

APPENDIX 1**Electric Vehicle Chargingpoints on NNDC Car Parks**Assumptions

	£
Capital Costs:	
Stearman's Yard - Wells	37,540
Morris St - Sheringham	37,540
Queens Rd - Fakenham	48,540
New Rd - North Walsham	30,360
Meadow - Cromer	31,540
Albert St - Holt	31,540
Council offices - Cromer	31,540
Total initial outlay	<u>248,600</u>
Initial Maintenance Costs	4,250
Initial Cost of electricity used	9,979
Initial back office annual charge	2,040
Total costs	<u>16,269</u>
Income from use	20,808
	-
	-
Total Income	<u>20,808</u>
OLEV Grant (potential)	150,000
Total Funding	<u>150,000</u>

Cost of borrowing, 10 yr EIP loan from PWLB, @ certainty rate 1.17%
 Correct at AM 22/08/2019
 External borrowing used as is currently cheaper than internal borrowing rate

Opportunity cost - what we could have achieved with this money through treasury investment using Budgeted average return of 3.3%

10 year NPV to reflect time probable obsolescence period

Number of sockets	34
Weeks	52
Yearly increase in Electricity costs	8%
Electric Vehicle Growth per annum	41%
Increase in other running costs	5%

APPENDIX 1

ROCE - full grant funding assumed

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>	<u>Year 8</u>	<u>Year 9</u>	<u>Year 10</u>
Income from use of charge points	£ 20,808.00	£ 31,686.42	£ 48,252.08	£ 73,478.27	£ 111,892.71	£ 170,390.23	£ 259,470.24	£ 395,121.28	£ 601,690.68	£ 916,254.57
Annual maintenance	£ 4,250.00	£ 4,462.50	£ 4,685.63	£ 4,919.91	£ 5,165.90	£ 5,424.20	£ 5,695.41	£ 5,980.18	£ 6,279.19	£ 6,593.14
Electricity costs	£ 9,979.49	£ 15,196.77	£ 23,141.64	£ 35,240.09	£ 53,663.61	£ 81,718.95	£ 124,441.61	£ 189,499.69	£ 288,570.13	£ 439,434.59
Back office charge	£ 2,040.00	£ 2,142.00	£ 2,249.10	£ 2,361.56	£ 2,479.63	£ 2,603.61	£ 2,733.80	£ 2,870.48	£ 3,014.01	£ 3,164.71
Net Revenue	£ 4,538.51	£ 9,885.15	£ 18,175.72	£ 30,956.72	£ 50,583.57	£ 80,643.47	£ 126,599.42	£ 196,770.92	£ 303,827.36	£ 467,062.12
Total initial investment	£ 248,600.00									
Less likely funding	-£ 150,000.00									
Net capital outlay	£ 98,600.00									
Borrowing cost	£ 1,153.62	£ 1,153.62	£ 1,153.62	£ 1,153.62	£ 1,153.62	£ 1,153.62	£ 1,153.62	£ 1,153.62	£ 1,153.62	£ 1,153.62
Net Revenue	£ 3,384.89	£ 8,731.53	£ 17,022.10	£ 29,803.10	£ 49,429.95	£ 79,489.85	£ 125,445.80	£ 195,617.30	£ 302,673.74	£ 465,908.50
Effective % ROCE per annum	3.43%	8.86%	17.26%	30.23%	50.13%	80.62%	127.23%	198.39%	306.97%	472.52%

APPENDIX 1

ROCE - No grant funding assumed

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>	<u>Year 8</u>	<u>Year 9</u>	<u>Year 10</u>
Income from use of charge points	£ 20,808.00	£ 31,686.42	£ 48,252.08	£ 73,478.27	£ 111,892.71	£ 170,390.23	£ 259,470.24	£ 395,121.28	£ 601,690.68	£ 916,254.57
Annual maintenance	£ 4,250.00	£ 4,462.50	£ 4,685.63	£ 4,919.91	£ 5,165.90	£ 5,424.20	£ 5,695.41	£ 5,980.18	£ 6,279.19	£ 6,593.14
Electricity costs	£ 9,979.49	£ 15,196.77	£ 23,141.64	£ 35,240.09	£ 53,663.61	£ 81,718.95	£ 124,441.61	£ 189,499.69	£ 288,570.13	£ 439,434.59
Back office charge	£ 2,040.00	£ 2,142.00	£ 2,249.10	£ 2,361.56	£ 2,479.63	£ 2,603.61	£ 2,733.80	£ 2,870.48	£ 3,014.01	£ 3,164.71
Net Revenue	£ 4,538.51	£ 9,885.15	£ 18,175.72	£ 30,956.72	£ 50,583.57	£ 80,643.47	£ 126,599.42	£ 196,770.92	£ 303,827.36	£ 467,062.12
Total initial investment	£ 248,600.00									
Less likely funding	£ -									
Net capital outlay	£ 248,600.00									
Borrowing cost	£ 2,908.62	£ 2,908.62	£ 2,908.62	£ 2,908.62	£ 2,908.62	£ 2,908.62	£ 2,908.62	£ 2,908.62	£ 2,908.62	£ 2,908.62
Net Revenue	£ 1,629.89	£ 6,976.53	£ 15,267.10	£ 28,048.10	£ 47,674.95	£ 77,734.85	£ 123,690.80	£ 193,862.30	£ 300,918.74	£ 464,153.50
Effective % ROCE per annum	0.66%	2.81%	6.14%	11.28%	19.18%	31.27%	49.75%	77.98%	121.05%	186.71%

Scenario - Maintenance costs increase by 50%

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>	<u>Year 8</u>	<u>Year 9</u>	<u>Year 10</u>
Income from use of charge points	£ 20,808.00	£ 31,686.42	£ 48,252.08	£ 73,478.27	£ 111,892.71	£ 170,390.23	£ 259,470.24	£ 395,121.28	£ 601,690.68	£ 916,254.57
Annual maintenance	£ 5,312.50	£ 5,578.13	£ 5,857.03	£ 6,149.88	£ 6,457.38	£ 6,780.25	£ 7,119.26	£ 7,475.22	£ 7,848.98	£ 8,241.43
Electricity costs	£ 9,979.49	£ 15,196.77	£ 23,141.64	£ 35,240.09	£ 53,663.61	£ 81,718.95	£ 124,441.61	£ 189,499.69	£ 288,570.13	£ 439,434.59
Back office charge	£ 2,040.00	£ 2,142.00	£ 2,249.10	£ 2,361.56	£ 2,479.63	£ 2,603.61	£ 2,733.80	£ 2,870.48	£ 3,014.01	£ 3,164.71
Net Revenue	£ 3,476.01	£ 8,769.53	£ 17,004.31	£ 29,726.74	£ 49,292.09	£ 79,287.42	£ 125,175.57	£ 195,275.88	£ 302,257.56	£ 465,413.84
Total initial investment	£ 248,600.00									
Less likely funding	-£ 150,000.00									
Net capital outlay	£ 98,600.00									
Borrowing cost	£ 1,153.62	£ 1,153.62	£ 1,153.62	£ 1,153.62	£ 1,153.62	£ 1,153.62	£ 1,153.62	£ 1,153.62	£ 1,153.62	£ 1,153.62
Net Revenue	£ 2,322.39	£ 7,615.91	£ 15,850.69	£ 28,573.12	£ 48,138.47	£ 78,133.80	£ 124,021.95	£ 194,122.26	£ 301,103.94	£ 464,260.22
Effective % ROCE per annum	2.36%	7.72%	16.08%	28.98%	48.82%	79.24%	125.78%	196.88%	305.38%	470.85%

**Scenario - Electricity costs increase by 50%
Assuming cost pass through to users**

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>	<u>Year 8</u>	<u>Year 9</u>	<u>Year 10</u>
Income from use of charge points	£ 20,808.00	£ 32,859.99	£ 51,892.50	£ 81,948.64	£ 129,413.29	£ 204,369.47	£ 322,740.26	£ 509,671.43	£ 804,873.12	£ 1,271,055.63
Annual maintenance	£ 4,250.00	£ 4,462.50	£ 4,685.63	£ 4,919.91	£ 5,165.90	£ 5,424.20	£ 5,695.41	£ 5,980.18	£ 6,279.19	£ 6,593.14
Electricity costs	£ 9,979.49	£ 15,759.61	£ 24,887.58	£ 39,302.47	£ 62,066.46	£ 98,015.35	£ 154,785.84	£ 244,437.80	£ 386,016.18	£ 609,596.75
Back office charge	£ 2,040.00	£ 2,142.00	£ 2,249.10	£ 2,361.56	£ 2,479.63	£ 2,603.61	£ 2,733.80	£ 2,870.48	£ 3,014.01	£ 3,164.71
Net Revenue	£ 4,538.51	£ 10,495.88	£ 20,070.20	£ 35,364.71	£ 59,701.30	£ 98,326.31	£ 159,525.22	£ 256,382.96	£ 409,563.74	£ 651,701.02
Total initial investment	£ 248,600.00									
Less likely funding	-£ 150,000.00									
Net capital outlay	£ 98,600.00									
Borrowing cost	£ 1,153.62	£ 1,153.62	£ 1,153.62	£ 1,153.62	£ 1,153.62	£ 1,153.62	£ 1,153.62	£ 1,153.62	£ 1,153.62	£ 1,153.62
Net Revenue	£ 3,384.89	£ 9,342.26	£ 18,916.58	£ 34,211.09	£ 58,547.68	£ 97,172.69	£ 158,371.60	£ 255,229.34	£ 408,410.12	£ 650,547.40
Effective % ROCE per annum	3.43%	9.47%	19.19%	34.70%	59.38%	98.55%	160.62%	258.85%	414.21%	659.78%

Scenario - Usage 50% of expected

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>	<u>Year 8</u>	<u>Year 9</u>	<u>Year 10</u>
Income from use of charge points	£ 20,808.00	£ 27,079.53	£ 35,241.30	£ 45,863.03	£ 59,686.15	£ 77,675.55	£ 101,086.96	£ 131,554.58	£ 171,205.12	£ 222,806.35
Annual maintenance	£ 4,250.00	£ 4,462.50	£ 4,685.63	£ 4,919.91	£ 5,165.90	£ 5,424.20	£ 5,695.41	£ 5,980.18	£ 6,279.19	£ 6,593.14
Electricity costs	£ 9,979.49	£ 12,987.31	£ 16,901.69	£ 21,995.85	£ 28,625.40	£ 37,253.10	£ 48,481.19	£ 63,093.42	£ 82,109.77	£ 106,857.66
Back office charge	£ 2,040.00	£ 2,142.00	£ 2,249.10	£ 2,361.56	£ 2,479.63	£ 2,603.61	£ 2,733.80	£ 2,870.48	£ 3,014.01	£ 3,164.71
Net Revenue	£ 4,538.51	£ 7,487.72	£ 11,404.89	£ 16,585.71	£ 23,415.21	£ 32,394.64	£ 44,176.58	£ 59,610.50	£ 79,802.16	£ 106,190.84
Total initial investment	£ 248,600.00									
Less likely funding	-£ 150,000.00									
Net capital outlay	£ 98,600.00									
Borrowing cost	£ 1,153.62	£ 1,153.62	£ 1,153.62	£ 1,153.62	£ 1,153.62	£ 1,153.62	£ 1,153.62	£ 1,153.62	£ 1,153.62	£ 1,153.62
Net Revenue	£ 3,384.89	£ 6,334.10	£ 10,251.27	£ 15,432.09	£ 22,261.59	£ 31,241.02	£ 43,022.96	£ 58,456.88	£ 78,648.54	£ 105,037.22
Effective % ROCE per annum	3.43%	6.42%	10.40%	15.65%	22.58%	31.68%	43.63%	59.29%	79.77%	106.53%

**Scenario - Electricity costs increase by 50%
Charge not passed to users**

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>	<u>Year 8</u>	<u>Year 9</u>	<u>Year 10</u>
Income from use of charge points	£ 20,808.00	£ 31,686.42	£ 48,252.08	£ 73,478.27	£ 111,892.71	£ 170,390.23	£ 259,470.24	£ 395,121.28	£ 601,690.68	£ 916,254.57

APPENDIX 1

Annual maintenance	£	4,250.00	£	4,462.50	£	4,685.63	£	4,919.91	£	5,165.90	£	5,424.20	£	5,695.41	£	5,980.18	£	6,279.19	£	6,593.14
Electricity costs	£	9,979.49	£	15,759.61	£	24,887.58	£	39,302.47	£	62,066.46	£	98,015.35	£	154,785.84	£	244,437.80	£	386,016.18	£	609,596.75
Back office charge	£	2,040.00	£	2,142.00	£	2,249.10	£	2,361.56	£	2,479.63	£	2,603.61	£	2,733.80	£	2,870.48	£	3,014.01	£	3,164.71
Net Revenue	£	4,538.51	£	9,322.31	£	16,429.78	£	26,894.34	£	42,180.72	£	64,347.06	£	96,255.19	£	141,832.81	£	206,381.30	£	296,899.96
Total initial investment	£	248,600.00																		
Less likely funding	-£	150,000.00																		
Net capital outlay	£	98,600.00																		
Borrowing cost	£	1,153.62	£	1,153.62	£	1,153.62	£	1,153.62	£	1,153.62	£	1,153.62	£	1,153.62	£	1,153.62	£	1,153.62	£	1,153.62
Net Revenue	£	3,384.89	£	8,168.69	£	15,276.16	£	25,740.72	£	41,027.10	£	63,193.44	£	95,101.57	£	140,679.19	£	205,227.68	£	295,746.34
Effective % ROCE per annum		3.43%		8.28%		15.49%		26.11%		41.61%		64.09%		96.45%		142.68%		208.14%		299.95%

**Scenario - Electricity costs increase by 25%
Charge not passed to users, usage drops by 50%**

		<u>Year 1</u>		<u>Year 2</u>		<u>Year 3</u>		<u>Year 4</u>		<u>Year 5</u>		<u>Year 6</u>		<u>Year 7</u>		<u>Year 8</u>		<u>Year 9</u>		<u>Year 10</u>
Income from use of charge points	£	20,808.00	£	27,079.53	£	35,241.30	£	45,863.03	£	59,686.15	£	77,675.55	£	101,086.96	£	131,554.58	£	171,205.12	£	222,806.35
Annual maintenance	£	4,250.00	£	4,462.50	£	4,685.63	£	4,919.91	£	5,165.90	£	5,424.20	£	5,695.41	£	5,980.18	£	6,279.19	£	6,593.14
Electricity costs	£	9,979.49	£	13,227.82	£	17,533.47	£	23,240.62	£	30,805.44	£	40,832.60	£	54,123.62	£	71,740.86	£	95,092.50	£	126,045.11
Back office charge	£	2,040.00	£	2,142.00	£	2,249.10	£	2,361.56	£	2,479.63	£	2,603.61	£	2,733.80	£	2,870.48	£	3,014.01	£	3,164.71
Net Revenue	£	4,538.51	£	7,247.21	£	10,773.11	£	15,340.95	£	21,235.18	£	28,815.14	£	38,534.14	£	50,963.06	£	66,819.43	£	87,003.38
Total initial investment	£	248,600.00																		
Less likely funding	-£	150,000.00																		
Net capital outlay	£	98,600.00																		
Borrowing cost	£	1,153.62	£	1,153.62	£	1,153.62	£	1,153.62	£	1,153.62	£	1,153.62	£	1,153.62	£	1,153.62	£	1,153.62	£	1,153.62
Net Revenue	£	3,384.89	£	6,093.59	£	9,619.49	£	14,187.33	£	20,081.56	£	27,661.52	£	37,380.52	£	49,809.44	£	65,665.81	£	85,849.76
Effective % ROCE per annum		3.43%		6.18%		9.76%		14.39%		20.37%		28.05%		37.91%		50.52%		66.60%		87.07%

NNDC - Estimated revenue for Electric Vehicles Charging (EVC)
ALL COSTS ARE PER SOCKET

		<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>	<u>Year 8</u>	<u>Year 9</u>	<u>Year 10</u>										
Electricity	(Percentage yearly cost increase)		8%	8%	8%	8%	8%	8%	8%	8%	8%										
	Cost of Daytime	£	0.132	£	0.142	£	0.153	£	0.166	£	0.179	£	0.193	£	0.209	£	0.226	£	0.244	£	0.263
	Cost of Night	£	0.093	£	0.100	£	0.108	£	0.117	£	0.126	£	0.136	£	0.147	£	0.159	£	0.171	£	0.185
	Average cost	£	0.120	£	0.129	£	0.140	£	0.151	£	0.163	£	0.176	£	0.190	£	0.205	£	0.222	£	0.240
	Average sale price per kWh (based on 50/50 day at 30p / night use at 20p)	£	0.250	£	0.270	£	0.292	£	0.315	£	0.340	£	0.367	£	0.397	£	0.428	£	0.463	£	0.500
	Average mark-up per kWh (based on 50/50 split)	£	0.130	£	0.141	£	0.152	£	0.164	£	0.177	£	0.191	£	0.206	£	0.223	£	0.241	£	0.260
Electric Vehicle charging stations	Electric Vehicle growth Per Annum			41%	41%	41%	41%	41%	41%	41%	41%										
	Hours use per Day per socket		1.00	1.41	1.99	2.80	3.95	5.57	7.86	11.08	15.62	22.03									
	Total hours Per year per socket (used hours per day x 340 days)		340	479	676	953	1,344	1,895	2,672	3,767	5,312	7,489									
	Average kWh per annum @ 7.2kW		2,448	3,452	4,867	6,862	9,676	13,643	19,237	27,123	38,244	53,924									
	Net Income per annum after direct cost of electricity per socket	£	318.49	£	484.99	£	738.54	£	1,124.65	£	1,712.62	£	2,607.98	£	3,971.43	£	6,047.69	£	9,209.43	£	14,024.12
Yearly running costs	(Annual cost increase)		5%	5%	5%	5%	5%	5%	5%	5%	5%										
	Maintenance per annum per socket	£	125.00	£	131.25	£	137.81	£	144.70	£	151.94	£	159.54	£	167.51	£	175.89	£	184.68	£	193.92
	(Annual cost increase)		5%	5%	5%	5%	5%	5%	5%	5%	5%										
	Back Office Annual Charge per Socket	£	60.00	£	63.00	£	66.15	£	69.46	£	72.93	£	76.58	£	80.41	£	84.43	£	88.65	£	93.08
Annual Cost per Charger (Socket)		£185		£194		£204		£214		£225		£236		£248		£260		£273		£287	
Estimated Revenue	Surplus per socket	£	133.49	£	290.64	£	534.48	£	910.39	£	1,487.65	£	2,371.77	£	3,723.41	£	5,787.28	£	8,936.00	£	13,737.02
	Total Number of Sockets		34		34		34		34		34		34		34		34		34		34
	Total Potential Surplus Per Annum	£	4,538.51	£	9,881.75	£	18,172.32	£	30,953.32	£	50,580.17	£	80,640.07	£	126,596.02	£	196,767.52	£	303,823.96	£	467,058.72
	Total Potential Surplus Cumulative	£	4,538.51	£	14,420.26	£	32,592.58	£	63,545.90	£	114,126.07	£	194,766.13	£	321,362.16	£	518,129.68	£	821,953.64	£	1,289,012.36

Notes

Electricity cost increases are estimated against current levels of government forecasts for energy inflation at between 6% & 10%

Typical mark up is based on a 50%/50% mix of day and night time use

Government advice is the number of Electric vehicles will double every 2 years for the next 10 years, estimated at 6 million EV's by 2029

Usage hours per day are estimated against limited information available from councils and commercial operators already using EVC

The council office EVC revenue generation per socket are not included in the number of total sockets, but allowed in the purchase and grants from OLEV (main use will council vehicle at cost price)

For the purpose of the calculations, year 1 is first year with all 6 sites fully installed and commissioned

NNDC - Estimated revenue for Electric Vehicles Charging (EVC)

ALL COSTS ARE PER SOCKET

		<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>	<u>Year 8</u>	<u>Year 9</u>	<u>Year 10</u>										
Electricity	(Percentage yearly cost increase)		10%	10%	10%	10%	10%	10%	10%	10%	10%										
	Cost of Daytime	£	0.132	£	0.145	£	0.159	£	0.175	£	0.193	£	0.212	£	0.233	£	0.256	£	0.282	£	0.310
	Cost of Night	£	0.093	£	0.102	£	0.112	£	0.123	£	0.136	£	0.149	£	0.164	£	0.180	£	0.198	£	0.218
	Average cost	£	0.120	£	0.132	£	0.145	£	0.160	£	0.176	£	0.193	£	0.212	£	0.234	£	0.257	£	0.283
	Average sale price per kWh (based on 50/50 day at 30p / night use at 20p)	£	0.250	£	0.270	£	0.292	£	0.315	£	0.340	£	0.367	£	0.397	£	0.428	£	0.463	£	0.500
	Average mark-up per kWh (based on 50/50 split)	£	0.130	£	0.138	£	0.147	£	0.155	£	0.165	£	0.174	£	0.184	£	0.195	£	0.206	£	0.217
Electric Vehicle charging stations	Electric Vehicle growth Per Annum			21%	21%	21%	21%	21%	21%	21%	21%										
	Hours use per Day per socket		1.00	1.21	1.45	1.75	2.11	2.54	3.06	3.69	4.45	5.36									
	Total hours Per year per socket (used hours per day x 340 days)		340	410	494	595	717	864	1,041	1,254	1,511	1,821									
	Average kWh per annum @ 7.2kW		2,448	2,950	3,555	4,283	5,161	6,219	7,494	9,031	10,882	13,113									
	Net Income per annum after direct cost of electricity per socket	£	318.49	£	407.40	£	520.82	£	665.37	£	849.43	£	1,083.62	£	1,381.27	£	1,759.23	£	2,238.61	£	2,845.92
Yearly running costs	(Annual cost increase)		5%	5%	5%	5%	5%	5%	5%	5%	5%										
	Maintenance per annum per socket	£	125.00	£	131.25	£	137.81	£	144.70	£	151.94	£	159.54	£	167.51	£	175.89	£	184.68	£	193.92
	(Annual cost increase)		5%	5%	5%	5%	5%	5%	5%	5%	5%										
Back Office Annual Charge per Socket	£	60.00	£	63.00	£	66.15	£	69.46	£	72.93	£	76.58	£	80.41	£	84.43	£	88.65	£	93.08	
Annual Cost per Charger (Socket)		£185		£194		£204		£214		£225		£236		£248		£260		£273		£287	
Estimated Revenue	Surplus per socket	£	133.49	£	213.05	£	316.76	£	451.10	£	624.46	£	847.40	£	1,133.26	£	1,498.81	£	1,965.18	£	2,558.82
	Total Number of Sockets		34		34		34		34		34		34		34		34		34		34
	Total Potential Surplus Per Annum	£	4,538.51	£	7,243.81	£	10,769.71	£	15,337.55	£	21,231.78	£	28,811.74	£	38,530.74	£	50,959.66	£	66,816.03	£	86,999.98
	Total Potential Surplus Cumulative	£	4,538.51	£	11,782.32	£	22,552.03	£	37,889.58	£	59,121.36	£	87,933.10	£	126,463.84	£	177,423.50	£	244,239.52	£	331,239.50

Notes

Electricity cost increases are estimated against current levels of government forecasts for energy inflation at between 6% & 10%
 Typical mark up is based on a 50%/50% mix of day and night time use
 Government advice is the number of Electric vehicles will double every 2 years for the next 10 years, estimated at 6 million EV's by 2029
 Usage hours per day are estimated against limited information available from councils and commercial operators already using EVC
 The council office EVC revenue generation per socket are not included in the number of total sockets, but allowed in the purchase and grants from OLEV (main use will council vehicle at cost price)
 For the purpose of the calculations, year 1 is first year with all 6 sites fully installed and commissioned

NNDC - Estimated revenue for Electric Vehicles Charging (EVC)

ALL COSTS ARE PER SOCKET

		<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>	<u>Year 8</u>	<u>Year 9</u>	<u>Year 10</u>
Electricity	(Percentage yearly cost increase)		12%	12%	12%	12%	12%	12%	12%	12%	12%
	Cost of Daytime	£ 0.132	£ 0.147	£ 0.165	£ 0.185	£ 0.207	£ 0.232	£ 0.260	£ 0.291	£ 0.326	£ 0.365
	Cost of Night	£ 0.093	£ 0.104	£ 0.116	£ 0.130	£ 0.146	£ 0.163	£ 0.183	£ 0.205	£ 0.229	£ 0.257
	Average cost	£ 0.120	£ 0.134	£ 0.150	£ 0.168	£ 0.189	£ 0.211	£ 0.237	£ 0.265	£ 0.297	£ 0.332
	Average sale price per kWh (based on 50/50 day at 30p / night use at 20p)	£ 0.250	£ 0.280	£ 0.314	£ 0.351	£ 0.393	£ 0.441	£ 0.493	£ 0.553	£ 0.619	£ 0.693
	Average mark-up per kWh (based on 50/50 split)	£ 0.130	£ 0.146	£ 0.163	£ 0.183	£ 0.205	£ 0.229	£ 0.257	£ 0.288	£ 0.322	£ 0.361
Electric Vehicle charging stations	Electric Vehicle growth Per Annum		41%	41%	41%	41%	41%	41%	41%	41%	41%
	Hours use per Day per socket	1.00	1.41	1.99	2.80	3.95	5.57	7.86	11.08	15.62	22.03
	Total hours Per year per socket (used hours per day x 340 days)	340	479	676	953	1,344	1,895	2,672	3,767	5,312	7,489
	Average kWh per annum @ 7.2kW	2,448	3,452	4,867	6,862	9,676	13,643	19,237	27,123	38,244	53,924
	Net Income per annum after direct cost of electricity per socket	£ 318.49	£ 502.95	£ 794.26	£ 1,254.30	£ 1,980.79	£ 3,128.06	£ 4,939.84	£ 7,800.99	£ 12,319.32	£ 19,454.67
	Yearly running costs	(Annual cost increase)		5%	5%	5%	5%	5%	5%	5%	5%
Maintenance per annum per socket		£125.00	£131.25	£137.81	£144.70	£151.94	£159.54	£167.51	£175.89	£184.68	£193.92
(Annual cost increase)			5%	5%	5%	5%	5%	5%	5%	5%	5%
Back Office Annual Charge per Socket		£60.00	£63.00	£66.15	£69.46	£72.93	£76.58	£80.41	£84.43	£88.65	£93.08
Annual Cost per Charger (Socket)	£185	£194	£204	£214	£225	£236	£248	£260	£273	£287	
Estimated Revenue	Surplus per socket	£ 133.49	£ 308.60	£ 590.20	£ 1,040.04	£ 1,755.82	£ 2,891.85	£ 4,691.82	£ 7,540.58	£ 12,045.89	£ 19,167.58
	Total Number of Sockets	34	34	34	34	34	34	34	34	34	34
	Total Potential Surplus Per Annum	£ 4,538.51	£ 10,492.48	£ 20,066.80	£ 35,361.31	£ 59,697.90	£ 98,322.91	£ 159,521.82	£ 256,379.56	£ 409,560.34	£ 651,697.62
	Total Potential Surplus Cumulative	£ 4,538.51	£ 15,030.99	£ 35,097.78	£ 70,459.09	£ 130,156.99	£ 228,479.90	£ 388,001.72	£ 644,381.28	£ 1,053,941.62	£ 1,705,639.23

Notes Electricity cost increases are estimated against current levels of government forecasts for energy inflation at between 6% & 10%
Typical mark up is based on a 50%/50% mix of day and night time use
Government advice is the number of Electric vehicles will double every 2 years for the next 10 years, estimated at 6 million EV's by 2029
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For the purpose of the calculations, year 1 is first year with all 6 sites fully installed and commissioned

NNDC - Estimated revenue for Electric Vehicles Charging (EVC)

ALL COSTS ARE PER SOCKET

		<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>	<u>Year 8</u>	<u>Year 9</u>	<u>Year 10</u>										
Electricity	(Percentage yearly cost increase)		8%	8%	8%	8%	8%	8%	8%	8%	8%										
	Cost of Daytime	£	0.132	£	0.142	£	0.153	£	0.166	£	0.179	£	0.193	£	0.209	£	0.226	£	0.244	£	0.263
	Cost of Night	£	0.093	£	0.100	£	0.108	£	0.117	£	0.126	£	0.136	£	0.147	£	0.159	£	0.171	£	0.185
	Average cost	£	0.120	£	0.129	£	0.140	£	0.151	£	0.163	£	0.176	£	0.190	£	0.205	£	0.222	£	0.240
	Average sale price per kWh (based on 50/50 day at 30p / night use at 20p)	£	0.250	£	0.270	£	0.292	£	0.315	£	0.340	£	0.367	£	0.397	£	0.428	£	0.463	£	0.500
	Average mark-up per kWh (based on 50/50 split)	£	0.130	£	0.141	£	0.152	£	0.164	£	0.177	£	0.191	£	0.206	£	0.223	£	0.241	£	0.260
Electric Vehicle charging stations	Electric Vehicle growth Per Annum			21%	21%	21%	21%	21%	21%	21%	21%										
	Hours use per Day per socket		1.00	1.21	1.45	1.75	2.11	2.54	3.06	3.69	4.45	5.36									
	Total hours Per year per socket (used hours per day x 340 days)		340	410	494	595	717	864	1,041	1,254	1,511	1,821									
	Average kWh per annum @ 7.2kW		2,448	2,950	3,555	4,283	5,161	6,219	7,494	9,031	10,882	13,113									
	Net Income per annum after direct cost of electricity per socket	£	318.49	£	414.48	£	539.40	£	701.98	£	913.55	£	1,188.90	£	1,547.23	£	2,013.56	£	2,620.45	£	3,410.26
Yearly running costs	(Annual cost increase)		5%	5%	5%	5%	5%	5%	5%	5%	5%										
	Maintenance per annum per socket	£	125.00	£	131.25	£	137.81	£	144.70	£	151.94	£	159.54	£	167.51	£	175.89	£	184.68	£	193.92
	(Annual cost increase)		5%	5%	5%	5%	5%	5%	5%	5%	5%										
	Back Office Annual Charge per Socket	£	60.00	£	63.00	£	66.15	£	69.46	£	72.93	£	76.58	£	80.41	£	84.43	£	88.65	£	93.08
Annual Cost per Charger (Socket)		£185		£194		£204		£214		£225		£236		£248		£260		£273		£287	
Estimated Revenue	Surplus per socket	£	133.49	£	220.13	£	335.34	£	487.72	£	688.58	£	952.68	£	1,299.21	£	1,753.15	£	2,347.02	£	3,123.16
	Total Number of Sockets		34		34		34		34		34		34		34		34		34		34
	Total Potential Surplus Per Annum	£	4,538.51	£	7,484.32	£	11,401.49	£	16,582.31	£	23,411.81	£	32,391.24	£	44,173.18	£	59,607.10	£	79,798.76	£	106,187.44
	Total Potential Surplus Cumulative	£	4,538.51	£	12,022.83	£	23,424.32	£	40,006.63	£	63,418.44	£	95,809.68	£	139,982.86	£	199,589.96	£	279,388.71	£	385,576.15

Notes

Electricity cost increases are estimated against current levels of government forecasts for energy inflation at between 6% & 10%
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NND - Capital cost for Electric Vehicles Charging (EVC)

	<u>Charging posts (each with two EVC sockets)</u>	Installation cost per Charging Post		Price per Charging Post	Total	UKPN upgrade	Ground Works installation Ducting for additional 12 posts	Electrical cabinets and connection	
		Material	Installation						
Stearman's Yard - Wells	3	£ 3,980	£ 2,200	£ 6,180	£ 18,540	£ 6,000	£ 10,000	£ 3,000	£ 37,540
Morris St - Sheringham	3	£ 3,980	£ 2,200	£ 6,180	£ 18,540	£ 6,000	£ 10,000	£ 3,000	£ 37,540
Queens Rd - Fakenham	3	£ 3,980	£ 2,200	£ 6,180	£ 18,540	£ 17,000	£ 10,000	£ 3,000	£ 48,540
New Rd - North Walsham	2	£ 3,980	£ 2,200	£ 6,180	£ 12,360	£ 5,000	£ 10,000	£ 3,000	£ 30,360
Meadow - Cromer	3	£ 3,980	£ 2,200	£ 6,180	£ 18,540	£ -	£ 10,000	£ 3,000	£ 31,540
Albert St - Holt	3	£ 3,980	£ 2,200	£ 6,180	£ 18,540	£ -	£ 10,000	£ 3,000	£ 31,540
Council offices - Cromer	3	£ 3,980	£ 2,200	£ 6,180	£ 18,540	£ -	£ 10,000	£ 3,000	£ 31,540
	20				£ 123,600	£ 34,000	£ 70,000	£ 21,000	£ 248,600

The Council office EVC would fall under the OLEV workplace scheme, this is £500 per socket and worth an additional £3000 -£ 3,000

<u>Return to investment - 2 OLEV grants awarded</u>			
Based upon the projects being split over 2 successful OLEV grants being awarded is	<u>4.5 Years</u>	OLEV grant - 75% of capital cost (split over two projects each of maximum eligible cost of £100k)	£ 150,000
		Cost	£ 95,600

<u>Return to investment - only 1 OLEV grant awarded</u>			
Only a single grant award from OLEV the RTI will be	<u>5.5 Years</u>	Single awarded of OLEV grant - 75% of capital cost of a maximum eligible cost of £100K	£ 75,000
		Cost	£ 170,600

<u>Return to investment - No OLEV grant</u>			
If no OLEV grant is awarded the RTI for install the EVCP will be	<u>6.5 Years</u>		
		Cost	£ 245,600

Notes

Council office - Capital cost is allowed for, but no income at the office as being primarily for Council owned vehicles

Return to investment are based on a low level startup at 1 hour a day per socket and the same percentage as UK EV's numbers as shown on the revenue sheet