

Annex P

Planned Network Investment Volumes and Allowances

Final Determination

30 June 2017



About the Utility Regulator

The Utility Regulator is the independent non-ministerial government department responsible for regulating Northern Ireland's electricity, gas, water and sewerage industries, to promote the short and long-term interests of consumers.

We are not a policy-making department of government, but we make sure that the energy and water utility industries in Northern Ireland are regulated and developed within ministerial policy as set out in our statutory duties.

We are governed by a Board of Directors and are accountable to the Northern Ireland Assembly through financial and annual reporting obligations.

We are based at Queens House in the centre of Belfast. The Chief Executive leads a management team of directors representing each of the key functional areas in the organisation: Corporate Affairs; Electricity; Gas; Retail and Social; and Water. The staff team includes economists, engineers, accountants, utility specialists, legal advisors and administration professionals.

Our Mission

Value and sustainability in energy and water.

Our Vision

We will make a difference for consumers by listening, innovating and leading.

Our Values

Be a best practice regulator: transparent, consistent, proportional, accountable, and targeted

Be a united team

Be collaborative and co-operative

Be professional

Listen and explain

Make a difference

Act with integrity

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1 Definitions

Definitions of Units of Measure

- 1.1 The allowances associated with each sub-programme are calculated by multiplying a unit of measure with unit cost.
- 1.2 The units of measure differ depending on the type of work involved in the sub-programme.
- 1.3 Table 1.1 lists all units of measure used in this annex and their associated descriptions.

Unit of Measure	Description
Each	Reportable output is per unit
km	Reportable output is per kilometre (1000m)
Lump Sum	An allowance with no pre-defined outputs. This is the only unit of measure not subject to the D3 mechanism
Metre	Reportable output is per metre
Pole Set	An overhead line support constructed of two wood poles in a 'H' configuration. Only applies to 110kV overhead lines.
Programme	Delivery of all outputs of a defined task over a defined time period (for the purposes of this annex the RP6 time duration). E.g. Address all very/high risk sites.
Project	Delivery of a defined scope of work over a defined time period (for the purposes of this annex the RP6 time duration)
Property	A domestic dwelling or commercial building
Site	An area defined by a boundary wall or fence (e.g. substation)
Span	The conductor erected between two overhead line supports
Tower	An overhead line support constructed of a steel lattice in double circuit or single circuit configuration
Tower Side	The longitudinal face of a double circuit steel lattice tower

Table 1.1 – Definitions of Units of Measure

2 Planned Network Investment Volumes and Allowances

ID	Programme Name	Sub-programme	Asset name / further information	Unit of Measure	Volume	Unit Cost Pre-RPE (£k)	Direct Allowance Pre-RPE (£k)	Unit Cost Post-RPE (£k)	Direct Allowance Post-RPE (£k)
D06	Distribution Tower Lines	D06a	General Refurbishment	Lump Sum			1,056.130		1,010.188
		D06b	Re-conductor Eden Main-Carrickfergus West	Span	33	26.450	872.850	25.299	834.881
		D06c	Refurbish Finaghy-Sprucefield-Lissue DC OHL	Span	66	8.150	537.900	7.795	514.501
							2,466.880		2,359.571
D07	33kV Overhead Lines	D07a	Re-engineer	km	455	18.277	8,316.035	17.482	7,954.287
		D07b	Refurbish	km	910	1.630	1,483.300	1.559	1,418.776
		D07c	Not Used						
		D07d	Remedial Works	Lump Sum			11.493		10.993
							9,810.828		9,384.057
D08	11kV Overhead Lines	D08a	Re-engineer	km	3,033	8.900	26,993.700	8.513	25,819.474
		D08b	Refurbish	km	6,067	1.892	11,478.764	1.810	10,979.438
		D08c	Not Used						
		D08d	Remedial works	Lump Sum			2,663.120		2,547.274
		D08e	Undergrounding	Lump Sum			605.932		579.574
							41,741.516		39,925.760
D09	LV Overhead Lines	D09a&b	Not Used						
		D09c	Line Undergrounding (Direct Access)	km	5	80.500	402.500	76.998	384.991
		D09d	Line Undergrounding (Land locked)	km	13	242.810	3,156.530	232.248	3,019.221
		D09e	Remedial Works	Lump Sum			790.611		756.219
							4,349.641		4,160.432
D10	Undereaves	D10a	Replace 0.4kV mains and services (Volume Driven)	Property	19,500	0.419	8,169.330	0.401	7,813.964
D11	LV cut-outs	D11a	Replace house service cut-outs	Each	10,400	0.247	2,565.888	0.236	2,454.272

ID	Programme Name	Sub-programme	Asset name / further information	Unit of Measure	Volume	Unit Cost Pre-RPE (£k)	Direct Allowance Pre-RPE (£k)	Unit Cost Post-RPE (£k)	Direct Allowance Post-RPE (£k)
D13	Primary Plant	D13a	Replace indoor switchgear (33kV)	Each	36	130.381	4,693.716	124.709	4,489.539
		D13b	Replace outdoor switchgear - circuit breaker (33Kv)	Each	46	50.133	2,306.118	47.952	2,205.802
		D13c	Replace outdoor switchgear - complete mesh (with indoor switchboard)	Each	42	97.643	4,101.006	93.396	3,922.612
		D13d	Replace outdoor switchgear - mesh equipment (33kV)	Site	6	128.000	768.000	122.432	734.592
		D13e	Replace primary switchgear (33kV, 11kV & 6.6kV)	Each	200	46.586	9,317.200	44.560	8,911.902
		D13f&g	Not Used					0.000	0.000
		D13h	Building refurbishment	Site	8	12.969	103.752	12.405	99.239
		D13i	Civil works to primary substations	Site	40	30.000	1,200.000	28.695	1,147.800
		D13j	Primary substation lease renewal	Lump Sum			900.000		860.850
		D13k	Replace primary switchgear (11kV & 6.6kV) retro-fit	Each	57	23.894	1,361.958	22.855	1,302.713
		D13l	Refurbish primary S/S DC system	Site	60	12.748	764.880	12.193	731.608
		D13m	Rewire primary S/S (inc. AC services panel)	Site	30	18.730	561.900	17.915	537.457
		D13n	Plant painting (primary)	Site	40	2.500	100.000	2.391	95.650
		D13o	Replace earth fault indicator	Each	200	1.000	200.000	0.957	191.300
		D13p	Install 33kV capacitor bank	Each	2	148.288	296.576	141.837	283.675
		D13q	Install 11kV capacitor bank	Each	4	85.958	343.832	82.219	328.875
							27,018.938		25,843.614
D14	Primary Transformers	D14a	Replace 33/11kV Transformer (upto 6.25MVA)	Each	14	185.613	2,598.582	177.539	2,485.544
		D14b	Replace 33/11kV Transformer (upto 12.5MVA)	Each	2	228.700	457.400	218.752	437.503
		D14c	Replace 33/11kV or 33/6.6kV Transformer (upto 18.75MVA)	Each	14	273.543	3,829.602	261.644	3,663.014
		D14d - f	Not Used						
		D14g	Transformer refurbishment	Each	6	80.000	480.000	76.520	459.120
							7,365.584		7,045.181
D15	Secondary Substations	D15a	Replace RMU	Each	80	7.772	621.760	7.434	594.713
		D15b	Replace complete S/S	Each	395	37.061	14,639.095	35.449	14,002.294
		D15c	Replace complete S/S and temporary S/S works	Each	50	51.679	2,583.950	49.431	2,471.548
		D15d	Secondary Switchboard Replacement	Each	110	31.400	3,454.000	30.034	3,303.751
		D15e	Replace OH fed GMT	Site	66	25.125	1,658.250	24.032	1,586.116
		D15f	Replace H pole S/S	Site	72	13.410	965.520	12.827	923.520
		D15g	H pole: TX change only	Site	10	4.500	45.000	4.304	43.043
		D15h	H pole: replace LV cabinet	Each	40	4.600	184.000	4.400	175.996
		D15i	Replace 4 pole structure	Site	225	22.917	5,156.325	21.920	4,932.025
		D15j	Repair 4 pole structure defects	Site	20	2.350	47.000	2.248	44.956
		D15k	Replace sectionalisers	Each	55	9.400	517.000	8.991	494.511
		D15l	Replace mini pillars	Each	1,035	3.389	3,507.615	3.242	3,355.034

ID	Programme Name	Sub-programme	Asset name / further information	Unit of Measure	Volume	Unit Cost Pre-RPE (£k)	Direct Allowance Pre-RPE (£k)	Unit Cost Post-RPE (£k)	Direct Allowance Post-RPE (£k)
		D15m	Not Used						
		D15n	Replace LV wall mounted fuse board	Each	50	13.509	675.450	12.921	646.068
		D15o	Secondary substation ancillary works	Lump Sum			2,000.000		1,913.000
		D15p	Replace LV cabinet - 4 pole structures	Each	20	5.015	100.300	4.797	95.937
		D15q	Refurbish LV plant	Site	20,914	0.156	3,262.584	0.149	3,120.662
		D15r	Refurbish substation LV cabinet	Site	30	4.050	121.500	3.874	116.215
		D15s	Repair ABB LV cabinet	Each	800	0.750	600.000	0.717	573.900
		D15t	RMU substation - mini kiosk	Each	50	47.577	2,378.850	45.507	2,275.370
		D15u	Refurbish 11kV GVS sectionaliser	Each	80	3.000	240.000	2.870	229.560
		D15v	Secondary other	Lump Sum			435.000		416.078
		D15w	Voltage regulators	Each	3	44.914	134.742	42.960	128.881
							43,327.941		41,443.176
		D16a - h	Not Used						
		D16i	Replace HV cable	Metre	18,000	0.097	1,746.000	0.093	1,670.049
		D16j	Replace LV cable	Metre	24,227	0.128	3,101.056	0.122	2,966.160
		D16k	Not Used						
		D16l	Refurbish 33kV FFC	Site	11	31.453	345.983	30.085	330.933
D16	Distribution Cables	D16m	Part replacement of 33kV PILC cable	Metre	5,340	0.159	849.060	0.152	812.126
		D16n	Procure leak management technologies	Lump Sum			137.873		131.876
		D16o	Procure distribution cable accessories and ancillaries	Lump Sum			541.132		517.593
		D16p	Procure condition monitoring equipment	Lump Sum			210.000		200.865
							6,931.104		6,629.601
		D39a	Not Used						
D39	SCADA	D39b	Replace RTU	Each	122	30.221	3,686.962	28.906	3,526.579
		D39c	Control centre hardware & software	Lump Sum			1,500.000		1,434.750
							5,186.962		4,961.329
		D41a	Operational telecoms network	Lump Sum			3,302.000		3,158.363
D41	Operational Telecoms network	D41b	BT21CN	Lump Sum			1,654.000		1,582.051
							4,956.000		4,740.414
		D43a	Fit Safety Signs (all voltages) ¹	Programme			3,165.431		3,027.735
		D43b	Stay wires (all voltages) ²	Programme			10,938.774		10,462.937
D43	ESQCR - Distribution	D43c	Address very high/high risk sites ³	Programme			19,091.349		18,260.875
		D43d	Address LV clearances & OHL refurbishment ⁴	km	1,045	21.272	22,229.240	20.347	21,262.268
		D43e	Address 11kV clearances	km	9,100	0.352	3,203.200	0.337	3,063.861
		D43f	Address 33kV clearances	km	1,365	0.062	84.630	0.059	80.949

ID	Programme Name	Sub-programme	Asset name / further information	Unit of Measure	Volume	Unit Cost Pre-RPE (£k)	Direct Allowance Pre-RPE (£k)	Unit Cost Post-RPE (£k)	Direct Allowance Post-RPE (£k)
		D43g	Distribution transformers	Each	115	4.000	460.000	3.826	439.990
		D43h	Resolve looped services	Site	1,000	1.970	1,970.000	1.884	1,884.305
		D43i	11kV resilience cut	km	843	1.115	939.945	1.066	899.057
		D43j	33kV resilience cut	km	2,000	0.929	1,858.000	0.889	1,777.177
		D43k	S/S resilience cut	Site	300	0.667	200.000	0.638	191.300
							64,140.569		61,350.454
D50	Substation Flooding Enforcement (D)	D50a	Permanent protection of primary substations	Site	9	81.921	737.292	78.358	705.220
		D50b	RMU substations - provision of flood protection by raising kiosk	Site	84	13.000	1,092.000	12.435	1,044.498
							1,829.292		1,749.718
D57	Distribution Network Reinforcement	D57a	Not Used						
		D57b	Primary network projects (33kV)	Lump Sum			13,530.000		12,941.445
		D57c	Secondary network (11,6.6kV & LV) load related	Lump Sum			8,300.000		7,938.950
		D57d	Secondary network (11,6.6kV & LV) LCT related	Lump Sum			2,600.000		2,486.900
		D57e	Fault level investment	Lump Sum			1,700.000		1,626.050
							26,130.000		24,993.345
D101	Network Alterations	D101a	Non-recoverable costs	Lump Sum			15,547.592		14,871.272
		D101b	NIRAUC schemes	Lump Sum			135.662		129.761
							15,683.254		15,001.032
		D601a	Ardstraw Central 33/11kV transformer replacements	Project	1	460.000	460.000		439.990
		D601b	Carrickmore North 33/11kV additional transformer	Project	1	1,034.000	1,034.000		989.021
		D601c	Dromore North 33/11kV transformer replacements	Project	1	460.000	460.000		439.990
D601	33kV Congestion	D601d	Roughfort Central 33/11kV transformer replacements	Project	1	460.000	460.000		439.990
		D601e	Coleraine - Ballymoney West (project #3 as described in paragraph 7.3 of appendix NIP A5)	Project	1	1,436.680	1,436.680		1,374.184
		D601f	Enniskillen Main - Belleek South/Callagheen Wind Farm (project #7 as described in paragraph 7.3 of appendix NIP A5)	Project	1	1,420.000	1,420.000		1,358.230
		D601g	Omagh - Slieve Divena (project #9 as described in paragraph 7.3 of appendix NIP A5)	Project	1	1,323.400	1,323.400		1,265.832

ID	Programme Name	Sub-programme	Asset name / further information	Unit of Measure	Volume	Unit Cost Pre-RPE (£k)	Direct Allowance Pre-RPE (£k)	Unit Cost Post-RPE (£k)	Direct Allowance Post-RPE (£k)
		D601h	Omagh Main - Fivemiletown Central (project #10 as described in paragraph 7.3 of appendix NIP A5)	Project	1	265.200	265.200		253.664
		D601i	Omagh - Tappaghan Wind Farm (project #11 as described in paragraph 7.3 of appendix NIP A5)	Project	1	415.800	415.800		397.713
		D601j	Limavady Main - Dungiven (project #15 as described in paragraph 7.3 of appendix NIP A5)	Project	1	502.740	502.740		480.871
		D601k	Strabane Main - Owenreagh/Claudy (project #16 as described in paragraph 7.3 of appendix NIP A5)	Project	1	655.200	655.200		626.699
		D601l	Strabane Main - Castlederg (project #19 as described in paragraph 7.3 of appendix NIP A5)	Project	1	1,988.000	1,988.000		1,901.522
							10,421.020		9,967.706
D602	Investing for the Future	D602b	Telecoms infrastructure	Programme			3,900.000		3,730.350
		D603a	33kV protection retrofit	Each	49	5.900	289.100	5.643	276.524
		D603b	11kV protection retrofit	Each	125	5.950	743.750	5.691	711.397
D603	Distribution Protection	D603c	Network disturbance recorders (substation monitors)	Each	51	24.045	1,226.295	22.999	1,172.951
		D603d	Reverse power flow recorder	Each	900	1.670	1,503.000	1.597	1,437.620
							3,762.145		3,598.492
D604	Connection Driven System Work	D604a	Connection driven system work	Lump Sum			4,320.000		4,132.080
D605	Network Access & Commissioning	D605a	Network access & commissioning	Lump Sum			5,165.000		4,940.323
						Lump Sums	67,105.545		64,186.454
						Unitised Amounts	232,136.347		222,038.416
						Distribution Direct Total	299,241.892		286,224.870
T06	Transmission Plant Switch Houses	T06a	Not Used						
		T06b	Refurbish Kilroot 275kV Switch House and associated works	Site	1	350.000	350.000		334.775

ID	Programme Name	Sub-programme	Asset name / further information	Unit of Measure	Volume	Unit Cost Pre-RPE (£k)	Direct Allowance Pre-RPE (£k)	Unit Cost Post-RPE (£k)	Direct Allowance Post-RPE (£k)
T10	110kV Switchgear Replacement	T10a & b T10c	Not Used Replace 110kV switchgear	Each	11	336.161	3,697.771	321.538	3,536.918
		T11a	Catenaries	Each	3	250.000	750.000	239.125	717.375
		T11b	Not Used						
		T11c	Asbestos removal	Lump Sum			100.000		95.650
		T11d	Concrete structure refurb	Site	3	133.333	399.999	127.533	382.599
		T11e	Transformer bunding	Site	3	80.000	240.000	76.520	229.560
		T11f	Not Used						
		T11g	Security systems	Lump Sum			100.000		95.650
		T11h	Not Used						
T11	275kV Plant Ancillaries	T11i	DC standby systems	Lump Sum			268.790		257.098
		T11j	Not Used						
		T11k	Earthing	Site	5	20.000	100.000	19.130	95.650
		T11l	AC rewire	Site	2	42.596	85.192	40.743	81.486
		T11m	Control room refurb	Site	3	25.000	75.000	23.913	71.738
		T11n	Drainage	Lump Sum			100.000		95.650
		T11o	Ballylumford 275kV CVT Replacement	Each	6	25.908	155.448	24.781	148.686
		T11p	Kilroot 275kV CT Replacement	Each	33	26.498	874.434	25.345	836.396
		T11q	Hannahstown 275kV Disconnecter Replacement	Each	12	75.000	900.000	71.738	860.850
		T11r	22kV Capacitor Bank Refurbishment	Lump Sum			25.000		23.913
							4,173.863		3,992.300
		T12a - c	Not Used						
		T12d	Transformer bunding	Site	4	20.177	80.706	19.299	77.195
		T12e	Not Used						
		T12f	Generator	Each	16	23.782	380.512	22.747	363.960
		T12g	Not Used						
		T12h	DC standby systems	Lump Sum			270.814		259.034
		T12j - m	Not Used						
		T12n	Civil	Lump Sum			200.000		191.300
		T12o & p	Not Used						
		T12q	110kV Spare CTs	Each	3	15.521	46.563	14.846	44.538
		T12r	110kV Disconnecter replacement	Each	23	35.000	805.000	33.478	769.983
		T12s	Drainage Upgrade	Lump Sum			25.000		23.913
							1,915.870		1,832.530
T13	275kV/110kV Transformer	T13a & b	Not Used						

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	Replacement	T13c	Transformers (275/110 kV) Install only	Each	2	602.062	1,204.124	575.872	1,151.745
		T13d	Replace Auxiliary Transformer	Each	4	59.708	238.832	57.111	228.443
		T13e	Replace Transformer Cooler	Each	2	125.000	250.000	119.563	239.125
							1,692.956		1,619.312
T14	110/33kV Transformers Replacement	T14a	Transformers (110/33 kV)Procure only	Each	5	681.000	3,405.000	651.377	3,256.883
		T14b	Transformers (110/33 kV) Install only	Each	7	379.920	2,659.440	363.393	2,543.754
		T14c	Replace associated cable	Lump Sum			746.666		714.186
		T14d	Replace Earthing Transformer	Each	2	72.708	145.416	69.545	139.090
		T14e	Replace Transformer Cooler	Each	7	125.000	875.000	119.563	836.938
							7,831.522		7,490.851
T15	22kV Reactor Replacement	T15a	22kV Reactors Procure only	Each	1	550.000	550.000	526.075	526.075
		T15b	Not Used						
		T15c	22kV Reactors Procure & Install	Each	2	681.961	1,363.922	652.296	1,304.591
		T15d	Replace Reactor Cooler	Each	1	47.000	47.000	44.956	44.956
							1,960.922		1,875.622
T16	Transmission Transformer Refurbishment	T16a	Refurbish/Replace 275kV Bushing	Each	3	30.924	92.772	29.579	88.736
		T16b	275kV Plant Painting	Site	4	10.512	42.048	10.055	40.219
		T16c	Not Used						
		T16d	Refurbish 275kV TX tap changer	Each	2	17.345	34.690	16.590	33.181
		T16e	Refurbish 110kV cooler	Each	4	56.351	225.404	53.900	215.599
		T16f	Replace 110kV Bushing	Each	18	15.446	278.028	14.774	265.934
		T16g	110kV Plant Painting	Site	9	7.880	70.920	7.537	67.835
		T16h	Refurbish 110kV Disconnecter	Lump Sum			50.000		47.825
		T16i	Refurbish 110kV TX tap changer	Each	4	13.780	55.120	13.181	52.722
		T16j	Repair PST Tapchanger defect	Each	1	40.000	40.000	38.260	38.260
							888.982		850.311
T17	275kV Overhead Line Asset Replacement	T17a	Replace Colour and Number Plates	Tower	310	0.595	184.450	0.569	176.426
		T17b	Replace Spacers	Span	502	1.100	552.200	1.052	528.179
		T17c	Replace Suspension Insulator	Tower side	390	3.597	1,402.830	3.441	1,341.807
		T17d	Replace Tension Insulator	Tower side	112	11.240	1,258.880	10.751	1,204.119
		T17e	Tower Painting	Tower	536	5.045	2,704.120	4.826	2,586.491
		T17f	Foundation assessment	Tower	124	3.000	372.000	2.870	355.818
		T17g	Condition assessment	Lump Sum			195.012		186.529
		T17h	Not Used						
		T17i	Trolley Inspections	Span	245	0.600	147.000	0.574	140.606
		T17j	Muff Repair	Tower	247	1.900	469.300	1.817	448.885

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							7,285.792		6,968.860
T19	110kV Overhead Line Asset Replacement	T19a	Replace conductor	Span	30	27.556	826.680	26.357	790.719
		T19b	Replace colour and number plates	Tower	248	0.600	148.800	0.574	142.327
		T19c - e	Not Used						
		T19f	Tower Painting	Tower	773	1.906	1,473.338	1.823	1,409.248
		T19g	Replace wood poles	Pole set	1170	3.135	3,667.950	2.999	3,508.394
		T19h	Foundation assessment	Tower	178	3.000	534.000	2.870	510.771
		T19i	Condition assessment	Lump Sum			154.518		147.796
		T19j	Not Used						
		T19k	Earthwire Replacement	Span	70	14.805	1,036.350	14.161	991.269
		T19l	Not Used						
		T19m	Muff repairs	Tower	263	1.900	499.700	1.817	477.963
							8,341.336		7,978.488
T20	Transmission Cables	T20a - h	Not Used						
		T20i	Replace Sheath Voltage Limiters	Each	9	5.357	48.213	5.124	46.116
		T20j	Refurbish 110kV cable	Lump Sum			273.471		261.575
		T20k	Cable Flushing	Metre	9800	0.013	127.400	0.012	121.858
		T20l	Procurement of Transmission Cables Accessories and Ancillaries	Lump Sum			407.870		390.128
							856.954		819.677
T40	Transmission ESQCR	T40a	Transmission ESQCR Overhead Lines	Lump Sum			165.128		157.945
T602	Transmission Protection	T602a	Install 275kV Buszone (5 Zone)	Each	1	87.000	87.000	83.216	83.216
		T602b	Install 275kV Buscoupler	Each	3	13.500	40.500	12.913	38.738
		T602c	Install 275KV Control Panel	Each	2	117.538	235.076	112.425	224.850
		T602d	Install 275kV Buszone (3 Zone)	Each	2	55.800	111.600	53.373	106.745
		T602e	Install 275kV Interbus Transformer Protection	Each	5	61.250	306.250	58.586	292.928
		T602f	Install 275kV Mesh Corner	Each	2	14.600	29.200	13.965	27.930
		T602g	Install 275KV Group Alarms	Each	5	24.324	121.618	23.266	116.328
		T602h	Install 275kV Feeder Protection	Each	20	71.113	1,422.260	68.020	1,360.392
		T602i	Install 275kV OCEF Gen Prot	Each	2	24.000	48.000	22.956	45.912
		T602j	Install 275kV Circuit Breaker Fail	Each	23	7.163	164.749	6.851	157.582
		T602k	Install 22kV Reactors	Each	4	24.000	96.000	22.956	91.824
		T602l	Install 110kV Buszone Protection (4 Zone)	Each	12	15.000	180.000	14.348	172.170
		T602m	Install 110kV Group Alarms	Each	3	42.292	126.876	40.452	121.357
		T602n	Install 110kV Transformer Protection	Each	6	31.300	187.800	29.938	179.631
		T602o	Install 110kV Distance Protection	Each	8	32.225	257.800	30.823	246.586

ID	Programme Name	Sub-programme	Asset name / further information	Unit of Measure	Volume	Unit Cost Pre-RPE (£k)	Direct Allowance Pre-RPE (£k)	Unit Cost Post-RPE (£k)	Direct Allowance Post-RPE (£k)
		T602p	Install 110kV Tap Change Control	Each	6	12.025	72.150	11.502	69.011
		T602q	Install 110kV Combined Transformer and Tap Changer Protection	Each	1	77.200	77.200	73.842	73.842
		T602r	Install 110kV Load Shedding (Relay Change Only and Minor Wiring)	Each	7	3.625	25.375	3.467	24.271
		T602s	Install 110kV Unit Protection (3 end scheme)	Each	12	26.625	319.500	25.467	305.602
		T602t	Install 110kV Unit Protection	Each	2	31.575	63.150	30.201	60.403
		T602u	Install 110kV Intertripping	Each	2	16.750	33.500	16.021	32.043
		T602v	Install Computer Based Alarm Panel	Each	1	11.500	11.500	11.000	11.000
		T602w	Load Shedding Panel	Each	2	9.113	18.226	8.717	17.433
		T602x	Install 275kV Grid Substation Monitors	Each	15	25.873	388.095	24.748	371.213
		T602y	Install 110kV Grid Substation Monitors	Each	9	25.232	227.088	24.134	217.210
		T602z	Install 110kV Main Substation Monitors	Each	6	26.850	161.100	25.682	154.092
							4,811.613		4,602.308
T603	Network Access & Commissioning (T)	T603a	Network Access & Commissioning	Lump Sum			1,305.000		1,248.233
						Lump sums	4,387.269		4,196.423
						Unitised Amounts	40,890.440		39,111.706
						Transmission Direct Total	45,277.709		43,308.129

The post RPE figures have been calculated using an assumed uniform distribution of output over the RP6 duration and a factor of 0.9565