EPMO Business Case Revision
TD-0003319
West Melbourne Redevelopment Project

Portfolio:	Transmission
Regulatory Category:	2002 TCAPEX Station Rebuilds
Transmission Regulatory Key:	PC
Project Initiator & Dept.	[C-I-C], Network Engineering
Prepared by:	[C-I-C]
Date BC submitted:	4/10/2016
Project start date:	02/12/2010
Commissioning Readiness Date:	30/09/2021
Project Completion Date:	20/12/2021
Delivery Budget:	$142.285 M (Budget including Direct + CFC + O/H)
Management Reserve:	$2.936 M
Total Budget for Approval:	$147.758 M
Is this budgeted in the current Portfolio FY Plan:	Yes
Scope of Work attached?	Yes (Appendix A)
Planning extract attached?	Yes West Melbourne Terminal Station Redevelopment
ESV / Legal Directive?	No
Capex profit centre	13260
Propex profit centre	None
Opex (BAU) owner & cost centre	[C-I-C]
Change in Opex	Reduction of $25.8 K per annum

Approvals:			**Endorsement to Proceed:**
EGM, Regulated Energy Services	Chief Financial Officer	Managing Director	Manager, EPMO
Approval Budget- $1M to $5M [C-I-C]	*Approval Budget– $5M to $50M* [C-I-C]	*Approval Budget - $5M to $50M* [C-I-C]	[C-I-C]

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Business Case Accountability Matrix

The table below provides delineation and shows *who* is responsible to review *which* section of the BC. This will expedite approval as only the person best placed to review a specific section will be accountable for it.

When the business case is approved, all the stakeholders below will be copied into the confirmation email.

Development	Review
Initiator: [C-I-C]	**Initiator's manager: [C-I-C]**
• All aspects of the Business Case	• Executive summary • Project Background • Scope • Schedule • Options considered (financial & technical) • Risk assessment
High Level Designer (PD): [C-I-C]	**EPMO: [C-I-C]**
• Options considered (Technical solution) • Risk assessment • Benefit assessment	• Due Diligence o Financial o Documentation • Project Governance • Benefit assessment • Financial assessment
Project Manager: [C-I-C]	**Portfolio Review: [C-I-C]**
• Schedule • Options considered (Technical solution) • Risk assessment	• Overall Business Case • Validation of Opex (BAU) cost centre
Project Owner: [C-I-C]	

1. EXECUTIVE SUMMARY

This business case seeks approval for a revision to the scope of work, cost estimate and completion date of the West Melbourne Terminal Station (WMTS) redevelopment project. The project scope changes include the following:

- Like-for-like replacement of all deteriorated switchgear with air insulated switchgear (AIS) except for one existing 66 kV gas insulated switchgear (GIS) bus, which will be replaced with GIS. The original scope of work was to replace all 220 kV and 66 kV switchgear with GIS.
- Replacing the four 150 MVA 220/66 kV connection transformers with three 225 MVA 220/66 kV transformers rather than transformers of the same size (150 MVA).
- Retiring all 22 kV assets in line with CitiPower's plan to discontinue taking 22 kV supplies from WMTS.

The revised cost estimate and project completion date is $145.2 M (including project expenditure of $12.9 M incurred prior to FY 2017) and 30 September 2021. The like-for-like AIS replacement solution has been made possible by additional land that has been secured through a lease for a strip of land on the south western side of the site and the cancelation of the East-West Link road project.

The new like-for-like replacement option will deliver the same service, but at a lower cost with an estimated project cost saving (excluding WDV) of $43 M ($188.6 M minus $145.2 M)[1]. If WDV of assets is included, project savings would be $45M. The economic benefit of the later project completion date and consequent deferral of capital investment is estimated at $32 M[2]. The later project economic timing is a result of lower demand growth and a lower Value of Customer Reliability (VCR) rate.

Table 1.1: Project Expenditure Forecast

Project Expenditure Forecasts ($'000s)	WIP	2016 / 17	2017 / 18	2018 / 19	2019 / 20	2020 / 21	2021 / 22	2022 / 23	Total
Direct Expenditure	10,658	16,080	26,718	27,579	20,885	17,275	2,311	-	121,506
Overheads	652	1,447	2,405	2,482	1,880	1,555	208	-	10,629
Capitalised Finance Charges	1,547	1,244	2,779	3,377	581	597	26	-	10,151
Project Delivery Budget - Direct & CFCs & OH (SAP budget)	**12,857**	**18,771**	**31,901**	**33,438**	**23,346**	**19,427**	**2,546**	**-**	**142,285**
Management Reserve	-	-	-	-	-	-	2,936	-	2,936
Total Expenditure incl Management Reserve	**12,857**	**18,771**	**31,901**	**33,438**	**23,346**	**19,427**	**5,481**	**-**	**145,221**
Total CAPEX for Approval (incl risk, CFCs & OHs)	**12,857**	**18,771**	**31,901**	**33,438**	**23,346**	**19,427**	**5,481**	**-**	**145,221**
Operating Expenditure	0	-	-	-	-	-	-	-	-
Written Down Value (WDV) of Assets retired (non-cash)	-	-	-	-	-	-	2,537	-	2,537
Total Estimated Expenditure for Approval	**12,857**	**18,771**	**31,901**	**33,438**	**23,346**	**19,427**	**8,018**	**-**	**147,758**
Total Revenue		**1,134**	**3,317**	**5,592**	**7,657**	**9,317**	**505,186**	**-**	**505,186**
NPV (post Tax)									**23,356**
Payback Period (Discounted)									30.2
Internal Rate of Return (IRR)									6.45%
Corporate WACC (Post Tax Nominal)									5.12%

** Access to the Management Reserve component is subject to approval of a Change Control Request (CCR) in SAP and prior to exceeding the Project Delivery Budget

[1] The later project completion date will also result in a lower asset write down value, which has not been accounted for in the project cost saving of $43 M. Project total expenditure savings (including asset write down values) is $45.1 M. The GIS redevelopment option cost estimate is $188.6 M (excluding WDV) as per the Business Case that has been approved in April 2012.

[2] The economic benefit has been calculated based on a four year deferral of the estimated real cost of the like-for-like replacement project ($128.4 M) at a real discount rate of 7.5%.

Previously Approved

Program / Project Expenditure Forecasts	2012 / 13	2013 / 14	2014 / 15	2015 / 16	2016 / 17	
	2016 / 17	2017 / 18	2018 / 19	2019 / 20	2020 / 21	Total
Program / Project Direct Expenditure	2,731	33,312	60,136	57,839	6,899	160,917
Program / Project Total Expenditure	3,312	40,538	74,194	66,966	7,836	192,846
Revenue						
NPV						
Payback Period (Discounted)						
Corporate WACC (Post Tax Nominal)						

Revised Summary

Program / Project Expenditure Forecasts	2016 / 17	2017 / 18	2018 / 19	2019 / 20	2020 / 21	Total
Program / Project Direct Expenditure	16,080	26,718	27,579	20,885	17,275	121,506
Program / Project Total Expenditure	18,771	31,901	33,438	23,346	19,427	147,758
Revenue	1,134	3,317	5,592	7,657	9,317	505,186
NPV						23,356
Payback Period (Discounted)						30
Corporate WACC (Post Tax Nominal)						5.12%

Variance to Previous Approval

Program / Project Expenditure Forecasts	2016 / 17	2017 / 18	2018 / 19	2019 / 20	2020 / 21	Total
Program / Project Direct Expenditure	13,349	(6,594)	(32,557)	(36,954)	10,376	(39,411)
Program / Project Total Expenditure	15,459	(8,637)	(40,756)	(43,620)	11,591	(45,088)
Revenue	1,134	3,317	5,592	7,657	9,317	505,186
NPV						23,356

2. PROJECT BACKGROUND

WMTS is the key terminal station supplying Melbourne's CBD and inner suburban areas. Many of the primary and secondary assets installed at the time that WMTS was established have deteriorated and are reaching the end of their technical lives. The risks associated with plant failure are increasing and these assets are becoming more difficult and expensive to maintain due to a lack of manufacturer support and a scarcity of spare parts. A business case to redevelop WMTS with compact GIS technology was approved in May 2012 to address the identified risks.

As the project progresses through detailed design, the business reassessed the economic feasibility and economic timing of the recommended solution when the project is still in its early delivery stage with project spend prior to FY 2017 at $12.9 M.

A new lower cost solution (like-for-like AIS replacement) is now made possible with the cancelation of the East West Link road project and securing the lease on a strip of land on the south western side of the site. Furthermore, lower demand growth and CitiPower's decision to upgrade their distribution network and to discontinue taking supplies from WMTS 22 kV by around 2021reduces the supply risk at WMTS, which allows the project completion date to be deferred till FY2021/22.

3. REASON FOR REVISION

Revision Raised by:	[C-I-C]
Current Status of this Project:	Build phase - Design
Triggers for Change:	A new redevelopment option has been made possible by the cancelation of the East West Link road project and the lease of a strip of land on the south western side of the site. Lower demand growth and the new AEMO Value of Customer Reliability (VCR) rates allowed for the project to be deferred based on the lower assessed supply risk at WMTS. CitiPower's decision to upgrade their distribution network and to discontinue taking supplies from WMTS 22 kV by around 2021. City of Melbourne's approval of the planning application to redevelopment WMTS with AIS rather than GIS. Transportation of larger 225 MVA transformers across the Arden Street bridge has been confirmed to be technically possible following some modifications to the bridge and for it to be more economical than replacing with 150 MVA transformers. The initial business case assumption was that significant cost would be incurred to reinforce the bridge to allow for the greater weight of the 225 MVA transformers.
Effects of Change on:	
Strategic Alignment	No change.
Benefit	The project delivers the same benefits.
Scope	All 220 kV switchgear will be replaced with AIS rather than GIS. The 66 kV switchgear replacements will be like for like with three AIS busses and one GIS bus rather than all GIS. The four 150 MVA 220/66 kV transformers will be replaced with three 225 MVA transformers and the B4 transformer, which is still in a good condition will be used in another asset replacement project. The original scope allowed for replacement with the same size transformers (150 MVA). The 22 kV assets will be retired.
Work to be undertaken	Changes as described in the Scope above.
Cost	The project can be delivered at a lower cost based on the scope changes. The estimated saving is around $43 M when the estimated cost ($188.5 M) of the original project in 2012 is compared with the new estimate ($145.2 M). This cost comparison does not include the economic benefits achieved by deferring the capital expenditure.
Risks	Project delivery risks are marginally higher as it is now been undertaken as replacements in live switchyards.
Impact Assessment File Name:	N/A
Initial Approved Business Case File Name:	XA14 WMTS Redevelopment Project Business Case

4. SCOPE – HIGH LEVEL

The high level scope of work includes:

- Like for like replacement of the 220 kV switchgear with AIS
- Like for like replacement of the 66 kV switchgear with three AIS buses and one GIS bus
- Replacement of the 150 MVA 220/66 kV transformers with three 225 MVA 220/66 kV transformers. The B4 transformer, which is still in a good condition, will be used elsewhere on the network.
- Replacement of protection and control systems in a new control building
- Retirement of the 22 kV assets, including two165 MVA 220/22 kV transformers, 22 kV switchroom and 22 kV fault limiting reactors

Assets to be Replaced	Original Scope of work	New Scope of work	Cost change ($M)
220 kV AIS	• Replace with indoor GIS • Provide switching for four 220/66 kV transformers, two 220/22 kV transformers and four lines	• Replace with outdoor AIS • Provide switching for three 220/66 kV transformers and four 220 kV lines	($14M)
Three 220/66 kV transformers Two 220/22kV transformers & fault limiting reactors	• Replace with three new 150 MVA 220/66 kV transformers and retain the B4 transformer, which is still in a good condition. • Replace the 220/22 kV transformers and fault limiting reactors in 2025	• Replace with three 225 MVA 220/66 kV transformers and utilise B4 transformer in another replacement project. • Retire the two 220/22 kV transformers and fault limiting reactors	($6M)
66 kV AIS Switchyard and one GIS bus	• Replace with indoor GIS • Provide switching for four 150 MVA 220/66 kV transformers	• Replace with outdoor AIS and one GIS bus • Provide switching for three 220/66kV transformers	($13M)
22 kV Switch building	• Replace all 22 kV indoor switchgear with indoor GIS	• Retire 22 kV building and indoor switchgear	($12M)

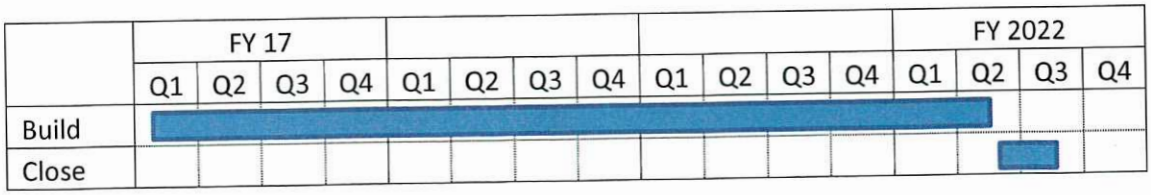
4.1 Standards to be developed for this project

The engineering standards for this project are current and available via ECM. The project manager is comfortable that no new standards are required for this project.

5. SCHEDULE

Date of idea initiation: 04/2011

Date of Commissioning Readiness: 30/09/2021



6. OPTIONS CONSIDERED

Two proactive asset replacement options have been considered in addition to the "Do Not Continue with Project" option. The proactive replacement options propose replacement of the deteriorated asset with either AIS or GIS. The economic cost benefits analyses for the three options have been undertaken over 45 years commensurate with the expected asset lives.

Table 6.1: Analysis of investment options

	Economic Least Cost Analysis				Financial Return		
Analysis of Investment Options ($'000s)	**PV Capital Cost**	**PV Opex Costs**	**PV Community Costs & Benefits**	**Total PV Cost**	**NPV including Reg Return (post tax)**	**PV Cost Ratio**	**PV of Incentive / (Penalty)**
Do not continue with project	(11,310)	(646)	(268,492)	**(280,448)**	-	1.00	-
AIS Redevelopment	**(116,474)**	**(334)**	**(36,413)**	**(153,221)**	**23,356**	**9.77**	**-**
Business as Usual - GIS Redevelopment	(150,487)	(334)	(36,413)	**(187,234)**	30,152	12.61	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-

All figures are in $000's unless otherwise stated.
(nominal and discounted)

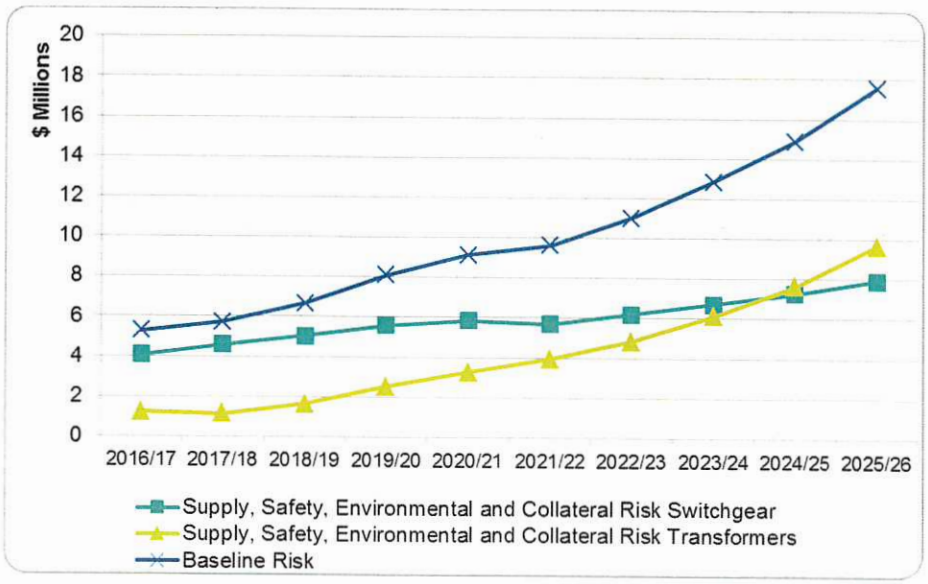
Do Not Continue with Project

This option acts as a baseline to measure the economic benefits of the proactive replacement options to mitigate the identified risks at WMTS. The total PV cost of this option is much higher than the other two options as shown in Table 6.1.

The risk of an asset failure and consequent safety and/or supply impact is expected to increase over the planning period. The baseline risk at WMTS, which consists of the expected safety, supply, collateral and environmental risk is shown in the Figure 1 below.

The progressive reduction in reliability of supply and increase in safety risk is inconsistent with AusNet Services' obligations under the National Electricity Rules. Recurring asset failures is furthermore inconsistent with the requirements of the Electricity Safety Act and AusNet Services' accepted Electricity Safety Management Scheme.

Figure 1: Monetised baseline risk at WMTS



Capex and Opex

No additional capex is included for this option. The Work In Progress capital cost will be written off.

Opex consists of transformer and circuit breaker operation and maintenance costs, which is estimated at $38.8 K pa given the age and condition of the assets at WMTS.

Transformer annual opex is estimated at $2.18 K pa for each one of the three old transformers and $0.38 pa for the relatively new B4 transformer.

Circuit breaker annual opex is estimated at $1.85 K for each of the nine 220 kV circuit breakers and $0.8 K for each of the 19 66 kV circuit breakers.

Community Costs & Benefits

The community cost of the Base Case option includes safety, supply, collateral and environmental risk cost (as shown in Figure 1) as well as transformer losses. The monetised risk has been calculated in accordance with AMS 10-24 and the following input assumptions: Detailed information is provided in Section A.5.

Safety consequence = $20 M

Plant Collateral Damage Cost = $1 M

Environmental Risk Cost = $0.5 M

Value of Customer Reliability (VCR) = $42.035 / kWh

The supply, safety, collateral and environmental risk cost of the deteriorated switchgear at WMTS increases from $4.1 M to $9 M over the eleven years from 2016/17 to 2027/28. (See detailed breakdown for each voltage highlighted in yellow in the table below).

The supply, safety, collateral and environmental risk cost of the deteriorated transformers at WMTS increases from $1.2 M to $12.8M over the eleven years from 2016/17 to 2027/28. (See detailed breakdown for N-1, N-2, N-3 and N-4 risk in the table below)

The transformer losses increase from $152K to $422 K over the eleven years from 2016/17 to 2027/28. It includes load losses based on the forecast demand at WMTS as well as no load losses using the following assumptions for losses on the three old and one new 220/66 kV transformer.

150 MVA 220/66 kV Transformers	Old	New
No load losses (kW)	95	50
Load losses @ 150 MVA (kW)	776	475

The sum of all identified risk and operating cost for 2016/17 is $5.5 M as detailed below:

	2016/17	2017/18	2018/19	2019/20	2020/21
Capex	0.000	0.000	0.000	0.000	0.000
	0	0	0	0	0
RISK AND OPERATING COST					
Transformer Safety Risk	0.205	0.330	0.403	0.550	0.611
220 kV Circuit Breaker Safety, Collateral, Environment and Supply Risk	0.319	0.352	0.386	0.432	0.473
220 kV Instrument Transformer Safety Risk	0.231	0.257	0.284	0.314	0.346
66 kV Circuit Breaker Safety, Collateral, Environment and Supply Risk	2.340	2.698	2.981	3.397	3.676
66 kV Instrument Transformer Safety Risk	0.529	0.586	0.648	0.714	0.785
22 kV Circuit Breaker Safety, Collateral, Environment and Supply Risk	0.469	0.503	0.538	0.507	0.397
22 kV Instrument Transformer Safety Risk	0.169	0.187	0.206	0.227	0.186
N-1 Transformer Supply Risk	0.000	0.000	0.000	0.000	0.000
N-2 Transformer Supply Risk	0.017	0.053	0.095	0.323	0.432
N-3 Tranformer Supply Risk	0.988	0.743	1.128	1.639	2.211
N-4 Tranformer Supply Risk	0.000	0.000	0.001	0.002	0.004
Transformer Maintenance	0.007	0.007	0.007	0.007	0.007
Circuit Breaker Maintenance	0.032	0.032	0.032	0.032	0.032
Transformer Losses	0.152	0.290	0.323	0.339	0.375
Annual Risk Cost and Operating Cost	5.458	6.038	7.033	8.482	9.535

Preferred option – Business as Usual - AIS Replacement

This option involves a like for like replacement of the 220 kV and 66 kV assets with AIS except for the existing 66 kV GIS bus that will be replaced with GIS. The four 150 MVA 220/66 kV transformers are replaced with three 225 MVA 220/66 kV transformers and the WMTS B4 transformer, which is still in a good condition, will be used in another replacement project. The cost to transport the B4 transformer to the other site will be borne by that project. Springvale Terminal Station (SVTS) is a potential candidate and the SVTS redevelopment project

may use the ex-WMTS B4 transformer to replace one of the old deteriorated transformers at SVTS. This option will retire all 22 kV assets at WMTS, including the 22 kV switchroom, 220/22 kV transformers and 22 kV fault limiting reactors.

This option delivers significant benefits and addresses all the identified risks at WMTS.

Capex and Opex	The capex for this option is $145.2 M. Opex consists of transformer and circuit breaker operation and maintenance cost. The project will deliver a $25.8 K saving in operation and maintenance cost. The saving is due to the lower expected maintenance cost associated with the new transformers and switchgear.
Community Costs & Benefits	The residual safety, supply, collateral and environmental risk cost will be negligible after project completion in 2021/22. Transformer losses will be around $250 K pa and will grow slightly as demand grows at WMTS.
Incentive Benefits (Electricity only)	

The new like-for-like replacement option will deliver the same service, but at a lower cost with an estimated project cost saving (excluding WDV) of $43 M ($188.6 M minus $145.2 M). The economic benefit of the later project completion date and consequent deferral of capital investment is estimated at $32 M. The later project economic timing is a result of lower demand growth and a lower Value of Customer Reliability (VCR) rate.

Option 3 – GIS Replacement

This option involves a replacement of the 220 kV and 66 kV switchgear with GIS. The four 150 MVA 220/66 kV transformers are replaced with three 225 MVA 220/66 kV transformers and the B4 transformer, which is still in a good condition, will be used to replace the old deteriorated transformers at SVTS. This option will retire all 22 kV assets at WMTS, including the 22 kV switchroom, 220/22 kV transformers and 22 kV fault limiting reactors.

This option delivers significant benefits and addresses all of the identified risks at WMTS, but at a higher capital cost than Option 2.

Capex and Opex	The capex for this option is $198.6 M. Opex consists of transformer and circuit breaker operation and maintenance cost. The project will deliver the same operation and maintenance cost saving as Option 2. The saving is due to the lower expected maintenance cost associated with the new transformers and switchgear.
Community Costs & Benefits	The residual safety, supply, collateral and environmental risk cost will be negligible after project completion and transformer losses will be around $250 K pa. Transformer losses will grow slightly as demand grows at WMTS.
Incentive Benefits (Electricity only)	

7. RISK ASSESSMENT

Project delivery risk (known)

Project Risk	What could occur?	Consequence	Likelihood	Residual Risk Level	Actions and controls in place to manage/reduce risk
Plant explosive failure during project delivery phase	Safety risk and supply outages	4	A	III	Instrument transformers that pose safety risks have been replaced prior to the project start date. Monitor assets during project. Safety review completed prior to project start.
Plant failure during project delivery phase	Supply outages	2	A	IV	Contingency plans, load transfers and monitor assets for any deterioration in condition. A plant integrity check has been undertaken to identify plant condition issues. Actions have been put in place to replace transformer bushings and to undertake transformer oil quality improvement work.
Brown Field Redevelopment	Supply outages	2	B	III	Manage outages and limit it to the lower demand period. Complete project prior to 2021, whilst WMTS has lower demand levels following load transfers to Brunswick. Contingency plans and load transfers.

Other risks

None

Project Governance

Standard project governance.

8. FINANCIAL ASSESSMENT

Capitalised Finance Charges (CFC) table

Financial Year ($'000s)		Month	Project Direct Expenditure				Net Monthly Expenditure	Cummulative WIP Balance	Transferred into RAB (Sarcoded)	Customer Contribution Receipted into Trust	Finance Charges	Total Finance Charges	Cumulative Finance Charges
			Project Direct Expenditure $Real	Project Direct Expenditure $Nominal	Overheads	Totals							
Work In Progress				10,657.5	652.4	11,310.0		12,857.3			1,547.3	1,547.3	
	2016 / 2017	Apr-16	883.2	883	79		963	13,885	-		65		65
		May-16	883.2	883	79		963	14,918	-		70		135
For A to P:		Jun-16	883.2	883	79		963	15,956	-		75		210
Direct	16,080	Jul-16	883.2	883	79		963	16,998	-		80		290
Overheads	1,447	Aug-16	1,173.7	1,174	106		1,279	18,364	-		86		376
Finance Charges	1,244	Sep-16	1,173.7	1,174	106		1,279	19,736	-		93		469
	18,771	Oct-16	1,173.7	1,174	106		1,279	21,114	-		99		568
Error checks		Nov-16	4,331.1	4,331	390		4,721	25,957	-		122		690
($Real)		Dec-16	1,173.7	1,174	106		1,279	27,365	-		128		818
Direct	-	Jan-17	1,173.7	1,174	106		1,279	28,779	-		135		953
Overheads	-	Feb-17	1,173.7	1,174	106		1,279	30,201	-		142		1,095
		Mar-17	1,173.7	1,174	106	17,528	1,279	31,628	-		148	1,244	1,244
	2017 / 2018	Apr-17	4,219.4	4,325	389		4,714	36,514	-		171		1,415
		May-17	1,062.0	1,089	98		1,187	37,878	-		178		1,593
For A to P:		Jun-17	1,062.0	1,089	98		1,187	39,249	-		184		1,777
Direct	26,718	Jul-17	4,219.4	4,325	389		4,714	44,170	-		207		1,984
Overheads	2,405	Aug-17	1,062.0	1,089	98		1,187	45,571	-		214		2,198
Finance Charges	2,779	Sep-17	1,062.0	1,089	98		1,187	46,978	-		221		2,419
	31,901	Oct-17	4,219.4	4,325	389		4,714	51,936	-		244		2,663
Error checks		Nov-17	1,062.0	1,089	98		1,187	53,373	-		251		2,913
($Real)		Dec-17	1,062.0	1,089	98		1,187	54,817	-		257		3,171
Direct	-	Jan-18	1,062.0	1,089	98		1,187	56,267	-		264		3,435
Overheads	-	Feb-18	4,565.8	4,680	421		5,101	61,658	-		289		3,724
		Mar-18	1,408.4	1,444	130	29,122	1,574	63,530	-		298	2,779	4,022
	2018 / 2019	Apr-18	1,408.4	1,480	133		1,613	65,450	-		307		4,330
		May-18	4,565.8	4,797	432		5,229	71,012	-		333		4,663
For A to P:		Jun-18	1,408.4	1,480	133		1,613	72,967	-		343		5,006
Direct	27,579	Jul-18	1,408.4	1,480	133		1,613	74,932	-		352		5,357
Overheads	2,482	Aug-18	4,565.8	4,797	432		5,229	80,539	-		378		5,736
Finance Charges	3,377	Sep-18	1,408.4	1,480	133		1,613	82,539	-		387		6,123
	33,438	Oct-18	1,408.4	1,480	133		1,613	84,549	-		397		6,520
Error checks		Nov-18	4,565.8	4,797	432		5,229	90,201	-		423		6,943
($Real)		Dec-18	1,408.4	1,480	133		1,613	92,247	-		433		7,376
Direct	-	Jan-19	1,408.4	1,480	133		1,613	-	93,860		-		-
Overheads	-	Feb-19	1,520.1	1,597	144		1,741	1,749	-		8		7,385
		Mar-19	1,173.7	1,233	111	30,061	1,344	3,108	-		15	3,377	7,399
	2019 / 2020	Apr-19	1,062.0	1,144	103		1,247	4,375	-		21		7,420
		May-19	1,062.0	1,144	103		1,247	5,648	-		27		7,446
For A to P:		Jun-19	4,219.4	4,544	409		4,953	10,651	-		50		7,496
Direct	20,885	Jul-19	1,062.0	1,144	103		1,247	11,953	-		56		7,552
Overheads	1,880	Aug-19	1,062.0	1,144	103		1,247	13,262	-		62		7,615
Finance Charges	581	Sep-19	1,062.0	1,144	103		1,247	14,577	-		68		7,683
	23,346	Oct-19	1,062.0	1,144	103		1,247	15,899	-		75		7,758
Error checks		Nov-19	4,219.4	4,544	409		4,953	20,950	-		98		7,856
($Real)		Dec-19	1,062.0	1,144	103		1,247	22,301	-		105		7,961
Direct	-	Jan-20	1,173.7	1,264	114		1,378	-	23,679		-		-
Overheads	-	Feb-20	1,173.7	1,264	114		1,378	1,384	-		6		7,967
		Mar-20	1,173.7	1,264	114	22,765	1,378	2,775	-		13	581	7,980
	2020 / 2021	Apr-20	4,196.1	4,632	417		5,049	7,860	-		37		8,017
		May-20	1,038.7	1,147	103		1,250	9,153	-		43		8,060
For A to P:		Jun-20	1,038.7	1,147	103		1,250	10,452	-		49		8,109
Direct	17,275	Jul-20	1,038.7	1,147	103		1,250	11,757	-		55		8,164
Overheads	1,555	Aug-20	871.1	961	87		1,048	12,865	-		60		8,225
Finance Charges	597	Sep-20	982.8	1,085	98		1,182	14,114	-		66		8,291
	19,427	Oct-20	4,000.5	4,416	397		4,813	19,017	-		89		8,380
Error checks		Nov-20	496.7	548	49		598	19,707	-		93		8,473
($Real)		Dec-20	496.7	548	49		598	20,400	-		96		8,569
Direct	-	Jan-21	496.7	548	49		598	-	20,998		-		-
Overheads	-	Feb-21	496.7	548	49		598	600	-		3		8,571
		Mar-21	496.7	548	49	18,830	598	1,204	-		6	597	8,577
	2021 / 2022	Apr-21	496.7	562	51		613	1,825	-		9		8,586
		May-21	496.7	562	51		613	2,449	-		11		8,597
For A to P:		Jun-21	496.7	562	51		613	-	3,062		-		-
Direct	2,311	Jul-21	524.7	594	53		647	650	-		3		8,600
Overheads	208	Aug-21	27.9	32	3		34	688	-		3		8,603
Finance Charges	28	Sep-21	-	-	-		-	-	688		-		-
	2,546	Oct-21	-	-	-		-	-	-		-		-
Error checks		Nov-21	-	-	-		-	-	-		-		-
($Real)		Dec-21	-	-	-		-	-	-		-		-
Direct	-	Jan-22	-	-	-		-	-	-		-		-
Overheads	-	Feb-22	-	-	-		-	-	-		-		-
		Mar-22	-	-	-	2,519	-	-	-		-	26	-
	2022 / 2023	Apr-22	-	-	-		-	-	-		-		-
		May-22	-	-	-		-	-	-		-		-
For A to P:		Jun-22	-	-	-		-	-	-		-		-
Direct	-	Jul-22	-	-	-		-	-	-		-		-
Overheads	-	Aug-22	-	-	-		-	-	-		-		-
Finance Charges	-	Sep-22	-	-	-		-	-	-		-		-
	-	Oct-22	-	-	-		-	-	-		-		-
Error checks		Nov-22	-	-	-		-	-	-		-		-
($Real)		Dec-22	-	-	-		-	-	-		-		-
Direct	-	Jan-23	-	-	-		-	-	-		-		-
Overheads	-	Feb-23	-	-	-		-	-	-		-		-
		Mar-23	-	-	-	-	-	-	-		-	-	-
Total						132,135					-	10,151	
Cash flow amount should equal the total directs as shown on page 1 of the A to P							Total Including Finance Charges				142,285		

Corporate accounting considerations

Asset Retirements

The following assets with a total WDV of $2.537 M will be retired as at September 2021

Asset Desc	NBV Total Sep-21
NO.4 220/66KV TRANS X PROT AT WMTS P466	682,845.75
NO.4 220/66KV TRANS X PROT AT WMTS - P466	62,035.85
LOAD SHEDDING EQUIPMENT AT WMTS - X1E6	27,476.60
NO.1 66KV BUS AT WMTS - X3E6	28,322.23
NO.3 66KV BUS AT WMTS - X3E6	28,060.82
2-3 220KV BUS TIE CB 109 CB FAIL PROT & CONT AT WMTS	13,913.56
B4 220/66KV TRANS CB FAIL PROT & CONT AT WMTS	13,913.59
JA NO.1 66KV FDR X PROT AT WMTS - Z345	73,514.93
NO.3 66KV BUS AT WMTS - Z225	98,671.94
JA NO.1 66KV FDR Y PROT AT WMTS - Z345	72,884.90
NO.1 220/66KV TRANS AT WMTS - X425	27,335.96
NO.2 220/66KV TRANS AT WMTS - X425	11,715.55
NO.2 66KV CAPACITOR BANK AT WMTS - X4A0	233.31
REMOTE CONTROL AT WMTS - X126	68,805.33
CB CONTROLS/MONITORS AT WMTS	8,181.38
NO.1 220/66KV TRANS AT WMTS - X233	17,469.05
NO.1 220/22KV TRANS AT WMTS - X233	17,469.05
NO.2 220/66KV TRANS AT WMTS - X233	17,469.05
NO.3 220/66KV TRANS AT WMTS - X233	17,469.05
NO.3 220/22KV TRANS AT WMTS - X233	17,469.05
ENVIRONMENTAL UPGRADE WORKS AT WMTS - X559	92,961.62
ENVIRONMENTAL UPGRADE WORKS AT WMTS	13,001.68
FT NO.2 66KV FDR BACKUP PROT AT WMTS	6,285.16
FT NO.1 66KV FDR BACKUP PROT AT WMTS	6,285.17
KTS NO.1 220KV LINE CB AT WMTS	74,735.74
KTS NO.2 220KV LINE CB AT WMTS	89,336.67
WB 66KV FDR AT WMTS	6,751.50
KTS NO.1 220KV LINE CB AT WMTS	71,725.83
NO.4 11KV/415V S/S TRANS AT WMTS	536,471.63
B3 220/66KV TRANS AT WMTS	2,755.43
26000L MISTING WATER TANK AT WMTS	5,883.96
B2 220/66KV TRANS AT WMTS	2,755.43
B1 220/66KV TRANS AT WMTS	5,530.76
NC 66KV FDR SD R/PH AT WMTS	8,785.24
FE NO.1 66KV FDR SD R/PH AT WMTS	8,785.24
B3 220/66KV TRANS 220KV SD R/PH AT WMTS	18,364.41
FT NO.2 66KV FDR SD R/PH AT WMTS	8,403.65
FE NO.2 66KV FDR SD R/PH AT WMTS	8,403.65
VM NO.1 66KV FDR AT WMTS	10,033.20
VM NO.3 66KV FDR AT WMTS	10,033.20
VM NO.2 66KV FDR AT WMTS	10,033.20
CB CONTROLS/MONITORS AT WMTS	785.35
2-3 220KV BUS TIE CB 109 CB FAIL PROT & CONT AT WMTS	497.15
DC SUPPLY SYSTEMS AT WMTS	91,329.89
FE NO.1 66KV FDR Y PROT AT WMTS	35,344.03
FE NO.1 66KV FDR X PROT AT WMTS	35,344.03
FE NO.2 66KV FDR X PROT AT WMTS	35,344.01
FE NO.2 66KV FDR X PROT AT WMTS	35,344.03
	2,536,567.81

Contributed (Gifted) Assets

None

Assets to be created

See Appendix A.5

Accounting Review

N/A

Appendix A

A.1 Scope of works

TD-0003319 WMTS Rebuild AIS Option S(

A.2 Asset Management Strategy Extract

WMTS Redevelopment Planr

A.3 ESV or Legal Directive

None

A.4 Detailed List of new Assets Created

WMTS New Assets Created.pdf

A.5 Detailed Cost and Benefit Assumptions

See WMTS Redevelopment Planning Report and AMS 10-24

WMTS Economic Model_V2016 for Bus

Monetise Risk Calculations- Base Case

The present value cost (PV) of each option has been assessed over an expected asset life of 45 years. The monetised risk is shown for each year until 2027/28 after which a residual amount is calculated to present the remaining period.

Option 1: Do not continue with project	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	Residual
Capex	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Annual payment for Non-Network Options	0	0	0	0	0	0	0	0	0	0	0	0	0
RISK AND OPERATING COST													
Transformer Safety Risk	0.205	0.330	0.403	0.550	0.611	0.656	0.731	0.813	0.879	0.971	1.024	1.078	13.515
220 kV Circuit Breaker Safety, Collateral, Environment and Supply Risk	0.319	0.352	0.386	0.432	0.473	0.516	0.568	0.638	0.720	0.833	0.905	0.983	12.324
220 kV Instrument Transformer Safety Risk	0.231	0.257	0.284	0.314	0.346	0.380	0.416	0.454	0.495	0.537	0.582	0.630	7.895
66 kV Circuit Breaker Safety, Collateral, Environment and Supply Risk	2.340	2.698	2.981	3.397	3.676	3.938	4.258	4.606	4.940	5.339	5.658	5.989	75.101
66 kV Instrument Transformer Safety Risk	0.529	0.586	0.648	0.714	0.785	0.859	0.938	1.022	1.110	1.203	1.300	1.403	17.589
22 kV Circuit Breaker Safety, Collateral, Environment and Supply Risk	0.469	0.503	0.538	0.507	0.397	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22 kV Instrument Transformer Safety Risk	0.169	0.187	0.206	0.227	0.186	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N-1 Transformer Supply Risk	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.063	0.165	0.364	0.384	0.404	5.071
N-2 Transformer Supply Risk	0.017	0.053	0.095	0.323	0.432	0.489	0.700	1.014	1.329	1.907	2.123	2.359	29.574
N-3 Transformer Supply Risk	0.988	0.743	1.128	1.639	2.211	2.791	3.392	4.215	5.240	6.384	7.549	8.903	111.629
N-4 Transformer Supply Risk	0.000	0.000	0.001	0.002	0.004	0.006	0.010	0.016	0.024	0.036	0.052	0.074	0.924
Transformer Maintenance	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.087
Circuit Breaker Maintenance	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.399
Transformer Losses	0.152	0.290	0.323	0.339	0.375	0.383	0.386	0.396	0.407	0.412	0.423	0.423	5.301
Annual Risk Cost and Operating Cost	**5.458**	**6.038**	**7.033**	**8.482**	**9.535**	**10.059**	**11.438**	**13.276**	**15.348**	**18.026**	**20.039**	**22.283**	**279.410**
Total Annual Cost ($M)	**5.458**	**6.038**	**7.033**	**8.482**	**9.535**	**10.059**	**11.438**	**13.276**	**15.348**	**18.026**	**20.039**	**22.283**	**279.410**
PV Cost ($M) - Discount Rate 7.5%, 6%, 9%	**194.091**	**225.078**	**168.151**										
Annual Capital Cost	$9.819	$9.819	$9.819	$9.819	$9.819	$9.819	$9.819	$9.819	$9.819	$9.819	$9.819	$9.819	$9.819

Business Case Table	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	Residual
Supply, Safety, Environmental and Collateral Risk Switchgear =	-4,057.2	-4,583.1	-5,045.1	-5,590.7	-5,863.4	-5,694.0	-6,180.2	-6,720.0	-7,264.6	-7,912.5	-8,446.0	-9,004.7	-112,909.3
Supply, Safety, Environmental and Collateral Risk Transformers =	-1,209.8	-1,126.2	-1,626.8	-2,514.3	-3,257.7	-3,942.8	-4,832.7	-6,121.3	-7,637.8	-9,662.5	-11,131.3	-12,817.1	-160,713.4
OPEX =	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	485.9
Losses =	-152.2	-290.1	-322.7	-338.6	-375.2	-383.5	-386.2	-396.1	-406.7	-412.1	-422.8	-422.8	-5,301.2

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Option 4: AIS Replacement	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	Residual
Capex	0.000	0.000	0.000	0.000	0.000	125.860	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Annual payment for Non-Network Options	0	0	0	0	0	0	0	0	0	0	0	0	0
RISK AND OPERATING COST													
Transformer Safety Risk	0.205	0.330	0.403	0.550	0.611	0.003	0.004	0.005	0.006	0.008	0.009	0.011	0.143
220 kV Circuit Breaker Safety, Collateral, Environment and Supply Risk	0.319	0.352	0.386	0.432	0.473	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
220 kV Instrument Transformer Safety Risk	0.231	0.257	0.284	0.314	0.346	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
66 kV Circuit Breaker Safety, Collateral, Environment and Supply Risk	2.340	2.698	2.981	3.397	3.676	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
66 kV Instrument Transformer Safety Risk	0.529	0.586	0.648	0.714	0.785	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22 kV Circuit Breaker Safety, Collateral, Environment and Supply Risk	0.469	0.503	0.538	0.507	0.397	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22 kV Instrument Transformer Safety Risk	0.169	0.187	0.206	0.227	0.186	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N-1 Transformer Supply Risk	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.005	0.013	0.016	0.020	0.250
N-2 Transformer Supply Risk	0.017	0.053	0.095	0.323	0.432	0.000	0.000	0.001	0.001	0.003	0.004	0.006	0.080
N-3 Tranformer Supply Risk	0.988	0.743	1.128	1.639	2.211	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.021
N-4 Tranformer Supply Risk	0.000	0.000	0.001	0.002	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Transformer Maintenance	0.007	0.007	0.007	0.007	0.007	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.019
Circuit Breaker Maintenance	0.032	0.032	0.032	0.032	0.032	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.143
Transformer Losses	0.152	0.290	0.323	0.339	0.375	0.248	0.249	0.256	0.263	0.267	0.274	0.274	3.439
Annual Risk Cost and Operating Cost	**5.458**	**6.038**	**7.033**	**8.482**	**9.535**	**0.263**	**0.266**	**0.276**	**0.289**	**0.304**	**0.318**	**0.327**	**4.096**
Total Annual Cost ($M)	**5.458**	**6.038**	**7.033**	**8.482**	**9.535**	**126.123**	**0.266**	**0.276**	**0.289**	**0.304**	**0.318**	**0.327**	**4.096**
PV Cost ($M) - Discount Rate 7.5%, 6%, 9%	**113.174**	**122.126**	**105.051**										
Annual Capital Cost	$9.819	$9.819	$9.819	$9.819	$9.819	$9.819	$9.819	$9.819	$9.819	$9.819	$9.819	$9.819	$9.819
PV of Annual Risk Cost and Operating Cost ($M)	70.0	77.4	90.2	108.7	122.2	3.4	3.4	3.5	3.7	3.9	4.1	4.2	

Business Case Table	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	Residual
Supply, Safety, Environmental and Collateral Risk Switchgear =	-4,057.2	-4,583.1	-5,045.1	-5,590.7	-5,863.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Supply, Safety, Environmental and Collateral Risk Transformers =	-1,209.8	-1,126.2	-1,626.8	-2,514.3	-3,257.7	-2.8	-4.0	-7.2	-12.8	-24.4	-31.2	-39.4	-494.6
OPEX =	38.8	38.8	38.8	38.8	38.8	12.9	12.9	12.9	12.9	12.9	12.9	12.9	161.9
Losses =	-152.2	-290.1	-322.7	-338.6	-375.2	-247.6	-249.5	-256.2	-263.4	-267.0	-274.3	-274.3	-3,439.1
OPEX Savings =	0.0	0.0	0.0	0.0	0.0	-25.8	-25.8	-25.8	-25.8	-25.8	-25.8	-25.8	-324.0

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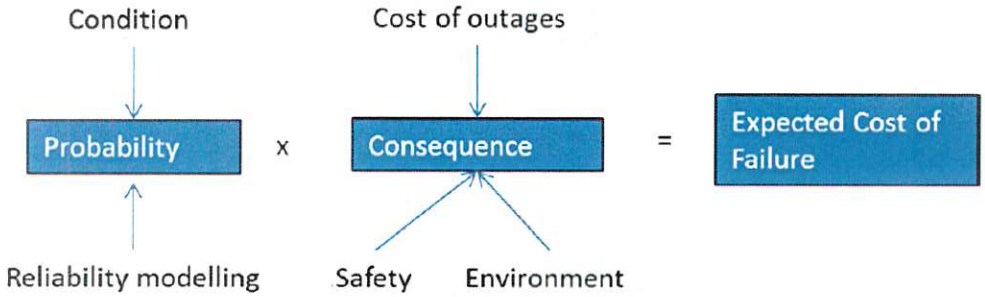
Option 5: GIS Replacement	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	Residual
Capex	0.000	0.000	0.000	0.000	0.000	170.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Annual payment for Non-Network Options	0	0	0	0	0	0	0	0	0	0	0	0	0
RISK AND OPERATING COST													
Transformer Safety Risk	0.205	0.330	0.403	0.550	0.611	0.102	0.108	0.115	0.122	0.129	0.137	0.011	0.143
220 kV Circuit Breaker Safety, Collateral, Environment and Supply Risk	0.319	0.352	0.386	0.432	0.473	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
220 kV Instrument Transformer Safety Risk	0.231	0.257	0.284	0.314	0.346	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
66 kV Circuit Breaker Safety, Collateral, Environment and Supply Risk	2.340	2.698	2.981	3.397	3.676	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
66 kV Instrument Transformer Safety Risk	0.529	0.586	0.648	0.714	0.785	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22 kV Circuit Breaker Safety, Collateral, Environment and Supply Risk	0.469	0.503	0.538	0.507	0.397	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22 kV Instrument Transformer Safety Risk	0.169	0.187	0.206	0.227	0.186	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N-1 Transformer Supply Risk	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.005	0.013	0.016	0.020	0.250
N-2 Transformer Supply Risk	0.017	0.053	0.095	0.323	0.432	0.000	0.000	0.001	0.001	0.003	0.004	0.006	0.080
N-3 Tranformer Supply Risk	0.988	0.743	1.128	1.639	2.211	0.000	0.000	0.000	0.000	0.001	0.001	0.002	0.021
N-4 Tranformer Supply Risk	0.000	0.000	0.001	0.002	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Transformer Maintenance	0.007	0.007	0.007	0.007	0.007	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.019
Circuit Breaker Maintenance	0.032	0.032	0.032	0.032	0.032	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.143
Transformer Losses	0.152	0.290	0.323	0.339	0.375	0.248	0.249	0.256	0.263	0.267	0.274	0.274	3.439
Annual Risk Cost and Operating Cost	**5.458**	**6.038**	**7.033**	**8.482**	**9.535**	**0.362**	**0.371**	**0.386**	**0.405**	**0.426**	**0.446**	**0.327**	**4.096**
Total Annual Cost ($M)	**5.458**	**6.038**	**7.033**	**8.482**	**9.535**	**170.362**	**0.371**	**0.386**	**0.405**	**0.426**	**0.446**	**0.327**	**4.096**
PV Cost ($M) - Discount Rate 7.5%, 6%, 9%	**142.141**	**153.655**	**131.696**										
Annual Capital Cost	$9.819	$9.819	$9.819	$9.819	$9.819	$9.819	$9.819	$9.819	$9.819	$9.819	$9.819	$9.819	$9.819
PV of Annual Risk Cost and Operating Cost ($M)	70.0	77.4	90.2	108.7	122.2	4.6	4.8	5.0	5.2	5.5	5.7	4.2	

Business Case Table	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	Residual
Supply, Safety, Environmental and Collateral Risk Switchgear =	-4,057.2	-4,583.1	-5,045.1	-5,590.7	-5,863.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Supply, Safety, Environmental and Collateral Risk Transformers =	-1,209.8	-1,126.2	-1,626.8	-2,514.3	-3,257.7	-2.8	-4.0	-7.2	-12.8	-24.4	-31.2	-39.4	-494.6
OPEX =	38.8	38.8	38.8	38.8	38.8	12.9	12.9	12.9	12.9	12.9	12.9	12.9	161.9
Losses =	-152.2	-290.1	-322.7	-338.6	-375.2	-247.6	-249.5	-256.2	-263.4	-267.0	-274.3	-274.3	-3,439.1
OPEX Savings =	0.0	0.0	0.0	0.0	0.0	-25.8	-25.8	-25.8	-25.8	-25.8	-25.8	-25.8	-324.0

The following formula has been used to calculate the monetised risk for each asset at WMTS. The sum of all risks for switchgear and transformers are shown separately in the table above:



EPMO Business Case Review Summary

Project No / Title	**TD-0003319 West Melbourne Redevelopment Project**
Portfolio	Transmission
Revision (Y/N)	Yes
Project Delivery Budget (P50 + CFC + OH)	$142.3M (previously $180.5M, a reduction of $38.2M)
Total Estimated Expenditure for Approval (incl risk + WDV)	$147.8M (previously $192,8M, a reduction of $45M)
Total Increase / (Decrease)	Decrease
Financial Years (FY) of Spend	FY16/17 – FY21/22
Enterprise Portfolio Review	
Project NPV (post tax)	$23M
IRR	6.45%
Payback	30 years
1. Bus Case review	The Business Case seeks approval for a revision in scope of work, cost estimate and completion date of the West Melbourne Terminal Station (WMTS) redevelopment project. A new development option is made possible by the cancellation of the East West Link road project and the lease of a strip of land on the south western side of the current site. The Business now seeks approval to perform like-for-like replacement of all deteriorated switchgear with air insulated switchgear (AIS) except for one existing gas insulated switchgear (GIS), which will be replaced with GIS. The original approved scope of work was to replace all switchgears with GIS.
2. NPV model review	The business revalidated and confirmed the need to redevelop WMTS to meet future energy demand and eliminate creeping safety and supply risk of the station due to deteriorating asset health. The capital costs required to eliminate the above risks is lower with the AIS option when compared GIS.
3. Business Benefits	The project will avoid future increase in supply risk and safety risk.
4. Budget Allowance	Corporate budget allocated for the project as per Works Program FY17 was $8,472k. The Business Case forecasts a spent of $18,771k for FY17. Asset Portfolio will rebalance the portfolio budget to accommodate the additional $10M budget requested for FY17 spend.
5. Accounting notes	N/A
6. Other issues to note	N/A
Date review completed	25 October 2016
Prepared by	[C–I–C]
Approval signature	[C-I-C] Date 27-10-16

Memo

Date: 23/12/2016

To: [C–I–C]

CC: [C–I–C]

From: [C-I-C]

Dept: Business Owner

Re: West Melbourne Terminal Station rebuild revised business case – Cover Note

Nino & Adam,

The business case coming to you for review and approval is a revision to the rebuild project for the West Melbourne Terminal Station. I am the sponsor of this project.

The requirement of this project is to completely rebuild of the West Melbourne Terminal station. This is due to the aging assets built circa 1950 and the condition scores being category 5 (worst condition) for the transformers and switch gear. A complete rebuild rather than replacing individual assets is the cheapest option.

The original business case was to rebuild the station with Gas Insulated switch gear inside architecturally designed buildings. This was a City of Melbourne requirement, to align with Arden Macaulay Urban renewal Precinct plans. This was viable because the Value of customer reliability was high.

When the VCR dropped from $100/KWh to $42/kWh the Gas option was no longer viable. We then negotiated with City of Melbourne and were able to convince them to approve an Air Insulated Switchgear option. The revision before you is requesting we adopt that option for a forecast cost of $147.8M, a saving of $45.0M from the original business case.

This proposal was put to the board at the November meeting this year and approval given along with delegation to the MD to sign off.

Please call me directly if you have any questions regarding this project.

Regards

[C-I-C]