


strata

ENERGY CONSULTING

Draft quantitative CPP information requirements relating to capital expenditure, operating and maintenance expenditure, and demand

Electricity Distribution

For The Commerce Commission

June 2010

Preface



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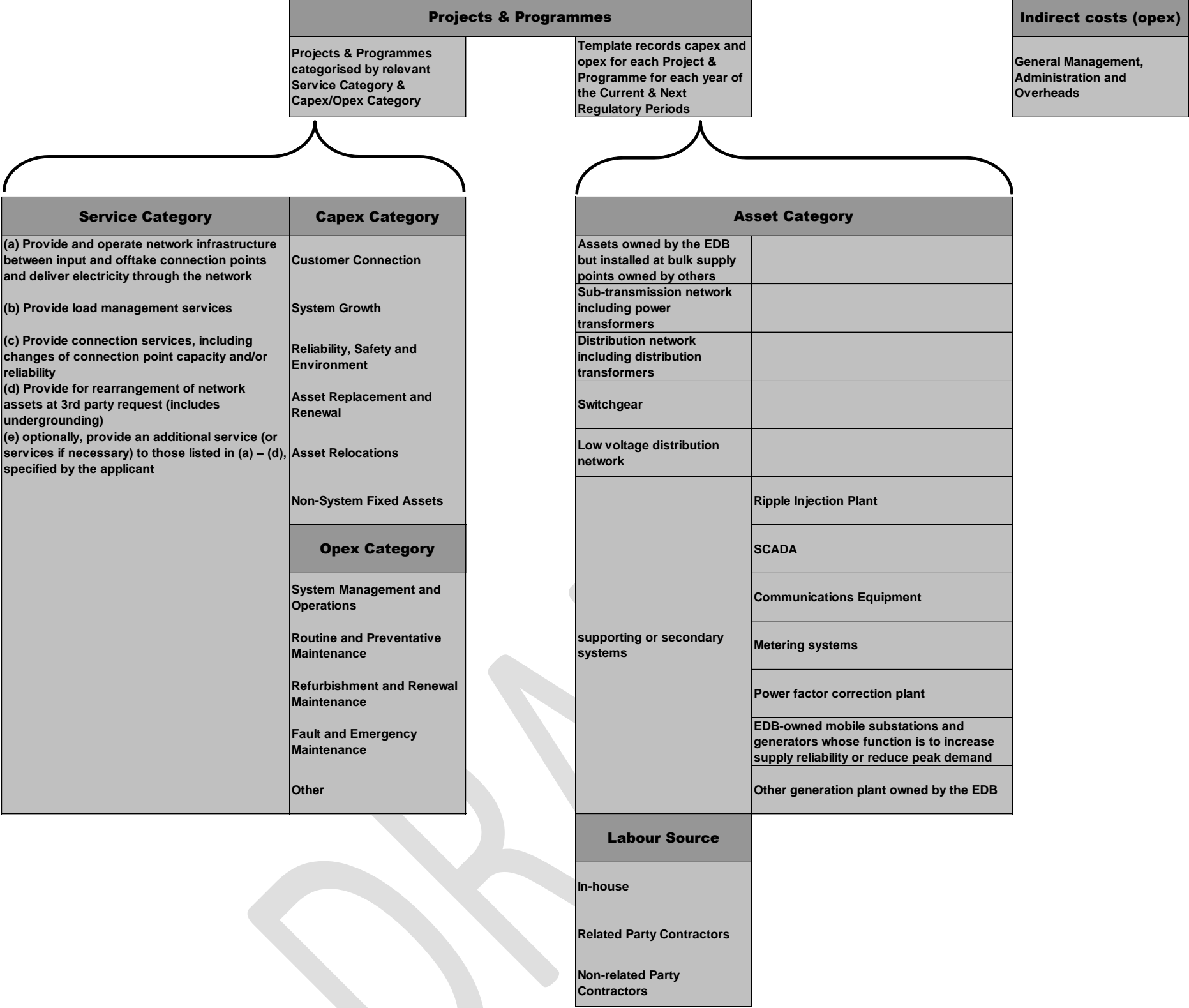
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DRAFT

INPUT METHODOLOGIES
QUANTITATIVE INFORMATION HIERARCHY - ELECTRICITY DISTRIBUTION

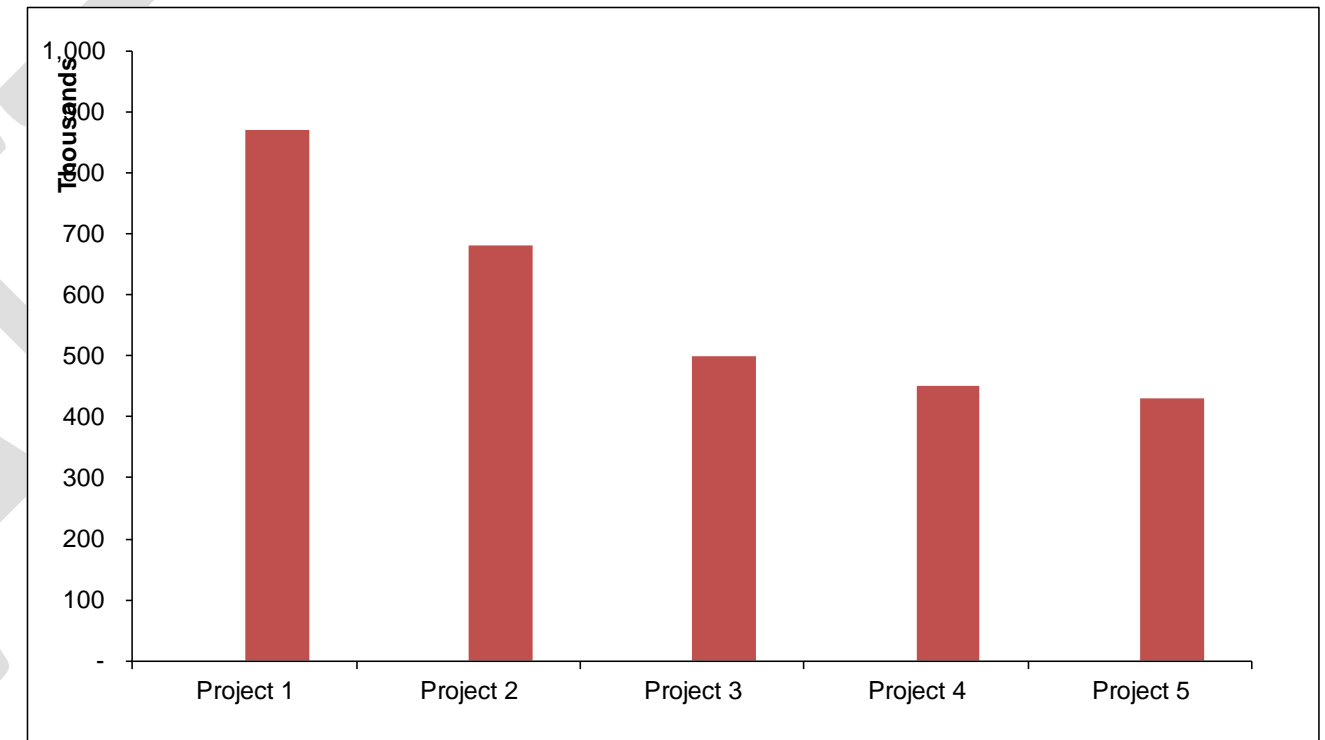
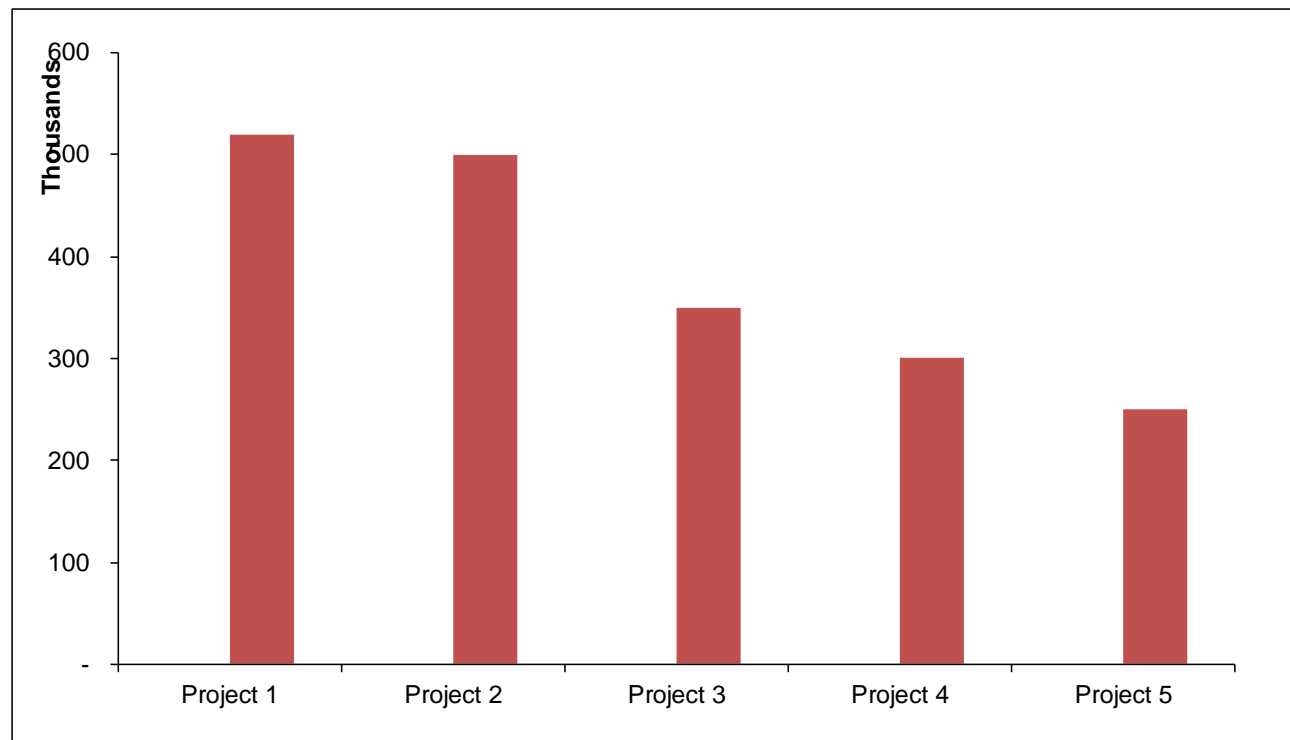


INPUT METHODOLOGIES
SERVICE EXPENDITURE CATEGORISATION - ELECTRICITY DISTRIBUTION

Service Categories	Related Capex Categories	Related Opex Categories
(a) Provide and operate network infrastructure between input and offtake connection points and deliver electricity through the network		System Management and Operations
	System Growth	Routine and Preventative Maintenance
	Reliability, Safety and Environment	Refurbishment and Renewal Maintenance
	Asset Replacement and Renewal	Fault and Emergency Maintenance
	Asset Relocations	Other
	Non-System Fixed Assets	
(b) Provide load management services	Customer Connection	System Management and Operations
	System Growth	Routine and Preventative Maintenance
		Refurbishment and Renewal Maintenance
	Asset Replacement and Renewal	Fault and Emergency Maintenance
		Other
	Non-System Fixed Assets	
(c) Provide connection services, including changes of connection point capacity and/or reliability	Customer Connection	System Management and Operations
		Routine and Preventative Maintenance
	Reliability, Safety and Environment	Refurbishment and Renewal Maintenance
	Asset Replacement and Renewal	Fault and Emergency Maintenance
		Other
(d) Provide for rearrangement of network assets at 3rd party request (includes undergrounding)		
	Asset Relocations	
(e) optionally, provide an additional service (or services if necessary) to those listed in (a) – (d), specified by the applicant		
		Other

Top Five Capex Projects		
Rank	Project name	\$000
1	Project 1	520
2	Project 2	500
3	Project 3	350
4	Project 4	300
5	Project 5	250

Top Five Opex Projects		
Rank	Project name	\$000
1	Project 1	870
2	Project 2	680
3	Project 3	500
4	Project 4	450
5	Project 5	430



Service Categories	Related Capex Categories	Assessment Year		Regulatory Year					Total
		Year 1	Year 2	Year 1	Year 2	Year 3	Year 4	Year 5	
(a) Provide and operate network infrastructure between input and offtake connection points and deliver electricity through the network	Customer Connection								
	System Growth								
	Reliability, Safety and Environment								
	Asset Replacement and Renewal								
	Asset Relocations								
	Non-System Fixed Assets								
	Subtotal								
(b) Provide load management services	Customer Connection								
	System Growth								
	Reliability, Safety and Environment								
	Asset Replacement and Renewal								
	Asset Relocations								
	Non-System Fixed Assets								
	Subtotal								
(c) Provide connection services, including changes of connection point capacity and/or reliability	Customer Connection								
	System Growth								
	Reliability, Safety and Environment								
	Asset Replacement and Renewal								
	Asset Relocations								
	Non-System Fixed Assets								
	Subtotal								
(d) Provide for rearrangement of network assets at 3rd party request (includes undergrounding)	Customer Connection								
	System Growth								
	Reliability, Safety and Environment								
	Asset Replacement and Renewal								
	Asset Relocations								
	Non-System Fixed Assets								
	Subtotal								
(e) optionally, provide an additional service (or services if necessary) to those listed in (a) – (d), specified by the applicant	Customer Connection								
	System Growth								
	Reliability, Safety and Environment								
	Asset Replacement and Renewal								
	Asset Relocations								
	Non-System Fixed Assets								
	Subtotal								
	Total								

Service Categories	Related Opex Categories	Assessment Year		Regulatory Year					Total
		Year 1	Year 2	Year 1	Year 2	Year 3	Year 4	Year 5	
(a) Provide and operate network infrastructure between input and offtake connection points and deliver electricity through the network	System Management and Operations								
	Routine and Preventative Maintenance								
	Refurbishment and Renewal Maintenance								
	Fault and Emergency Maintenance								
	Other								
	Subtotal								
(b) Provide load management services	System Management and Operations								
	Routine and Preventative Maintenance								
	Refurbishment and Renewal Maintenance								
	Fault and Emergency Maintenance								
	Other								
	Subtotal								
(c) Provide connection services, including changes of connection point capacity and/or reliability	System Management and Operations								
	Routine and Preventative Maintenance								
	Refurbishment and Renewal Maintenance								
	Fault and Emergency Maintenance								
	Other								
	Subtotal								
(d) Provide for rearrangement of network assets at 3rd party request (includes undergrounding)	System Management and Operations								
	Routine and Preventative Maintenance								
	Refurbishment and Renewal Maintenance								
	Fault and Emergency Maintenance								
	Other								
	Subtotal								
(e) optionally, provide an additional service (or services if necessary) to those listed in (a) – (d), specified by the applicant	System Management and Operations								
	Routine and Preventative Maintenance								
	Refurbishment and Renewal Maintenance								
	Fault and Emergency Maintenance								
	Other								
	Subtotal								
	Total								

**INPUT METHODOLOGIES
QUANTITATIVE INFORMATION TEMPLATE - ELECTRICITY
DISTRIBUTION**

Project/Programme Name	
Project/Programme Description	
Policy reference	
Service Category	
Capex Category	

Denotes a user input cell

Asset Category	Asset Type ¹	Current Period					Assessment Year			Regulatory Year					Total	
		Year -4	Year -3	Year -2	Year -1	Year 0	Year 1		Year 2	Year 1	Year 2	Year 3	Year 4	Year 5		
							Direct	Non-direct	Total							
Assets owned by the EDB but installed at bulk supply points owned by others									\$ -							\$ -
	Sub-total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sub-transmission network including power transformers									\$ -							\$ -
	Sub-total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Distribution network including distribution transformers									\$ -							\$ -
	Sub-total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Switchgear									\$ -							\$ -
	Sub-total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Low voltage distribution network									\$ -							\$ -
	Sub-total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Supporting or secondary systems	Ripple Injection Plant								\$ -							\$ -
	SCADA								\$ -							\$ -
	Communications Equipment								\$ -							\$ -
	Metering systems								\$ -							\$ -
	Power factor correction plant								\$ -							\$ -
	EDB-owned mobile substations and generators								\$ -							\$ -
	Other generation plant owned by the EDB								\$ -							\$ -
Sub-total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
	Sub-total - Controllable															
	Sub-total - Uncontrollable															
	Total Project/Programme	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

¹ Break down may be replaced with asset types in use by the applicant and expanded to include other asset types

Labour source	Current Period					Assessment Year			Regulatory Year				
	Year -4	Year -3	Year -2	Year -1	Year 0	Year 1		Year 2	Year 1	Year 2	Year 3	Year 4	Year 5
						Direct	Non-direct	Total					
In-house													
Related party contractors													
Non-related party contractors													
Total Labour	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

**INPUT METHODOLOGIES
QUANTITATIVE INFORMATION TEMPLATE - ELECTRICITY
DISTRIBUTION**

Project/Programme Name	
Project/Programme Description	
Policy reference	
Service Category	
Opex Category	

Denotes a user input cell

Asset Category	Asset Type ¹	Current Period					Assessment Year			Regulatory Year					Total	
		Year -4	Year -3	Year -2	Year -1	Year 0	Year 1		Year 2	Year 1	Year 2	Year 3	Year 4	Year 5		
							Direct	Non-direct	Total							
Assets owned by the EDB but installed at bulk supply points owned by others									\$ -							\$ -
	Sub-total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sub-transmission network including power transformers									\$ -							\$ -
	Sub-total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Distribution network including distribution transformers									\$ -							\$ -
	Sub-total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Switchgear									\$ -							\$ -
	Sub-total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Low voltage distribution network									\$ -							\$ -
	Sub-total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Supporting or secondary systems	Ripple Injection Plant								\$ -							\$ -
	SCADA								\$ -							\$ -
	Communications Equipment								\$ -							\$ -
	Metering systems								\$ -							\$ -
	Power factor correction plant								\$ -							\$ -
	EDB-owned mobile substations and generators								\$ -							\$ -
	Other generation plant owned by the EDB								\$ -							\$ -
Sub-total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
	Sub-total - Controllable															
	Sub-total - Uncontrollable															
	Total Project/Programme	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

¹ Break down may be replaced with asset types in use by the applicant and expanded to include other asset types

Labour source	Current Period					Assessment Year			Regulatory Year					
	Year -4	Year -3	Year -2	Year -1	Year 0	Year 1		Year 2	Year 1	Year 2	Year 3	Year 4	Year 5	
						Direct	Non-direct	Total						
In-house														
Related party contractors														
Non-related party contractors														
Total Labour	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

**INPUT METHODOLOGIES
QUANTITATIVE INFORMATION TEMPLATE**

Opex Category	General Management, Administration and Overheads
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Denotes a user input cell

Expenditure Type ¹		Current Period					Next Period									
		Year -4	Year -3	Year -2	Year -1	Year 0	Year 1			Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	
							Direct	Non-direct	Total							
Corporate management	Controllable								\$ -							
	Uncontrollable								\$ -							
	Total								\$ -							
Human resources	Controllable								\$ -							
	Uncontrollable								\$ -							
	Total								\$ -							
Accounting	Controllable								\$ -							
	Uncontrollable								\$ -							
	Total								\$ -							
Finance	Controllable								\$ -							
	Uncontrollable								\$ -							
	Total								\$ -							
Information Technology	Controllable								\$ -							
	Uncontrollable								\$ -							
	Total								\$ -							
Procurement	Controllable								\$ -							
	Uncontrollable								\$ -							
	Total								\$ -							
Property	Controllable								\$ -							
	Uncontrollable								\$ -							
	Total								\$ -							
Legal	Controllable								\$ -							
	Uncontrollable								\$ -							
	Total								\$ -							
Regulation	Controllable								\$ -							
	Uncontrollable								\$ -							
	Total								\$ -							
Occupational Health and Safety	Controllable								\$ -							
	Uncontrollable								\$ -							
	Total								\$ -							
Insurance paid to an insurance entity	Controllable								\$ -							
	Uncontrollable								\$ -							
	Total								\$ -							
	Total - Controllable	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Total - Uncontrollable	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Total Opex Category	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

¹ Break down may be replaced with categories in use by the applicant but within the definition of the opex category for indirect expenditures

**INPUT METHODOLOGIES
UNIT COST ESCALATOR TEMPLATE**

Escalator Name	[Name]
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Escalator Description	[Description]
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Key Assumption Reference	[Reference]
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Denotes a user input cell

Unit Cost Item	Base Year	Assessment Year		Regulatory Year				
		Year 1	Year 2	Year 1	Year 2	Year 3	Year 4	Year 5
	2011	2012	2013	2014	2015	2016	2017	2018
[Name]	\$ 1.00	\$ 1.02	\$ 1.04	\$ 1.07	\$ 1.08	\$ 1.10	\$ 1.12	\$ 1.14
Quantity	\$ 1,000.00	\$ 1,020.00	\$ 1,040.40	\$ 1,066.41	\$ 1,082.41	\$ 1,098.64	\$ 1,115.12	\$ 1,137.42
Escalator (% p.a.)		2.0%	2.0%	2.5%	1.5%	1.5%	1.5%	2.0%

Sample data shown