rail Investment Forum.
- 23. Two approaches were used to shorten delivery times of the new locomotives as far as possible:
 - a) An aggressive approach was taken with the maximum locomotives delivered per month cognisant of local conditions and
 - b) Approval was obtained in July 2012 to go out on an RFP before the acquisition was finally approved or PFMA approval obtained.
- 24. Transnet adopted a cautious approach because of the value of the acquisition and appointed external consultants to evaluate the business case.
- 25. Board approval was obtained in April 2013 and PFMA approval in August 2013.
- 26. The tenders closed in April 2013 but negotiations with tenderers could not commence till PFMA approval had been obtained.
- 27. It is expected that adjudication will be finalised by February 2014 and contracts awarded by May 2014.
- 28. At the time of the tabling the 1064 business case, the 465 diesel and 599 electric delivery timelines were based on the RFP then in the market. The exhibit below details the locomotive delivery timelines that were modelled as per the RFPs and used as the base case assumption.



29. The 1064 program has slipped by at least a year against original expectations. The current RFP timelines are being reviewed by the Locomotive Steering Committee to ensure a compressed timetable to further mitigate volume risks to the MDC.

Impact of the 1064 Delay

30. Even with the 1064 business case being approved, there is a revenue shortfall which is exacerbated by the delay in locomotive delivery. This is depicted in the graph below extracted from the 1064 locomotive business case.



- 31. The MDS shortfalls are tabled below for a one and two year delay.
 - a) One Year Delay:

Shortfall		MDS Shortfall Scenario - One Year Delay									
Locomotives		2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20			
No Delay		33	138	314	533	763	946	1040			
Year Delay		0	57	202	405	638	828	972			
Impact							7 11 1				
Locomotives	#	33	81	112	129	125	118	68			
Tons	Mt	1.6	5.2	9.8	13.7	14.0	13.3	7.6			
Revenue	Rm	363	1286	2610	3639	4073	4188	2584			
Capital	Rm	-1725	-1248	-1641	276	381	20	5249			
Mtce.	Rm	36	91	132	159	162	160	96			
Fuel and Elec.	Rm	67	183	331	440	469	471	290			

Shortfall Total One Year Delay	2013/14 - 16/17
Tons Mt	30
Revenue Rm	7 900
Mtce. Rm	417
Fuel and Elec. Rm	1021

b) Two Year delay:

Shortfall		MDS Shortfall Scenario - Two Year Delay									
Locomotives		2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/120			
No Delay		33	138	314	533	763	946	1040			
Year Delay		0	0	57	177	302	415	465			
Impact											
Locomotives	#	33	138	257	331	358	309	212			
Tons	Mt	1.6	7.9	18.1	28.6	33.0	31.3	23.8			
Revenue	Rm	363	1955	4831	7593	9604	9899	8057			
Capital	Rm	-2183	-3910	-4014	-1807	1292	2003	6480			
Mtce.	Rm	36	155	302	409	465	418	301			
Fuel and Elec	Rm	67	303	678	1004	1194	1153	903			

	Revenue Rm		
Tons	Mt	56	
Revenue	Rm	14 743	
Mtce.	Rm	901	
Fuel and Ele	ec. Rm	2052	

c) Notes to tables:

- i. The locomotives per year in the tables are mid-year numbers representing productive capacity and are lower than the total "delivered" during the course of the year.
- ii. The shortfall is totalled to 2016/17 on the assumption that other mitigating strategies will be put in place for the subsequent years.

MOTIVATION

MDS Risk Mitigation

32. The program and motivation below partially addresses the above MDS shortfall in the early years protecting tons and income per the table below.

Income Protected	2013/14	2014/15	2015/16	2016/17	Cumulative Total
Avg. Rand / Ton	225.4	244.7	255.4	264.0	
100 19E - Tons Protected	2.4	2.4	4.4	7.2	16.44 Tons
Income Protected Rm	R 541	R 587	R 1 134	R 1 901	R 4 163
60 Diesels Tons Protected		3.8	7.9	7.9	19.6 Tons
Income Protected Rm		R 930	R 2 018	R 2 086	R 5 033
Total Tons	2.4	6.2	12.3	15.1	36.04 Tons
Income Protected Rm	R 541	R 1 517	R 3 152	R 3 987	R 9 197

- 33. Note that this submission is not a full risk mitigation. Further the benefit in 2013/14 is from Project Shongololo which are the new operating procedures introduced on the Coal Export Line.
- 34. The prime motivators for this submission are to:
 - a) Protect General Freight volumes through delivering diesel and electric locomotives earlier than is possible through the 1064 program.
 - b) Ensure delivery earlier than the 1064 program by:

- i. Confining the procurement of the electric locomotives
- ii. Extending the current diesel locomotive contract.

MDS Shortfall - 100 Class 19E Dual Voltage Electric Locomotives:

- 35. The 100 Class 19E locomotives will be deployed on the Coal Export Line which will enable the release of 125 locomotives to the General Freight network protecting approximately 16.4 million tons (cumulative 13/14-16/17) of General Freight in the 7 Year MDS volume targets and thus allowing growth in the GFB market which would not have been possible because of the 1064 locomotive procurement delay.
- 36. The locomotive fleet plan presented to the Transnet Board in April 2011 proposed 112 new locomotives to meet an unconstrained coal export demand of 97 mt by 2015/16 with a proposed fleet of 308 electric locomotives. The "Capital investment for Export Coal 81 mt" predicated replacing the aged fleet with Class 19E equivalent locomotives. The updated locomotive fleet plan of April 2013 accompanying the 1064 General Freight locomotive business case also predicated 112 new locomotives for the Coal Business.
- 37. Subsequent to the Fleet Plan, the operational model was revised to take full advantage of the dual voltage capability of the Class 19E locomotive. The changeover to the new operational model commenced in July 2013 and will build up as drivers are trained on Radio Distributed Power operations on the current fleet and new the locomotives become available. This changes the future mix of the Coal Fleet. The new operational model is bringing about greater efficiencies and creating capacity.
- 38. The 112 locomotives were for expansion and replacement. Due to the volume shortfall in MDS it was decided to accelerate the acquisition of 100 electrics to enable the cascade of 125 locomotives to GFB and mitigate the MDS volume risk.
- 39. Cascading locomotives to General Freight will assist in mitigating the delay currently experienced in the 1064 program. In all cases the cascading will facilitate growth though to 2017/18 when the 1064 delivery begins to have significant impact. The class 7E and Class 10E series of the current coal fleet are facing imminent run outs, increasing maintenance costs and decreasing reliability and the cascade to General Freight is an interim measure.
- 40. The 100 Class 19E locomotives will sustain the Coal Line electric fleet for 81 million tons per annum capacity and standardize the coal fleet on Class 19E type locomotives with significant operational and cost advantages.
 - a) To achieve this operational efficiency requires 200 wagon trains to bypass Ermelo Yard and couple parallel to the main line eliminating shunting and standing time in the yard.
- 41. The cumulative cascade program for the Class 10E and Class 7E locomotives depends on the acquisition of the 100 Class 19E locomotives which we envisage can be cascaded to GFB, as an interim measure, as follows;
 - a) 40 in 2013/14
 - b) 74 end 2015/16
 - c) 120 end 2016/17
- 42. The first locomotives are cascaded in 2013/14. There are no or minimal cascades in 2014/15 as the locomotives are being delivered and commissioned. The effectiveness of the cascade is felt in 2015/16 and beyond.

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- 43. Using the rule of thumb for General Freight that 100 locomotives generate approximately 6 mt per annum, the 125 released locomotives will protect approximately 7.2 mt per annum of general freight.
- 44. The exact allocation to the areas below will be determined at the time of cascading according to operational priorities.
 - a) Manganese exports through Ngqura: Manganese exports from the Northern Cape through Ngqura are expected to grow according to the *7 Year Business Plan* to 12 mt (and to 16 mt thereafter). The Class 7E series released from the Coal Line to General Freight traffic will supplement this service till the full complement of class 20E locomotives have been delivered where after the Class 7E series will be retired.
 - b) **Thabazimbi Pyramid South:** This is an AC electrified section served by Class 7E series locomotives and the predicted volume growth is:

Year	2013/14	2014/15	2015/16	2016/1 7	2017/1	2018/19	2019/20
M Tons	8.868	10.347	15.135	17.056	18.446	22.897	22.912

- c) Cascading the Class 7E Series will facilitate volume growth through to 2015/16 as well as the potential life extending / technology changing modification on the cascaded Class 10E series.
- d) **Maputo Export:** This is a DC electrified section suitable for Class 18E locomotives only. The cascaded Class 10E will release Class 18E locomotives from other sections which will be transferred into this section. The tonnage increase is:

Year	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
M Tons	6.421	8.353	12.469	13.499	16.446	21.168	21.598

e) **General Freight on the Coal Line:** This traffic uses DC traction or Diesel locomotives to Ermelo and then AC electrification to Richards Bay. Currently Class 7E3 locomotives are designated for this traffic south of Ermelo. Releasing Class 11E locomotives from the export coal operation will enable the additional traffic and also substitute for the current Class 7E3 which will be cascaded.

Year	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
M Tons	10.702	11.901	13.404	15.036	15.733	16.032	16.470

45. The TFR Business Plan volume projections for the Coal Export Line are:

	Actual	Actual	Budget	Projections					
	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Export Coal Mt	67.7	69.21	77.00	81.00	81.00	84.00	95.00	97.50	97.50

46. The 100 Class 19E business case articulates the benefits of the earlier than previously planned delivery of the locomotives to the Coal Export Line.

47. The market analysis and infrastructure investment for "Capital investment for Export Coal 81 mt" was recommended by Transnet Board on 16 February 2011 and approved by the Shareholder (Minister of Public Enterprises) on 20 June 2012.





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- 48. Other aspects more fully covered in the 100 Class 19E Locomotive submission are:
 - a) Reliability and Operational efficiency
 - b) Savings on operational expenditure and capitalised maintenance
 - c) Energy Savings
 - d) Locomotive Fleet Plan and Standardisation and its benefits which include:
 - i. The fleet is standardized with operational interoperability
 - ii. Standard maintenance practices are propagated
 - iii. Reduction in spares holdings and special tools

MDS Shortfall - 60 Class 43 Diesel Locomotives

- 49. TFR is in the process of acquiring 143 class 43 Diesel locomotives from GESAT which have been delivered over the past two years which are have proven to be a capable locomotive. Given the MDS volume shortfall, it is proposed that 60 class 43 locomotives be acquired to further mitigate the volume risk as those in the 1064 program are now likely to come on stream in 2015.
- 50. The efficiency utilization of the locomotives will be comparable to that currently achieved on the Phalaborwa Richards Bay flow of 7 262 GTK per locomotive month. This flow powered by new class 43 Diesels already exceeds the national fleet efficiency targeted for 2018/19. This represents a 24% increase on the targeted 2013/14 efficiency.
- 51. The 60 locomotives have a potential mitigation of 3.8 7.9 mt at an average 8 149 GTK's per loco per month exceeding the current Phalaborwa Richards Bay flow. The potential income protection is R5 033 m (cumulative 2014/15 2015/16). The exact allocation of the 60 locomotives will be confirmed at the time of deployment over the following flows:
 - a) Botswana Coal to Bulk Connexion and Richards Bay.
 - i. Potential 1.8mt 3.8mt
 - ii. Diesels required: 35 inclusive of technical allowance.
 - iii. Potential GTK's per loco per month: 5 957
 - b) Elitheni Coal from Sterkstroom to East London
 - i. Potential 1mt to 2.5mt
 - ii. Diesels required: 15 inclusive of technical allowance
 - iii. Potential GTK's per loco per month: 12 784
 - c) Manganese from Postmasburg to Bloemfontein / Bloemcon
 - i. Potential 1 1.6mt mostly from new entrant miners.
 - ii. Diesels required: 10 inclusive of technical allowance.
 - iii. Potential GTK's per loco per month: 7 821

PROJECT BENEFITS

- 52. Protection of GFB MDS income and targets amounting to R4 163 m for the 100 Class 19E and R5 033 m for the 60 Class 43 Diesels over the period 2013/14-2016/17 .
- 53. Coal Export volumes and income are protected though improved reliability.

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- 54. Sustainability objectives as per the Transnet Sustainability framework are met threefold:
 - a) Sustainability from an **economic perspective** is met by offering a long term cost effective, low cost rail solution that addresses the needs of industry to remain globally competitive and allows emerging miners to enter the coal export market.
 - b) Sustainability from a **social perspective** is met through the optimisation of manufacturing facilities, job creation and proactive stakeholder engagement.
 - c) Sustainability from an **environmental perspective** in energy savings through (i) the improved efficiency of the new locomotives and (ii) the overall energy saving through the regenerative capability of the locomotives.
- 55. The programme will support the shift from road to rail as the cascaded locomotives take up the shortfall in the General Freight market.
- 56. Benefits specific to the 100 Class 19E include:
 - a) Energy savings will be achieved with an 18% improvement in KVA requirements over the old technology Class 7E and Class 10E locomotives.
 - b) The regenerative capability of the new locomotives introduces further energy savings of between 22% and 26%.
 - c) Quantifiable savings in maintenance of the new locomotives over the older series.
 - d) Not quantified but direct and indirect savings with uninterrupted operations due to fewer failures.
- 57. Benefits specific to the 60 Class 34 Diesels include:
 - a) Fuels savings of 8% over the older diesel fleet.
 - b) Significantly reduced failures compared to the current diesel fleet improving availability and reliability.
 - c) Standardisation of maintenance regimes with current Class 43 fleet.
 - d) Virtual elimination of significant damage to rail infrastructure (skid-marks) which are prevented by the modern traction control system.
 - e) The characteristics of the locomotive more closely match that of the electric fleet enabling optimum use of traction capability when worked in multiples with electric locomotives using RDP.

PROCUREMENT STRATEGY

Rationale for not being part of the 1064 process

- 58. The procurement process was carefully considered and was not taken into the 1064 locomotive process. Aspects considered were:
 - a) **Type:** The 100 19E equivalents are 26 ton per axle locomotives for heavy haul use to be deployed on the coal line. The 599 electric locomotives in the 1064 tender are 22 ton per axle locomotives for GFB use.
 - b) **Delivery:** The 60 diesels are equivalent to the 465 of the 1064 but the motivation below for extension is one of urgency because of the overall delay in the 1064 program. Including the diesels in the 1064 does not address the delay or urgency.

Analysis and Implications of Procurement Options

- 59. The following options were considered and reasoned:
 - a) Go out on tender

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- b) Do Nothing
- c) Confine / Extend Contract
- d) Extend current 20E contract for 95 CSR Locomotives
- e) Leasing
- 60. **Go out on tender:** With this option the locomotives become available beyond the 1064 timeframe and hence this is not a viable option as it does not address the urgency. It is however the best option insofar as public perceptions, fairness and transparency are considered.
- 61. **Do Nothing:** This option puts the MDS volumes at risk that this proposal wishes to mitigate. The implications are:

Base case R'm	Budget	Projections					
2013-14 Corporate Plan	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	
Revenue	36 690	45 382	53 852	62 146	72 541	81 622	
Operating Expenses	20 616	22 640	25 057	28 279	31 434	35 336	
EBITDA	16 074	22 742	28 796	33 866	41 107	46 286	

One Year Delay R'm	Budget	Projections					
2013-14 Corporate Plan	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	
Revenue	36 327	44 096	50 512	56 163	64 513	72 480	
Operating Expenses	20 514	22 367	24 594	27 680	30 802	34 704	
EBITDA	15 813	21 729	25 917	28 483	33 711	37 776	

- 62. **Confine / Extend contract:** This addresses the urgency of the proposal but has potential negative implications regarding public and business sentiment. For these reasons (and as outlined above) this is not part of the 1064 process and will not impact on that process.
 - a) The locomotives are known, meet requirements and prototyping is not required
 - b) Extension of the GE contract is the fastest way to procure the diesel locomotives.
 - c) The MARS facilities are available for immediate production which will result in significant savings.
 - d) Both the extension and confinement are acceptable procurement mechanisms per the PPM for this instance.
- 63. **Extend current 20E contract for 95 CSR Locomotives:** The 20E currently on order is a 22 ton per axle GFB locomotive and is not intended for heavy haul use on the Coal Export Line. The first delivery is awaited, the locomotive has still to be tested and it is at present unproven. Only after extensive type testing will it be possible to say whether and to what extent it can replicate the heavy haul capabilities of the 19E. Additionally, extension would not be an acceptable procurement mechanism per the PPM given the material amendment to contract which could be challenged.

Leasing: Leasing is not considered as an option having being covered in the Fleet Plan submissions and the options for the 1064. There is no viable external market for 1064mm dual voltage electric locomotives. South African circumstances are (historically) unique requiring bespoke electric designs. Even if leased the conditions would be that TFR take ownership after a period of time.

64. **Implications:** The 1064 tender is currently under adjudication. It is one of the largest procurement processes within Transnet and while it seeks (inter alia) to launch a South African

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locomotive industry, it will be closely scrutinised by the losing bidders seeking any loophole to press an advantage. The tender calls for programmatic procurement and it is possible to reduce the final quantities. The following implications were considered in adjusting the (diesel locomotive) quantities.

- a) The tenders have closed and asking respondents for revised submissions would delay the process further.
- b) The perceptions that may be generated by "backtracking" on and reducing a visibly stated need and objective to "favour" a supplier, the urgency argument notwithstanding.
- c) Proceeding with the proposed contract extension and announcing the reduction in diesel quantities at the time of award may be perceived as an underhanded manner of "favouring" a supplier.

Procurement Recommendation

- 65. For reasons of urgency, the confine / extend contract option is the recommended option.
- 66. This will procure the locomotives in the shortest possible time and, by so doing, best mitigates the potential shortfall in MDS volumes. The reasons of urgency have been set out as well as the complementary benefits of the recommended option.

Confinement of 100 Electric Locomotives

67. An extract from the latest approved Procurement Procedures Manual, dated 01 October 2012, stipulating grounds for confinement which are relevant to this submission, reads:

"Confinements will only be considered under the following circumstances:

- a) where a genuine unforeseeable urgency has arisen. Such urgency should not be attributable to a lack of proper planning. However, where a genuine urgency has been created by the lack of proper planning, urgency can still be relied upon as a ground for Confinement. In such cases appropriate action must be taken against the individual(s) responsible for the bad planning.
- the Goods/Services are only obtainable from one/limited number of suppliers. For instance, patented/proprietary Goods or OEM spares and components. Operating divisions are however required to provide evidence that there are no new entrants to the market who could also be approached;
- c) for reasons of standardisation or compatibility with existing Goods and Services. A case
 must be made that deviation from existing standardized Goods or Services will cause
 major operational disruption. If not, confinements based on "standardisation" will not be
 considered; or
- d) when the Goods or Services being procured are highly specialized and largely identical to those previously executed by that supplier and it is not in the interest of the public or the organization to solicit other offers, as it would result in wasted money and/or time for Transnet. When this particular ground is intended to be used as a ground for Confinement, it is important to note that all pre-requisites must be satisfied: The Goods or Services must be highly specialised, almost identical to previous work done and approaching the market again would result in wasted money and time."

68. The project is motivated on the basis of Para (a) where a genuine unforeseeable urgency has arisen.

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- a) Item 13 et al covering the "History and Status of the TFR Fleet Plan" and the "History and Status of the 1064 Procurement" demonstrates the reasonable and timeous steps taken to address to the Board the run out of the current fleet and the locomotive requirements required to address the volume ramp up of GFB.
- b) Item 11 et al further indicates that the delay was not attributable to a lack of proper planning as the GFB locomotive requirements have remained consistent throughout.
- c) Considering (a) and (b), no individual or group of individuals is responsible for bad planning.

69. Addressing the urgency:

- a) The locomotives requested have been through the teething phase with most initial manufacturing and operational faults rectified. Present models are operating optimally and have exceeded their design parameters
- b) Re-starting of these production lines will be quick; the designs are finalised so delivery lead times will be kept to a minimum and set up costs reduced.
- c) Crew (drivers and assistants) are already trained on these locomotives.
- d) Confinement will realize the quickest delivery and existing facilities previously used for the assembly of the 110×100 Class 19E.
- 70. Complementing the urgency (a) is the standardisation (c) and goods largely identical to those previously executed (d). Inter alia:
 - a) Locomotives are highly specialised with limited suppliers worldwide.
 - b) The locomotives would be largely identical with those already supplied as:
 - i. In 2009, Transnet Freight Rail (TFR) entered into a contract with Mitsui & Co African Railway Solutions (PTY) LTD (MARS for the procurement of 110 new Class 19E electric locomotives for the Coal Export Line; TFR took delivery of the last locomotive in August 2012. MARS are also delivering the Class 15E locomotives for the Ore Export line and the last one is due to come of the factory line in September 2013:
 - c) Transnet would incur wasted time and money in approaching the market as:
 - i. The specialised tender specifications take time to prepare; prospective tenderers need time to respond and there is the time to adjudicate. This process takes at least 12 months by which time the urgency has passed and the 1064 deliveries will start to kick in.
 - ii. Furthermore a new supplier would necessitate a new design, design review and prototyping and type testing. This is a further 15 months before production commences.
 - d) Standardisation of locomotives has two elements. (i) Operational standardisation and (ii) Maintenance standardisation.
 - i. Operational standardisation requires locomotives of the same class to operate as a consist (i.e. two or more locomotives coupled together operating as a single unit). This is not negotiable but is implemented through de facto industry standards.

After many years these standards have now changed and TFR is evaluating the impact of these changes.

ii. Maintenance standardisation addresses:

- Reduced spares holdings and simplified and standardised inventory.
- Standardised tools and diagnostic instruments serving a common fleet
- Unified training and for maintenance staff.
- Simplified maintenance practises resulting in shorter Mean Time to Repair.
- iii. TE is currently maintaining and repairing the Class 19E Series which means that no additional training will be required and optimum utilisation of the current maintenance facilities.
- 71. In light of the foregoing concerning standardisation, specialisation and similar locomotives already supplied and further considering that:
 - a) the Class 19E locomotives are performing well and have proven to be both efficient and reliable and
 - b) the Class 19E is a modern locomotive and the proposed 100 locomotives will be an extension of the current design and no prototyping or type testing is required conservatively saving 15 months or more and
 - c) the limited quantities of each type of locomotive:

It is submitted that it is not in the best interest of Transnet to solicit other offers for the 19E locomotives.

- 72. From a social-economic perspective the following jobs will be retained in assembly facilities:
 - a) Approximately 186 jobs will be retained at the TE assembly facility and further jobs will be retained in downstream enterprises
 - b) Approximately 400 **jobs** will be created over the period at the Union Carriage Works assembly facility and further jobs will be retained in downstream enterprises
 - c) Toshiba has indicated its serious intent in building a traction motor assembly facility in SA and this could be expedited through the SD obligations that would be linked to this contract.
- 73. The Japanese Yen has weakened marginally against the South African Rand. The Rand in turn has weakened significantly against the US Dollar. The foreign component of the original 110 x Class 19E contract was 40% Yen based and a contract on similar terms would be considerably cheaper than a new US Dollar based contract.
- 74. The original 110 Class 19E contract was entered into in 2006. The SD terms and conditions required today are significantly different and more stringent. This calls for a new procurement event via a confined tender.
- 75. Considering the volumes at risk and the urgent requirement for the coal line locomotives to cascade the current fleet to General Freight, it is proposed that the procurement be confined to MARS Railway Solutions, a subsidiary of Japan's Mitsui & Co Limited.

Contract Extension with GESAT for 60 Class 43 Diesels

- 76. The arguments for an extension to the GESAT contract are similar to those for confinement and are motivated on:
 - a) the basis of urgency (a) as outlined above
 - b) and complemented by standardisation (c) and goods largely identical to those previously executed (d).

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- 77. The project is motivated on the basis of Item 67 Para (a) where a genuine unforeseeable urgency has arisen. The arguments are per Items 68 and 69 above are also applicable to the 60 Class 43 Diesels.
- 78. The latest approved Procurement Procedures Manual, dated 01 October 2013, par 22.5.3, allows for a contract extension. In this instance the request is for a material contract amendment to a previously confined event. The reasoning for the original confinement of the additional 43 loco's is still applicable given that there is a genuine unforeseeable urgency which has arisen due to the delay in the 1064 tenders and such urgency is not be attributable to a lack of proper planning.
- 79. Complementing the urgency is that the goods are largely identical to those previously executed by that supplier and standardisation is a benefit for the specialized locomotives.
- 80. Addressing the urgency:
 - a) In December 2009, Transnet concluded a contract with General Electric South Africa Technologies (GESAT) PTY Ltd for the Supply of 100 Diesel Locomotives through a limited tender process confined to three potential suppliers. In 2011, through a confinement process, TFR concluded a contract with GESAT for an additional 43 Class 43 diesel locomotives. The completion date of the 43 Locomotives was end June 2013 in line with the Transnet planned schedule. The last few locomotives to roll out of assembly will be tested by 30 September 2013, where after they may be accepted.
 - b) As the production line is currently operational and design is finalised, delivery lead times will be reduced by approximately 12 months and Transnet will save by not requiring set up costs of facilities and production runs.
 - c) GESAT and TE have the ability to roll out between 8 to 10 locomotives per month.
 - d) No prototyping or type testing is required.
- 81. Complementing the urgency (a) is the standardisation (c) and goods largely identical to those previously executed (d). Inter alia:
 - a) Locomotives are highly specialised with limited suppliers worldwide.
 - b) The locomotives would be identical with the 143 Class 43 Diesels already supplied or about to be commissioned.
 - c) Transnet would incur wasted time and money in approaching the market as:
 - i. The specialised tender specifications take time to prepare; prospective tenderers need time to respond and there is the time to adjudicate. This process takes at least 12 months by which time the urgency has passed and the 1064 deliveries will start to kick in.
 - ii. Furthermore a new supplier would necessitate a new design, design review and prototyping and type testing. This is a further 12 months for diesels before production commences.
 - d) Standardisation of locomotives has two elements. (i) Operational standardisation and (ii) Maintenance standardisation.
 - i. Operational standardisation requires locomotives of the same class to operate as a consist (i.e. two or more locomotives coupled together operating as a single unit). This is not negotiable but is implemented through de facto industry standards.

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After many years these standards have now changed and TFR is evaluating the impact of these changes.

- ii. Maintenance standardisation addresses:
 - Reduced spares holdings and simplified and standardised inventory.
 - Standardised tools and diagnostic instruments serving a common fleet
 - Unified training and for maintenance staff.
 - Simplified maintenance practises resulting in shorter Mean Time to Repair.
- iii. TE is currently maintaining and repairing the Class 43 Series which means that no additional training will be required and optimum utilisation of the current maintenance facilities.
- 82. In light of the foregoing concerning standardisation, specialisation and similar locomotives already supplied and further considering that:
 - a) the Class 43 diesel is a modern locomotive that is performing well and has proven to be both efficient and reliable and
 - b) the proposed 60 locomotives will identical to the current design and no prototyping or type testing is required conservatively saving 15 months or more and
 - c) the limited quantities required:

It is submitted that it is not in the best interest of Transnet to solicit other offers for the 60 Class 43 diesel locomotives.

- 83. In both transactions, Transnet Engineering (TE) was appointed as GESAT's subcontractor for the local assembly of the locomotives and the contractual obligations have been met.
- 84. The time and cost to localise production to comply with local content and SD requirements has to be amortised over the anticipated production run. The smaller the run, the more expensive the overhead. To breakeven point to set up new facilities is marginal for the 100 Class 19E but mitigates against new facilities for the 60 Class 43 diesels.
- 85. Given that a contract is already in place and that the additional 60 loco requirement will be largely on the same terms and conditions as the 43 loco confinement, this warrants extension.

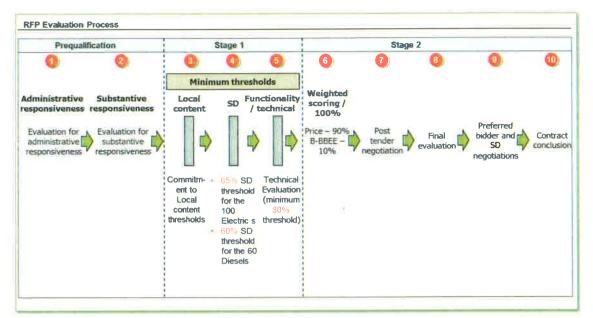
Contracting strategy

- 86. Extend the current contract with General Electric South African Technologies (GESAT) for 60 Class 43 Diesel Locomotives.
- 87. Confine and award to Mitsui & Co African Railway Solutions (PTY) LTD (MARS) for 100 Class 19E locomotives.
- 88. The reasons for the different confinement and extension strategies have been highlighted in the sections above.

Evaluation Methodology

89. The Request for Proposals (RFP's) for the confinement to Mars and extension to GESAT respectively will be issued and their respective proposals will be assessed as described below.

The normal open tender process would follow the evaluation methodology indicated below.



- 90. The Evaluation Methodology for an open tender comprises the following steps:
- 1) Administrative responsiveness bidders will need to pass the administrative responsiveness to enable them to be evaluated further. This includes evaluating all returnable documents were submitted and the bid documents were duly signed by the bidders
- 2) **Substantive responsiveness** bidders must ensure that all pre-qualification criteria, the pricing schedule is completed, their bid materially complies with the scope/specification and that all material terms and conditions in the bid documents have been met
- 3) **Local Content** bidders must comply to the minimum local content thresholds for Electric and Diesel locomotives as stipulated in the PPPFA
- 4) **SD thresholds** the SD thresholds of 65% and 60% set for Electric and Diesel locomotives respectively must be met for bidders to proceed to the next step of the evaluation.
- 5) **Technical evaluation** bidders will need to pass the minimum technical thresholds of 80% for both Electric and Diesel locomotives to proceed to the final phase (stage 2) of evaluations.
- 6) A **weighted scoring** approach for Price (90%) and B-BBEE scorecard (10%) will be used determine final award
- 7) **Post tender negotiations** post tender negotiation requesting preferred bidders to provide their Best and Final Offers
- 8) **Final evaluation** preferred bidders to undergo final evaluation based on the 90/10 as stipulated by the PPM
- Preferred bidder negotiations selection of the preferred bidder and negotiation of various aspects including final SD commitments and the B-BBEE improvement plan (FRC Future)
- 10) **Conclude contract** the parties sign a contract and addendums to formalize the agreement.
- 91. The above process is modified for the proposed confinement and extension in that:
 - a) Administrative response (1) is simplified to essential documentation such as tax clearance certificate, BEE certificate etc.





- b) Substantive response (2) will be required on to ensure that all material terms and conditions in the bid documents have been met
- c) Local content threshold must be met
- d) SD threshold must be met
- e) Technical evaluation (5) is simplified to ensure that all modifications / improvements made over the life of the locomotives (Class 43 and Class 19E's) for incorporation.
- f) Weighted Scoring Approach (6) and
- g) Final Evaluation (8) is not required due to confinement and extension to one party although evaluation against expected SD, BEE improvement and price ranges will be conducted to ensure the deals meet Transnet's expectations.,

Local Content, Designated Components and Supplier Development (SD)

- 92. Meeting Local Content (3) is a prerequisite to proceeding to SD threshold (4) evaluation.
- 93. The targets per PPPFA National Treasury Instruction Note (dated 16-07-2012) on 'Invitation and Evaluation of Bids Based on a Stipulated Minimum Threshold for Local Production and Content for the Rail Rolling Stock Sector' (Section 3 (3.1) are compulsory and are elaborated in following table:

Local Content - Section 3 (3.1)	
Category	Weighting
Local manufacturing: Threshold: 60% for Electric and 55% for Diesels)	100% of PPPFA
Total	100%

94. In addition, the progressive Local Content for Designated Components (Section 3 (3.2) will also be applicable to both Electric and Diesel locomotives as per the table below though they may not materialize as the contracts will be fulfilled before three years and they are not programmatic.

Designated Component / Activity Heading Only - Section 3 (3.2)	% Local Content 3-5 Years	% Local Content 6 Years and above.		
Assembly of Locomotives and EMU	100%	100%		
Car Body	100%	100%		
Bogie (including wheels)	100%	100%		
Coupling Equipment	100%	100%		
Suspension	100%	100%		
Heat, Ventilation and Air Conditioning	60%	70%		
Braking System	70%	80%		
Alternators	90%	100%		
Traction Motors	65%	80%		
Electric Systems	80%	90%		

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95. The Supplier Development targets are set out in the table below. They are considered realistic and achievable without posing a risk to the project.

Supplier Development (SD)	GENERAL LICE
Category	Weighting
Investment in plant – bidders monetary commitment to investment in plant and equipment	10%
Downstream procurement – bidders commitment to supporting 2^{nd} , 3^{rd} tier suppliers, etc.	15%
Skills development – supplier's commitment to skills development (number of people and monetary)	20%
Job creation / preservation – supplier's commitment to number of jobs maintained/created	30%
Small business promotion – supplier's commitment to usage of small businesses (monetary)	10%
ED/SD – bidders commitment to SD initiatives and ED development	15%
Total & Threshold > 65% for Electric and > 60% for Diesels	100%

Award Conditions - 100 Class 19E Equivalent

- 96. Approval to award the business to MARS is requested subject to SD compliance with the following:
 - a) Local content meeting or exceeding 60% by value
 - b) Compliance with **new** SD commitments with a minimum of 65% as measured in the SD Value Summary which forms part of the RFP
 - c) Transnet will also request a prince range of between R30.5m and R32m for the purposes of negotiation with the objective of coming in within the R34.34m per loco.

Award Conditions - 60 Class 43 Diesels

- 97. Approval to award the business to GESAT is requested subject to SD compliance with the following:
 - a) Local content meeting or exceeding 55% by value
 - b) Compliance with **new** SD commitments with a minimum of 60% as measured in the SD Value Summary which forms part of the RFP
 - c) Transnet will also request a prince range of between R22.5m and R24m for the purposes of negotiation with the objective of coming in within the R26m per loco.

FINANCIAL AND BUDGET IMPLICATIONS

1. The financial motivation and budget implications for the 100 Class 19E and 60 Class 43 Diesels are discussed in detail in the respective submissions.

100 Class 19E Equivalent

- 2. The 100 Class 19E Locomotives are summarized below:
 - a) A base price per locomotive price of R 34.34 m (2013/14 Yen 385 m @ Rand/Yen 0.09823)
 - b) Capital Investment Summary:

Year / Rm	13/14	14/15	15/16	16/17	17/18	18/19	Continge ncy	Total
Project Plan Payment	R 343	R 1 737	R 1 439				R352	R 3 871
Delivery		56	44					100

- c) Based on the original Coal 81 mt model, the acquisition of the 100 Class 19E sustaining locomotives has a net present value (NPV) of R98.49m over 10 years.
- d) The present value (PV) of the Total Cost of Ownership using the 1064 locomotive model is R59.1m.
- e) Approved infrastructure investments supporting the project totals R3 974 million.

60 Class 43 Diesels

- 3. The 60 Class 43 Diesels are summarized below:
- 4. The 60 Class 43 locomotives **are over and above** the 465 diesels of the approved 1064 locomotives.
 - a) The delays in the 1064 will result in the delivery of the 1064 locomotives extending beyond the current *7 year MDS* capital plan. The diesels in particular will not meet the originally planned delivery.
 - b) The fleet plan and the 1064 locomotive business case stress sustaining the fleet beyond the seven year period in the order of 60 to 80 locomotives per year.
 - c) The 60 Class 43 diesels will be funded from the 1064 locomotive budget for the first year.
 - d) The 1064 locomotive budget will be adjusted commencing the 2014/15 7 year cycle for the delayed delivery of the 1064 beyond the current 2013/14 7 year cycle. This adjustment is in line with the stated intent of sustaining the fleet though a continuous replenishment of new locomotives.
 - e) A price per locomotive price of R 26m @ Rand / USD (R9.59/USD) (R27.67 m @ R10.4/USD for 2014/15).
 - f) Capital Investment Summary:

Year / Rm	13/14	14/15	15/16	16/17	17/18	18/19	Continge ncy	Total
Project Plan Payment	R 156	R 1 504					R166	R 1 826
Delivery		60						60

- g) The acquisition of the 60 Class 43 Diesel preserves an NPV of R1 529 m based on the 1064 Locomotive Model.
- h) The PV of the Total Cost of Ownership using the 1064 Locomotive model is R59.1m.

Financial Impact to Group

5. The proposed procurement has limited impact on Group finances and the critical ratios are maintained.

6. For no delay the ratios are:

Ratios: Transnet Group - As is	Budget			Projections		
	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
- Operating margin %	24.9	29.1	31.5	32.5	35.4	36.3
- EBITDA %	42.9	46.7	49.1	49.7	51.8	52.6
- Return on average total assets (%)	8.0	10.0	11.3	12.4	14.2	14.5
- Gearing (%)	46.6	47.7	47.7	47.0	45.2	41.6
- Net debt to EBITDA (Times)	3.04	2.70	2.53	2.40	2.17	1.94
- Asset turnover (Times)	0.30	0.33	0.34	0.37	0.38	0.38
- Cash interest cover (Times)	3.3	3.6	4.0	4.1	4.5	4.8

7. For a one (1) year delay the ratios are:

Ratios: Transnet Group	Budget	Projections				
One (1) Year Delay	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
- Operating margin %	24.8	28.5	29.6	29.0	31.3	32.0
- EBITDA %	42.7	46.2	47.6	47.1	48.7	49.5
- Return on average total assets (%)	7.9	9.7	10.4	10.6	11.8	12.0
- Gearing (%)	46.2	47.3	47.8	48.7	48.7	47.1
- Net debt to EBITDA (Times)	3.01	2.71	2.67	2.75	2.64	2.49
- Asset turnover (Times)	0.30	0.33	0.33	0.35	0.36	0.36
- Cash interest cover (Times)	3.3	3.6	3.8	3.7	3.7	3.9

8. For a two (2) year delay the ratios are:

Ratios: Transnet Group	Budget		Projections			
Two (2) Year Delay	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
- Operating margin %	24.8	28.3	29.3	29.1	31.6	32.6
- EBITDA %	42.7	45.9	47.2	47.1	48.9	50.0
- Return on average total assets (%)	7.9	9.6	10.3	10.7	12.0	12.3
- Gearing (%)	46.0	46.6	46.8	47.4	47.7	46.3
- Net debt to EBITDA (Times)	2.99	2.67	2.61	2.64	2.55	2.41
- Asset turnover (Times)	0.30	0.33	0.34	0.35	0.36	0.36
- Cash interest cover (Times)	3.3	3.6	3.9	3.8	3.9	4.0

SOCIO-ECONOMIC BENEFITS

- 9. The transaction will be aligned with the Government of South Africa's socioeconomic policy framework, including CSDP, NGP, NDP, SSI, and IPAP2.
- 10. Meeting the MDS growth targets supports the National Development Program in the industrialisation of SA's mineral resources.
- 11. The program supports the sustainable development of a South African locomotive production industry.
- 12. Economic benefits include:
 - a) Using idle capacity available in South Africa
 - b) In terms of the National Treasury instruction note the local content for designated sector (rolling stock - locomotives) for electric locomotives is 60% and for diesel locomotives is 55%.
 - c) Ability to reinstate / retain local jobs as the skills pool already exists

d) Approximately 2 900 indirect and direct South African jobs will be preserved which include approximately 186 direct jobs at the TE assembly facility and 1076 (first, second and third tier) at MARS with further jobs retained in downstream enterprises

PROJECT RISKS

- 13. Both projects face several risks that could affect their overall economic viability:
- 14. **Locomotive Delivery**: This could arise if (i) the confinement is not approved (ii) unforeseen circumstances on the part of supplier including not complying with CSDP conditions.
- 15. **Lower volumes**: MDS volumes may not materialise per plan negating the need to cascade locomotives and / or the class 43 diesels not being fully or optimally utilised.
- 16. The coal line locomotives are nonetheless still nearing their end of life and these will require replacement in the short term to sustain coal exports at 81 mt. Long term coal contracts are currently being negotiated for 81 mt and there are sufficient coal reserves to sustain this tempo. The model and NPV is further based on 95% of the coal export volumes materialising. There is no risk to this project if volumes do not ramp up to 97.4 mt.

17. Exchange Rate Fluctuations:

- a) For the 100 Class 19E confined to MARS, the Yen / Rand Rate is forecast to be more stable than the Rand / Dollar rate. Localisation is already set at 60%, thus mitigating exchange fluctuation risks.
- b) For the 60 Class 43 confined to GESAT the base price is taken R10/USD. The rate is forecast to strengthen in the short term which includes the duration of the contract before weakening.

18. Tariffs not being realised:

- a) For the coal line current FOB prices for RBCT coal are around US\$90 per ton, well below the peak of over US\$150 per ton. At R9.50/USD and a tariff of R126 per ton, transport accounts for ~13% of the FOB price. Pressure on tariffs will remain till there is a long term sustainable uptick in the FOB price.
- b) For General Freight increases linked to inflation are not seen as a risk while increases above inflation will be subject to scrutiny and downward pressure.

19. Tariff exposure to commodity downturns:

- a) In the short term this could impact the viability of emerging miners for export coal. This will affect only 3 mt as the rest are based on long term contracts being negotiated. The model is also based on 95% of the volumes realising.
- b) Locomotives have a 30 year life-cycle which transcends economic cycles. In the short to medium term the global economic recovery is seen as slow but sustained. The economic environment for General Freight locomotives was fully set out in the 1064 business case.
- 20. Over Capitalisation of the Coal Line: This is not seen as a risk as the locomotives sustain current volumes of 81 mt for which long term contracts are being negotiated. The reserves in the Mpumalanga basin are also acknowledged to be able to sustain this tempo for the long term. There is thus little risk of stranded assets. The locomotives being replaced are at the end or very close to the end of their economic life and would require replacement in the very short term even if they were not cascaded to General Freight.

21. Project interdependencies:

a) Crucial to the new operations and achieving 81mt on the Coal Export Line with the additional 100 a Class 19E equivalent requires constructing the Ermelo bypass line. This

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- line enables two 100 wagons trains from the mines to be coupled together enabling the train to proceed as a single 200 wagon Radio Distributed Power (RDP) train without going into Ermelo Yard.
- b) An interdependency for the 100 Class 19E locomotives is cascading locomotives to general freight. The 60 Class 43 Diesels do not have other project interdependencies
- 22. Project risks will be mitigated during implementation by a **dedicated cross-functional project team** to manage the contract.

Diesels 21/30/2013

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RECOMMENDATION:

- 1. It is recommended that the Transnet Board Acquisitions and Disposals Committee recommends to the Transnet Board of Directors the following:
 - a) Note the risk to TFR MDS volumes through insufficient traction power resulting from the delay in the procurement of the 1064 locomotives:
 - b) To approve the investment in and procurement of 100 Class 19E equivalent electric locomotives required for the Coal Export Line in the amount of R3 871 m (excluding borrowing costs):

c) To approve the confinement and equivalent electric locomotives.	award of the procurement for the 100 Class 19E
	range in the fleet plan to procure of 60 Class 43 diesel the amount of R1 826 m (excluding borrowing costs):
e) To approve an extension of the additional locomotives:	current Class 43 diesel locomotives contract for 60
f) The GCE be delegated the power effect to the above resolutions.	to sign and conclude all relevant documents to give
Siyabonga Gama Chief Executive Transnet Freight Rail	2613.10.11 Date:
Gairy Pha Group Chief Supply Chain Officer Transnet SOC	11/10/13 Date:
Mohammed Mahomedy Group General Manager Capital Integration Transnet SOC	// . /o . 2o /3 Date:
Anoj Singh Group Chief Financial Officer Transnet SOC	II/WI/3. Date:
RECOMMENDED BY:	
Brian Molefe Group Chief Executive Transnet SOC	Date: