

THAMESWEY SOLAR LIMITED

BUSINESS PLAN 2019

Covering the period 2019-2021

Address: 2nd Floor, Gloucester Chambers, Jubilee Square, Woking, Surrey GU21 6GA
Registered Address: The St Botolph Building, 138 Houndsditch, London, EC3A 7AR

Company Registration No.: 07679222
VAT Number: 129 5595 78

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1. Executive Summary

Introduction

- 1.1 This business plan sets out the proposed strategies for delivering the Thameswey Group companies' activities for the next year and seeks to define their strategic direction for the period up to 2021.
- 1.2 The strategic plan ensures that the focus of activity within each company is clearly aligned with those of Thameswey Limited, and ultimately with the shareholders' strategic objectives. This plan reflects the Board's views on the medium and long term objectives set out in the proposed strategic plans.
- 1.3 This business plan refreshes the 2018 to 2020 business plan. As an established business the plan details expected financial returns for the plan period and discusses long term projections. Future investment appraisals will be subject to specific business cases.

Purpose

- 1.4 Thameswey Solar Limited (TSL) was established in 2011 to further the installation, commissioning and operation of solar photovoltaic (PV) panels throughout the Borough of Woking on Council owned housing, community buildings, and third party owned buildings.

Financial Features

- 1.5 In establishing TSL in December 2011 a long term financial target was set at 5.29% annual equivalent return on its investment over the 25 year business plan period. Expected financial returns within the business plan period are commented on in section 5 – Financial Plan.
- 1.6 TSL has the use of intellectual property owned by Thameswey Limited (TL). It is obliged to pay an annual licence fee of £1,000 for the Trademark.
- 1.7 WBC established a framework for financial support by way of share capital (from the ultimate owner and from the Joint Venture partner Total Gas Contracts Ltd) and loan investment to enable TSL to invest in PV. WBC charges a margin over its borrowing costs for the loans to the Group and this directly benefits residents by contributing to the revenue income of WBC. In 2016 Total Gas Contracts Ltd sold their shares to Thameswey Limited (TL) at a discount of circa 50%.

Financial Requirements

- 1.8 This business plan sets out the financing requirements for TSL. Additional loan finance will be required in 2020, until 2020 no additional loan finance is required.
- 1.9 This business plan does not propose further investment in new installations. However, the Thameswey group is continuing to invest in renewable and solar energy, for example by Thameswey Developments through installations on its buildings and retro-fitting solar energy into Thameswey Housing stock. If the company is to make additional capital investment, approval would be sought from the TSL Board, shareholders and the Council before commencement of works.

Current Business Position

- 1.10 TSL operates roof-mounted PV installations on buildings owned by the Council, local schools, community buildings, Peacocks and the Wolsey Place shopping centre.
- 1.11 The company's PV installations generated 944,069 kWh of electricity in 2017, compared with 930,520 kWh in 2016 (an 1.4% increase). The power generated saved approximately 363 tonnes of carbon dioxide (CO₂) equivalent emissions (note the carbon saved per unit of electricity generated is calculated on the basis of comparison with grid electricity. In recent years, an increase in the renewable component of the grid mix has resulted in a reduction in the relative savings attributed to PV). The renewable electricity generated by TSL continues to contribute towards a reduction in the Carbon Reduction Commitment (CRC) of WBC and helped the council reduce its CRC payments.

2. General Company Description

Legal Entity

- 2.1 Thameswey Solar Ltd is a private Limited Company registered in the United Kingdom.

Ownership & Subsidiary Company

- 2.2 Shareholdings are shown below:

Table 1: Thameswey Solar Ltd Shareholder Equity

Company	Equity Share	Number of £1 Ordinary Shares
Thameswey Limited	100%	1,182,688

Board of Directors

- 2.3 The current board of Directors is set out below:

Barry Maunders	Independent Director (Chairman)
Douglas Spinks	Officer Director
Peter Bryant	Officer Director
Ayesha Azad	Councillor Director

- 2.4 The above-board composition meets the requirements of the Thameswey Group Protocols as approved by the Council in February 2018. In order to be quorate a board meeting must have at least one independent, one Councillor and one officer Director in attendance.

Significant Assets

- 2.5 TSL was originally established with over 4,900 PV panels located across 35 sites in the Borough and a total capacity of 1,238 kWp (kilowatt peak). During 2017 an additional 11 kWp capacity was added to TSL's assets with the installation of PV on the roof of Morris House in Commercial Way.
- 2.6 All installations include telemetry for remote monitoring of components and meter reading.

Goals and Objectives

2.7 TSL has three primary objectives:

- To support greater use of renewable energy in order to achieve a reduction in carbon dioxide emissions;
- To promote awareness of the benefits of solar energy to the users of public buildings; and
- To promote the use of PV and develop projects that help stimulate further investment in the solar energy market locally.

2.8 TSL was established to assist WBC in meeting the Councils' Climate Change Strategy. The key principles of the strategy are as follows:

- Reduction of Borough-wide CO₂ equivalent emissions;
- Adaptation to climate change; and
- Promotion of sustainable development

2.9 TSL will continue to support WBC in achievement of the Climate Change Strategy, which adopted the Government's Climate Change Act (2008) targets for carbon emission reductions i.e. to reduce greenhouse gas emissions by 80% by 2050 against a 1990 baseline.

3. The Opportunity & Industry

The Opportunity

- 3.1 There may be opportunities for TSL to assist the Council further in achievement of its Climate Change Strategy.
- 3.2 TSL may provide or tender for new PV or renewable energy installations and may respond positively to invitations to participate in partnership business opportunities to develop new renewable energy installations where the capital for the surveys and installation costs is secured from third parties and a project fee for TSL is secured for intellectual property.
- 3.3 TSL will look to provide energy services for solar installations for other Thameswey group companies in return for a share of the value of generated electricity supplied to the host building.

The Industry

- 3.4 The PV industry currently requires a high capital upfront investment in a sector with relatively low annual returns and therefore requires a long term business plan.
- 3.5 The UK government has maintained its policy of cutting the financial support for solar power provided through the Feed in Tariff, with large reductions introduced in early 2016. In July 2018 Government announced its intention to close the Feed in Tariff (FiT) scheme to new applicants (existing FiT agreements will be unaffected). The Government also announced a call for evidence on its future support for small scale low carbon electricity generation.

- 3.6 Financial support for solar thermal energy is to be continued through the Renewable Heat Incentive (RHI) and potentially offers the best opportunities to secure financial support for new solar installations in the foreseeable future, beyond March 2019. TSL will look to manage this application process on behalf of other parts of the Group.

4. The Business Model

Sources of Revenue

- 4.1 TSL receives the following types of income for its operations:
- 4.2 FiT income is paid by energy suppliers for every kWh of electricity generated. The current rates of FiT that TSL receives (as at April 2018) varies between 17.66p/kWh and 40.08p/kWh depending mainly on the registration date. This income is RPI linked and was uplifted in April 2018.
- 4.3 Export tariffs for electricity supplied directly to the National Grid vary depending on the size of the site. Small sites below 30 kWp receive deemed export at 3.57 p/kWh for 50% of the energy generated which is RPI linked. Larger sites receive export income under a Power Purchase Agreement based on metered export to the grid;
- 4.4 Electricity income is received from building owners/occupiers for the sale of a proportion of the electricity consumed onsite; and
- 4.5 A contribution is received from building owners for the cost of maintenance of the PV panels through a service charge.

Major Operational Costs

- 4.6 Apart from depreciation and finance charges the most significant costs that the company incurs are for the operation and maintenance (O&M) of the panels.
- 4.7 Insurance costs are significant, since the fire at Goldwater Lodge, the company has taken out additional insurance to insure against loss of income in the event of arson or other damage.

Operational Plan

- 4.8 TSL will continue to operate the PV panels. During the Business Plan period TSCL will take on organisation responsibilities for routine maintenance of the installations, including a fault response service and assistance in the optimisation of power output from the installations.
- 4.9 During 2017 approximately, half of the company's installations were cleaned as a trial to assess the cost-benefit of cleaning. The performance of these installations is being monitored over a two-year period in comparison to the other installations to assess the impact of cleaning the panels in terms of improved electrical output.

Capital Investment

- 4.10 No major additional capital investment has been identified in this plan. However, the company will respond to opportunities to purchase and install enhanced PV system monitoring equipment if the business case is favourable.

Assumptions and Critical Factors in Model

- 4.11 TSL has a financial model which has been used to make the financial projections in the Business Plan (shown in Appendices 2, 3 and 4). The model is updated annually to reflect the previous year's activity and any updates on performance and inflation forecasts.
- 4.12 The original model that was used as the basis for approval of the project in 2011 has been updated to bring it in line with actual income streams currently anticipated.
- 4.13 The model assumes that inflation will run at 2.5% for the full period of the business plan. In practice short term inflation will vary. Increased inflation will provide an improvement in the return for the company due to increasing revenues and margins.
- 4.14 The performance of solar panels is expected to gradually reduce annually; to account for this the model assumes degradation of PV panels at 0.25% per annum

5. Financial Plan

Finance Structure

- 5.1 TSL is financed by both share capital and loan finance. TL (ultimately WBC) has a total of £1,182,688 in share capital finance in TSL. Approval was given for loan finance of £2,196,000 under a 14 year annuity loan from WBC at an annual interest rate of 6.0%. Up to May 2014, £2,126,000 of the available loan had been drawn down.
- 5.2 During 2020 additional funding is required of £90,000, the increase in funding is £20,000 over the balance of £70,000 outstanding. No further funding is required during the 25-year project.
- 5.3 In 2018 TSL will contribute £59,388 to WBC in the form of loan interest; the Council uses this to help reduce Council tax charges to residents of the Borough.
- 5.4 The Council will also benefit from reduced energy charges for the General Fund properties and the housing sites.
- 5.5 Over the 25 year business plan period the net benefit to WBC is expected to generate a shareholder return of over £3m.

Appendix 1 shows the key financial benefits to WBC of TSL over the plan period.

Shareholder Return on Investment

- 5.6 This business plan is forecasting returns of 3.95%.
- 5.7 A summary of the shareholders returns is below:

Table 2: Financial Returns

	£
Shareholders Return	£3,068,146
Less Share Capital	(1,182,688)
Net Shareholders Return	1,885,458
Return on Investment	3.95%
NPV of Shareholders Returns	£708,852

Profit & Loss Account

- 5.8 The budget has been based on historical costs, expected inflation and modelled revenue and expenditure. TSL has a good level of confidence in the budget.

Risks and Sensitivities

- 5.9 One of the biggest risks to the company is variation in the annual output of the panels due to local weather and general atmospheric conditions. The output of the PV panels is directly affected by the level of solar irradiation (insolation) at ground level. It is anticipated that solar irradiance levels will rise at a rate of approximately 1% per annum (ref: EUCAARI (European Integrated project on Aerosol Cloud Climate and Air Quality Interaction) project funded by the European Commission). However, it is considered prudent to forecast solar irradiance to remain at constant levels throughout the plan period. If in future years the annual output of the panels improves due to higher irradiance levels then it may be brought into the plan at a later date and will lead to improved shareholders' returns.

Appendix 2 shows the forecast Profit & Loss until 2021

Balance Sheet and Cash Flow

Appendix 3 shows the Balance Sheet Forecast to 2021

Appendix 4 shows the Cash Flow Forecast to 2021

Appendix 1: Benefits to WBC

Description	2017	2018	2019
Net Interest Margin	£60,879	£59,388	£51,477
Carbon Dioxide Emission Savings	363 tonnes	TBC	
Assist WBC in its Climate Change Strategy			

Appendix 2: Profit and Loss Forecast

	2017	2018	2019	2020	2021
	<i>Actual</i>	<i>Forecast</i>	<i>Budget</i>	<i>Budget</i>	<i>Budget</i>
	£	£	£	£	£
Turnover					
Income	207,180	234,139	240,240	246,508	252,948
	207,180	234,139	240,240	246,508	252,948
Cost of Sales					
Operation Costs	18,591	17,418	15,804	16,199	16,604
PV Insurance	12,734	12,798	12,862	12,926	12,991
	31,326	30,216	28,665	29,125	29,594
Gross profit/(loss)	175,854	203,923	211,575	217,383	223,353
<i>GP% of turnover</i>	84.9%	87.1%	88.1%	88.2%	88.3%
Overheads					
Administration Costs	7,444	7,974	8,013	8,054	8,094
Legal Fees	35	1,020	1,025	1,030	1,036
Auditors Remuneration	6,520	7,070	7,106	7,141	7,177
Trade Mark Licence Fee	1,000	1,000	1,000	1,000	1,000
Non Executive Directors	2,657	2,700	2,713	2,727	2,740
Bank Charges	130	128	129	130	130
Total Costs	17,786	19,892	19,986	20,081	20,177
EBITDA	158,068	184,031	191,588	197,302	203,177
Depreciation	80,283	80,573	80,573	80,573	80,573
Amortisation of Grant	4,785	5,053	5,053	5,053	5,053
Operating Profit/(loss)	82,570	108,511	116,069	121,782	127,657
Finance Income	23	57	37	21	43
Finance Costs	95,753	87,684	78,848	70,487	63,579
Profit/(Loss) Before Tax	(13,160)	20,884	37,258	51,317	64,120
Corporation Tax	12,919	0	0	0	0
Profit/(Loss) after Tax	(26,079)	20,884	37,258	51,317	64,120

Appendix 3: Balance Sheet Forecast

	2017	2018	2019	2020	2021
	Actual	Forecast	Budget	Budget	Budget
FIXED ASSETS					
PV Installation	2,689,046	2,610,826	2,532,605	2,454,385	2,376,165
Management of Install	80,882	78,529	76,176	73,824	71,471
	2,769,928	2,689,355	2,608,782	2,528,209	2,447,636
LONG TERM INVESTMENTS					
	0	0	0	0	0
CURRENT ASSETS					
Trade Debtors	(394)	4,554	4,673	4,795	4,920
Other Debtors	0	0	0	0	0
VAT Refund	0	0	0	0	0
Accrued Income	26,088	24,482	25,120	25,776	26,449
Corporation Tax	(23,251)	(23,251)	(23,251)	(23,251)	(23,251)
Prepayments	400	452	464	476	488
Other Group Debtors	1	1	1	1	1
Bank Account	141,561	92,879	51,735	106,288	72,687
	144,405	99,118	58,742	114,084	81,295
CURRENT LIABILITIES					
Trade Creditors	4,970	8,282	9,032	9,802	10,593
Other Creditors	0	0	0	0	0
VAT Liability	125	208	227	247	267
Accrued Expenses	29,695	27,550	25,275	23,875	21,315
	34,790	36,041	34,534	33,923	32,174
NET CURRENT ASSETS					
	109,615	63,077	24,208	80,161	49,121
LONG TERM LIABILITIES					
WBC Loan	1,532,338	1,389,396	1,237,749	1,166,866	996,186
Grant - 40 years	166,725	161,672	156,618	151,565	146,512
	1,699,063	1,551,068	1,394,367	1,318,431	1,142,698
NET TOTAL ASSETS					
	1,180,480	1,201,364	1,238,622	1,289,939	1,354,059
CAPITAL & RESERVES					
Share Capital	1,182,688	1,182,688	1,182,688	1,182,688	1,182,688
Asset Revaluation Reserve	0	0	0	0	0
P&L Account brought fwd	23,872	(2,208)	18,677	55,935	107,251
Profit/(Loss) YTD	(26,079)	20,884	37,258	51,317	64,120
	1,180,480	1,201,365	1,238,623	1,289,939	1,354,059

Appendix 4: Cash Flow Forecast

	2017	2018	2019	2020	2021
	Actual	Forecast	Budget	Budget	Budget
	2017	2018	2019	2020	2021
	£	£	£	£	£
Operating Activities					
Profit/(Loss) Before Financing	82,570	108,511	116,069	121,782	127,657
(Increase)/Decrease in Debtors	18,229	(3,395)	(768)	(789)	(811)
Increase/(Decrease) in Creditors	(4,973)	1,251	(1,506)	(611)	(1,749)
Add Back: Depreciation / Less Amortisation	75,498	75,520	75,520	75,520	75,520
NET CASH FLOW FROM OPERATING ACTIVITIES	171,324	181,887	189,314	195,901	200,616
Investing Activities					
(Purchase)/Disposal of investments	0	0	0	0	0
(Purchase)/Disposal of fixed assets	(14,226)	0	0	0	0
NET CASH FLOW FROM INVESTING ACTIVITIES	(14,226)	0	0	0	0
Financing Activities					
Increase in Share Capital	0	0	0	0	0
Interest Received	23	57	37	21	43
Interest Paid	(95,753)	(87,684)	(78,848)	(70,487)	(63,579)
Loan/Grant Received	10,726	0	0	90,000	0
Repayment of Loans	(134,737)	(142,942)	(151,647)	(160,883)	(170,680)
NET CASH FLOW FROM FINANCING ACTIVITIES	(219,741)	(230,569)	(230,458)	(141,349)	(234,217)
Taxation					
Corporation Tax	0	0	0	0	0
NET CASH INFLOW/(OUTFLOW) OF CASH	(62,643)	(48,682)	(41,144)	54,553	(33,601)
Cash Balance @ Beginning of Period	204,205	141,562	92,879	51,735	106,288
Cash Balance @ End of Period	141,562	92,879	51,735	106,288	72,687