

SOLARFOX

Clean energy environment, for a clean world.



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Executive Summary

This document outlines a business plan for Solarfox Corporation in West Bromwich, West Midlands, focusing on clean energy initiatives. We've analyzed the market using tools like Porter's Five Forces, SWOT analysis, and the marketing mix to understand our position and financial needs.

By partnering with a reputable solar panel supplier, we aim to provide excellent customer service. The report concludes with a detailed Financial Summary, including projected sales, to inform potential investors about expected returns.

Introduction

Solarfox Corporation is the UK-based standard solar panel company. We have managed to acquire a large hectare of land on the outskirts of West Bromwich, Birmingham. We are engaged in solar panel installation, maintenance, and repair, providing comprehensive customer service and contributing to a greener and more sustainable future. As a solar panel company, we specialize in providing cost-effective and environmentally friendly solutions to residential and commercial customers. With a strong focus on customer satisfaction, you reduce their energy costs and carbon footprint. Our distribution channels include both online platforms and a physical location, which allows us to reach a wider customer base. We understand the importance of convenience and accessibility, and by offering our products through multiple channels, we ensure that customers can easily access our solar panels and benefit from their energy saving benefits.

Mission

Our mission at Solarfox is to enable a sustainable future through innovative solar solutions and to use the sun's energy to advance environmental protection. We are committed to providing state-of-the-art solar panels and customer services as well as reducing carbon footprint.

Vision

To be the partner of choice for governments, businesses and communities seeking reliable and sustainable solar energy solutions, driving positive change for the planet and future generations.

Gap in the market and solutions

1. How about introducing a customized solar panel service? Most solar panels on the market are one size fits all. But what if customers want modules that meet their individual design preferences

or architectural features? The plan is to offer personalized solar panels tailored to individual customer spaces. This not only closes a gap in the market for personalized solar solutions, but also opens up opportunities in focused segments – solar energy.

2. How about a solar panel leasing program designed specifically for renters? Many renters are interested in the benefits of solar energy but are hesitant to invest in a system for a property they don't own. The idea is to create a service that allows renters to lease solar panels on a monthly subscription. The system would be easily installed and removable, making it portable and suitable for various rental properties. This allows tenants to benefit from cost savings and environmental benefits without making a long-term commitment or owning property. The leasing program could provide flexible options for different energy needs, benefiting both individual tenants and property management companies looking to provide sustainable amenities. It's a win-win for the environment and those looking for permanent solar energy.

Using Porters 5 forces for the Solarfox Corporation

Competitive Rivalry in the market

The solar industry, a key growth driver, is thriving in the West Midlands and demand for solar panels is increasing. Solarfox, an integrated solar panel company, faces strong competition from major competitors such as Energy Saving Grants, Evergreen MAC and Sol Energy LTD (Renewableenergyhub, 2023). Notably, there were over 100,000 certified solar PV installations in UK homes in the first half of 2023 - a milestone only achieved once before in June 2012, just before major cuts in feed-in tariffs (Mcscertified, 2023). The competitive landscape is intense and characterized by the presence of multinational companies with specialized units.

Threat to Substitutes

Renewable energy is becoming more and more popular than traditional energy sources. The world is moving away from using fossil fuels for energy because they are depleting, and their use is damaging the environment. Climate activists and concerns about global warming are urging companies to stop using fossil fuels. Solar and wind energy are becoming major competitors for traditional electricity companies (Solarin et al., 2021).

(Department of Energy Security & Net Zero, 2023) describes that the company has set itself the goal of making the electricity sector cleaner and producing zero emissions by 2050. By using new technologies, we can reduce the risk of other energy sources replacing ours. All of these factors together make the risk of adopting other energy sources less likely.

Threat of New Entrants

The biggest challenge for new companies entering the solar industry is the high capital requirement. The government has strict rules in the solar industry. Barriers to entry into an industry include the need for high capital, product differentiation, regulatory frameworks and economies of scale. New companies can receive money from private investors, banks and loans for small and medium-sized businesses. In the UK, smaller companies can attract customers by offering package deals (Power Technology, 2018).

Large energy companies in the UK have lost some customers to smaller companies with cheaper deals over the last decade. New competitors such as Evergreen MAC and Energy Saving Grants have grown significantly and now control 25% of the market, up from 1% a decade ago. This means that the chances of new companies entering the market are still high (Twidale, 2019).

Bargaining power of suppliers

The main companies in the solar equipment sector include suppliers of raw materials and traders. Merchants play a crucial role in connecting with consumers. In the area of energy production, the quality of raw materials is of great importance. High-quality materials can significantly increase efficiency, while low-quality materials can reduce it. The increased influence of suppliers in an industry increases the complexity of the profitability prospects for companies operating in that sector (Porter Analysis, 2022).

Owners

In the field of solar industry services, the owners of this company are a young couple – Mr. Shivcharan Mistry and Ms. Dipeeka Mistry. Both hail from Birmingham, West Midlands, and Mr Shiv has eight years' experience in the solar industry. His professional career includes a role as a solar system manager in a well-known company. On the other hand, Dipeeka, a graduate of the University of Birmingham, brings her formal education in finance and accounting to complement the solar efforts.

Company Summary

Proposed location

Our company, Solarfox Corporation, aims to establish its headquarters in the vibrant and environmentally conscious city of West Bromwich in the West Midlands. This location was strategically selected due to its commitment to sustainability, a robust technology ecosystem, and a community that values clean energy initiatives. Progressive policies and incentives for

renewable energy businesses in the West Midlands.

Justification for proposed location

- 1. Eco-Friendly Community:** West Midlands has a good reputation for implementing environmentally friendly practices. Community awareness and support for renewable energy initiatives creates an enabling environment for Solarfox Corporation to thrive.
- 2. Tech Hub:** As it is located in the centre of West Bromwich, it offers access to a pool of talented professionals, potential employees and cutting-edge technology. This proximity is crucial to staying at the forefront of innovation in the renewable energy sector.
- 3. Incentives and policies:** West Midlands and particularly West Bromwich offer attractive incentives and policies for companies committed to clean energy. These include tax credits, subsidies and a favourable regulatory environment that will significantly support the growth of Solarfox Corporation.

Now, let's move on to the legal entity:

Legal Entity

Solarfox will operate as a corporation. This legal form was chosen due to its specific advantages, including access to a wider range of financing options, the possibility of a public offering and the possibility of issuing different classes of shares.

Justification for the Legal Entity:

- 1. Access to Capital:** As a company, Solarfox can attract a larger pool of investors and raise capital by issuing different types of shares. This flexibility is critical to funding large-scale research and development initiatives in the rapidly evolving renewable energy sector.
- 2. Potential for a public offering:** The corporate structure creates the conditions for future growth and the possibility of an initial public offering (IPO). This route provides Solarfox with greater visibility, liquidity and additional capital to scale operations.
- 3. Employee Stock Options:** 2. Potential for a public offering: The corporate structure creates the conditions for future growth and the possibility of an initial public offering (IPO). This route provides Solarfox with greater visibility, liquidity and additional capital to scale operations.

By opting for a corporation structure in West Midlands, Solarfox aims to position itself for substantial growth, innovation, and long-term success in the dynamic and impactful field of renewable energy.

Using SWOT Analysis for Solarfox Corporation

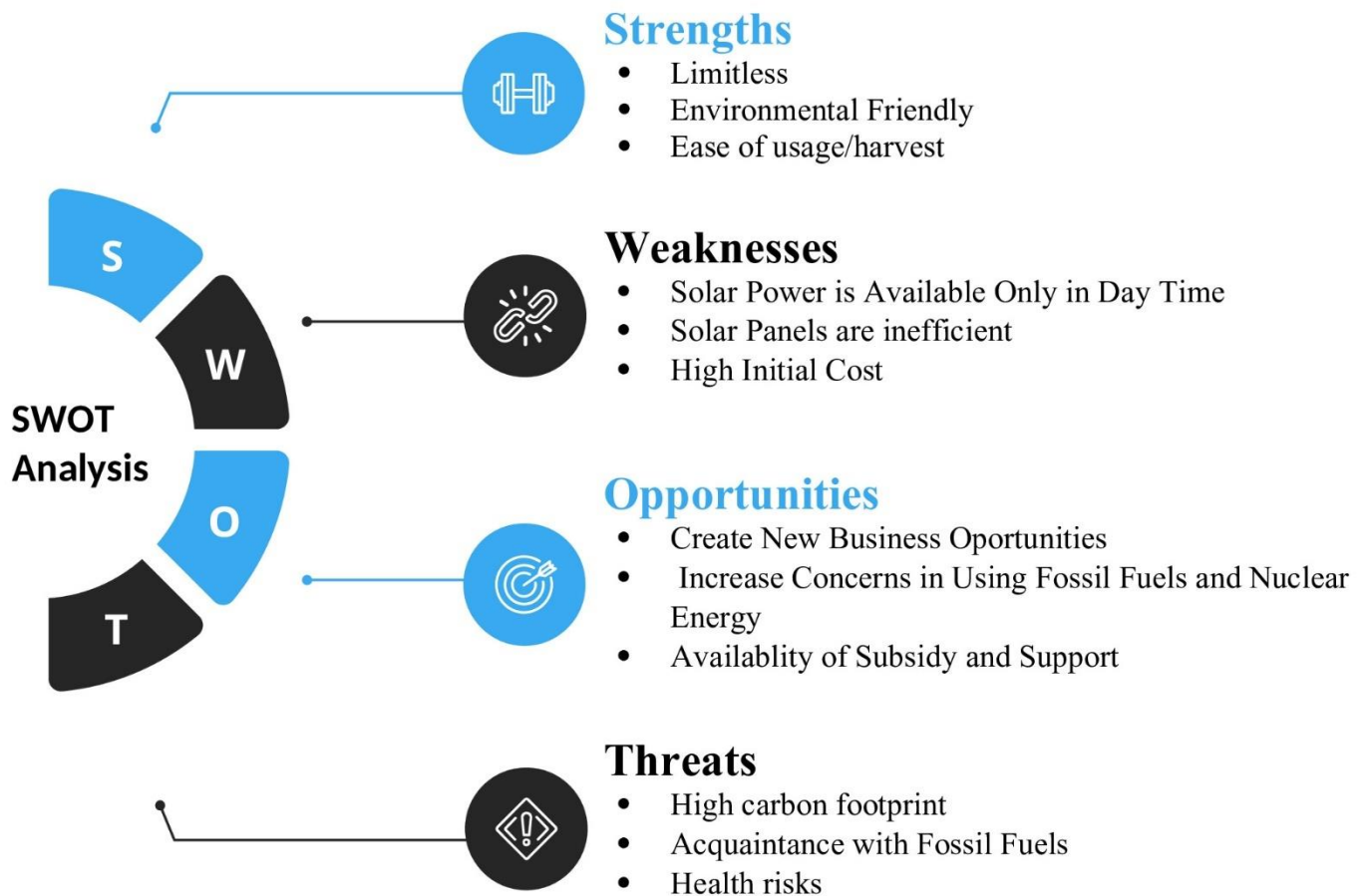


Figure 1 - Using SWOT Analysis for the unlaunched business Solarfox.

In the process of strategic planning, SWOT analysis serves as a tool to examine and evaluate both internal and external elements that contribute to the achievement of strategic goals in a business plan or project. This analysis focuses in particular on recognizable and well-founded factors and takes into account their relevance to strategic goals. The identified internal and external factors are then ranked according to their importance and guide the decision-making process in line with the strategic goals.

Strengths

Limitless - Solar energy, derived from the sun, is an abundant and free source of energy with the potential to meet global energy needs. Despite an estimated annual availability of four million exajoules, only a fraction is considered easily harvestable. Despite its enormous potential, solar energy's contribution to global energy supply remains minimal. Therefore, improving the efficiency of solar energy generation could potentially meet global energy needs without requiring additional energy sources (Guangul and Chala, 2019).

Ease of usage/harvest - Solar energy is primarily generated through solar panels and uses

photovoltaic technology to generate electricity. Solar energy system installation is versatile as the panels can be easily installed on roofs of residential and commercial buildings. Alternatively, homeowners can access electricity from community solar gardens without the need for roof panels.

Weakness

Solar Power is available only in daytime - Because solar radiation is only present during the day, photovoltaic panels can only convert solar energy during those hours. Solar systems need energy storage in order to guarantee a steady supply of electricity. In situations where there is not enough solar radiation or energy storage, additional power sources are installed, which raises the total cost of solar systems (Guangul and Chala, 2019).

Solar panels are inefficient - Compared to other energy systems, solar panels have a relatively low conversion efficiency, typically not exceeding 20%. Because of this inefficiency, a lot of space is required to collect enough solar energy for an average household.

Opportunities

Availability of Subsidy and Support – In many countries, both governmental and non-governmental organizations offer subsidy and income tax exemption schemes. Here is the data specific to the United Kingdom.

Solar Panels Grants and Incentives in the UK	
ECO4	Smart Export Guarantee
£4 billion budget allocated for 4 years between April 1st 2022 – 2026 - UK homeowners have a greater chance to get this grant due to LA flex which lets councils decide region-specific eligibility.	- Came into effect on 1 January 2020 - Receive payments for selling surplus energy back to the grid
Vat Reduction	Recently Expired Grants
0% VAT for solar panels, either the whole product or only installation - Applicable for homes in Great Britain from 1st April 2022 – 31st March 2027	Renewable Heat Incentive Feed-In <u>Traiff</u>

Figure 2 (Source – greenmatch.co.uk)

Threats

Acquaintance with Fossil Fuels - People have been using fossil fuels for a long time and investing a lot of money in power plants that rely on them. Transitioning from these traditional fuels to solar energy is a major challenge due to existing, well-established technologies (Guangul and Chala, 2019).

Fluctuating market conditions - The solar panel industry is influenced by various market factors,

including changes in government policies and economic conditions. To counter this threat, we will continually monitor market trends and adapt our business strategies accordingly to ensure our long-term sustainability.

Target Market

Solar photovoltaic (PV) technology in the UK became the world's fastest-growing renewable energy technology last year, contributing to the employment of over 30,000 people across the country, according to a recent report. Although the UK is starting to deploy PV later than some European countries such as Germany and Italy, it is currently in a race to deploy PV. The cost of PV in the UK has fallen significantly by almost 70% over the last five years. As these costs continue to fall, the need for additional support such as: B. Subsidies. PV is rapidly becoming a fully industrialized technology, positioning itself as a competitor to other renewable energy technologies and soon poised to compete with conventional sources such as gas energy (Al-Ezzi, 2017).

There are 40,500 households in West Bromwich West, a predominantly urban area. In this area, full-time workers earn an average weekly wage of £528.20. Notably, this figure contrasts with the corresponding average weekly earnings of £617.50 in the West Midlands region and £640.00 across the UK. The customers we target with our survey report are divided into two categories (Energy Efficiency Infrastructure Group, 2021).

Using 4Ps of Marketing Mix for the Solar Community

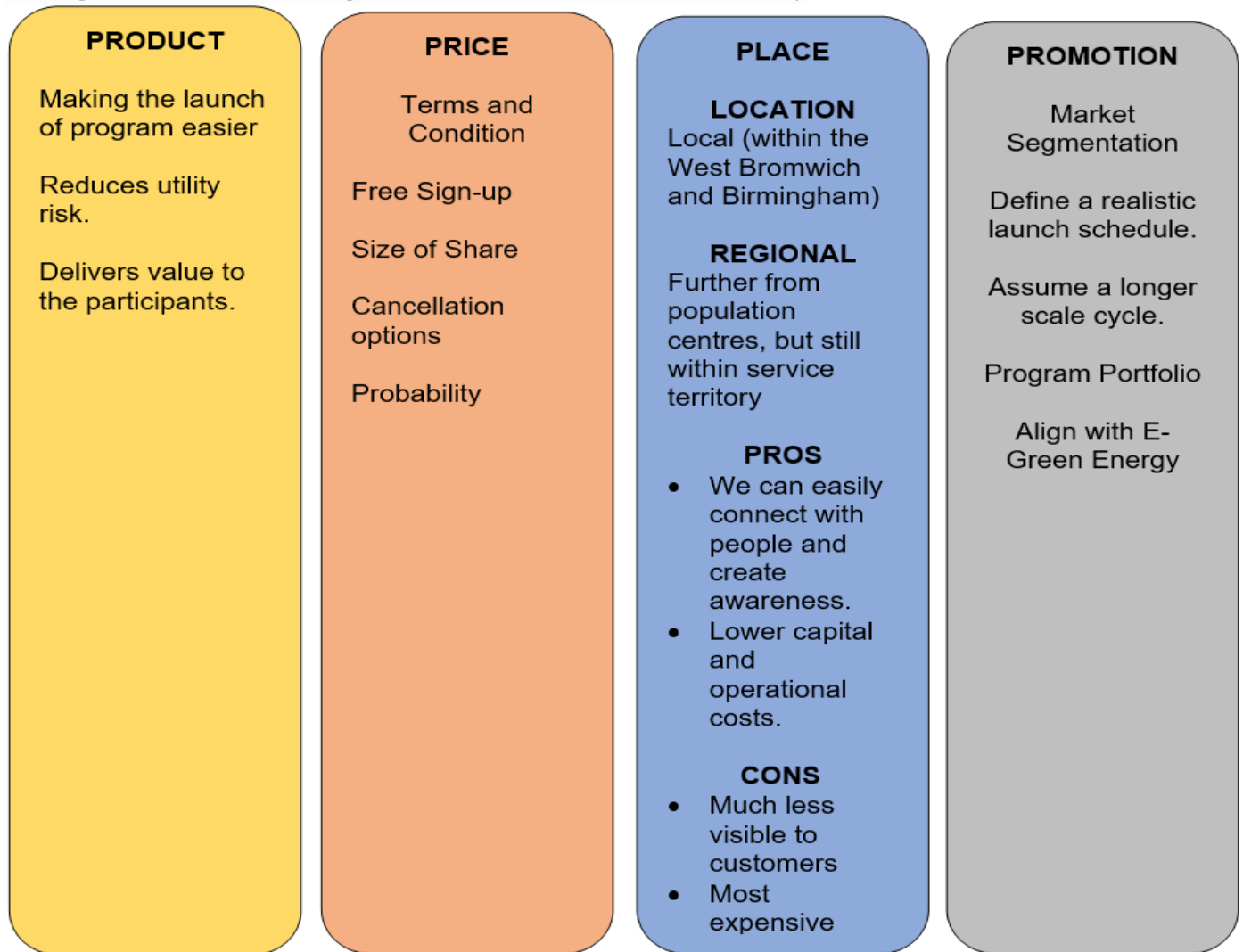


Figure 3 – Using Marketing Mix for the business plan.

Financial Summary

The last component of the solar panel business plan is an in-depth financial plan. The financial plan crafts a detailed map of all the expenses needed for the startup and how these expenses will be met by the earned profits.

Important Assumptions

The company's financial projections rely on a set of assumptions, characterized by a conservative outlook. While a certain degree of deviation is anticipated, it is expected to remain within manageable limits, ensuring that the company's primary financial strategy remains unaffected.

	Year 1	Year 2	Year 3
Plan Month	1	2	3
Current Interest Rate	10,00%	11,00%	12,00%

	Year 1	Year 2	Year 3
Long-term Interest Rate	10,00%	10,00%	10,00%
Tax Rate	26,42%	27,76%	28,12%
Other	0	0	0

Break-even Analysis

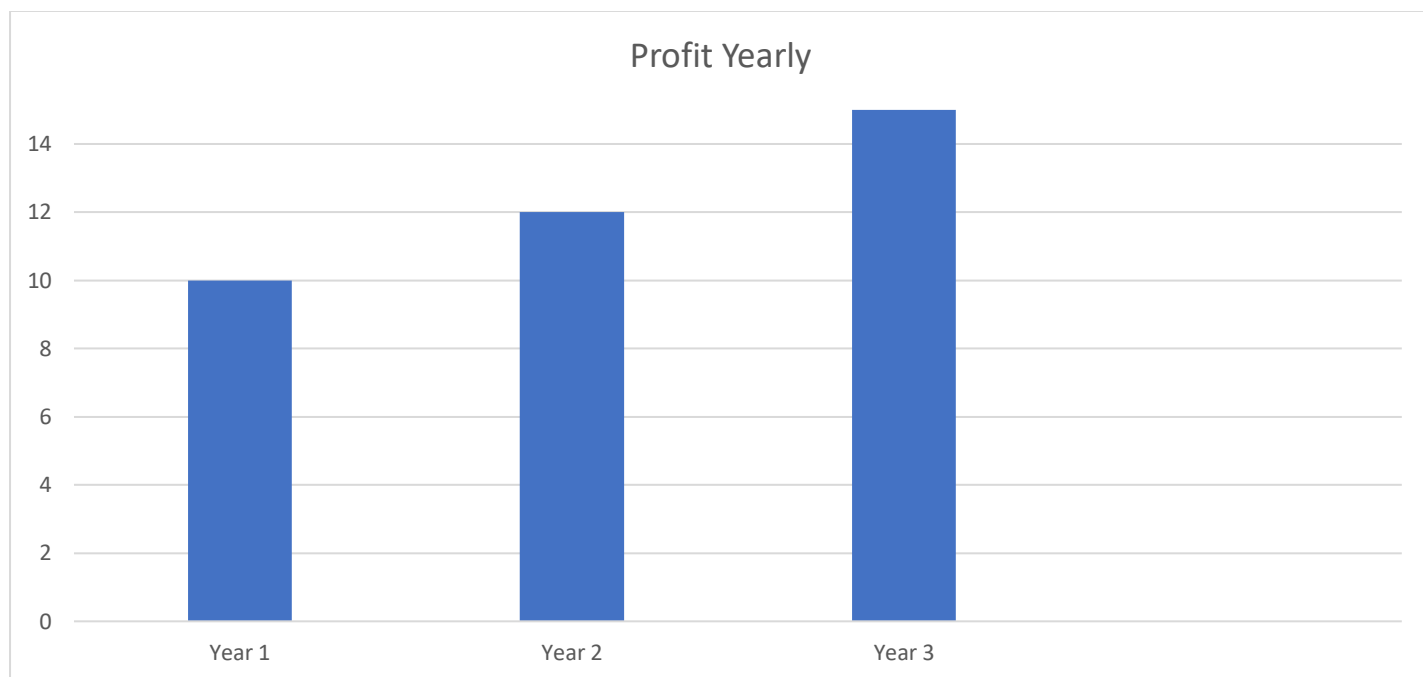
Monthly Units Break-even	5530
Monthly Revenue Break-even	£15000
Assumptions:	
Average Per-Unit Revenue	£300
Average Per-Unit Variable Cost	£2
Estimated Monthly Fixed Cost	£12000

Projected Profit and Loss

	Year 1	Year 2	Year 3
Sales	£180000	£210000	£350000
Direct Cost of Sales	£15000	£20000	£40000
Other	\$0	\$0	\$0
TOTAL COST OF SALES	£18000	£22000	£32000
Gross Margin	£120000	£150000	£220000
Gross Margin %	55.78%	62.65%	70.65%

	Year 1	Year 2	Year 3
Expenses			
Payroll	£20000	£30000	£60000
Sales and Marketing and Other Expenses	£1 850	£2 000	£2 150
Depreciation	£2 070	£2 070	£2 070
Leased Equipment	£0	£0	£0
Utilities	£4 000	£4 250	£4 500
Insurance	£1 800	£1 800	£1 800
Rent	£6 500	£7 000	£7 500
Payroll Taxes	£500	£800	£1200
Other	\$0	\$0	\$0
Total Operating Expenses	£188 766	£220 744	£252 722
Profit Before Interest and Taxes	£105 205	£146 040	£186 875
EBITDA	£107 275	£148 110	£1`88 945
Interest Expense	\$0	\$0	\$0
Taxes Incurred	£26 838	£37 315	£47 792
Net Profit	£78 367	£108 725	£139 083

Profit Yearly



Financial Year	Profit
Year1	10,000
Year2	12,000
Year3	14,000

Financial Year	Gross Margin
Year1	10,000
Year2	12,000
Year3	14,000

Projected Balance Sheet

Assets	Year 1	Year 2	Year 3
Current Assets			
Cash	£100000	£200000	£300000
Accounts Receivable	£12 613	£14 493	£16 373

Assets	Year 1	Year 2	Year 3
Inventory	£2 980	£3 450	£3 920
Other Current Assets	£1 000	£1 000	£1 000
TOTAL CURRENT ASSETS	£201 259	£237 468	£273 677
Long-term Assets			
Long-term Assets	£10 000	£10 000	£10 000
Accumulated Depreciation	£12 420	£14 490	£16 560
TOTAL LONG-TERM ASSETS	£980	£610	£240
TOTAL ASSETS	£198 839	£232 978	£267 117
Current Liabilities			
Accounts Payable	£9 482	£10 792	£12 102
Current Borrowing	£0	£0	£0
Other Current Liabilities	£0	£0	£0
SUBTOTAL CURRENT LIABILITIES	£9 482	£10 792	£12 102
Long-term Liabilities	£0	£0	£0
TOTAL LIABILITIES	£9 482	£10 792	£12 102
Paid-in Capital	\$30 000	\$30 000	\$30 000
Retained Earnings	£48 651	£72 636	£96 621
Earnings	£100 709	£119 555	£138 401
TOTAL CAPITAL	£189 360	£222 190	£255 020

Assets	Year 1	Year 2	Year 3
TOTAL LIABILITIES AND CAPITAL	£198 839	£232 978	£267 117
Net Worth	£182 060	£226 240	£270 420

References

1. Al-Ezzi, A. (2017) 'The market of solar panels in the United Kingdom', *Applied Solar Energy*, 53(1), pp. 78-84. Available at: <https://doi.org/10.3103/S0003701X17010029>
2. Department for Energy Security & Net Zero (2023) *Net Zero Strategy: Build Back Greener*. Available at: <https://www.gov.uk/government/publications/net-zero-strategy> (Accessed: 10 October 2023).
3. Energy Efficiency Infrastructure Group (2021) West Bromwich West. Available at: <https://www.theeeig.co.uk/constituencies/west-bromwich-west/> (Accessed: 22 October 2023).
4. Guangul, F. and Chala, G. (2019) *Solar Energy as Renewable Energy Source: SWOT Analysis*. Available at: https://www.researchgate.net/publication/331266856_Solar_Energy_as_Renewable_Energy_Source_SWOT_Analysis (Accessed: 22 October 2023).
5. mcscertified (2023) *Solar Success in the West Midlands*. Available at: <https://mcscertified.com/solar-success-in-the-west-midlands/> (Accessed: 22 October 2023).
6. Porter Analysis (2022) *Porter's Five Forces of SSE*. Available at: <https://www.porteranalysis.com/porters-five-forces-of-sse/> (Accessed: 20 October 2023).
7. Power Technology (2018) UK power market transition: Big Six under pressure. Available at: <https://www.power-technology.com/comment/ukpower-market-transition-big-six-pressure/>
8. renewableenergyhub (2023) *Solar panels installers in West Bromwich*. Available at: <https://www.renewableenergyhub.co.uk/solar-panel-solar-pv-installers-in-west-bromwich> (Accessed: 22 November 2023).
9. Solarin, S.A., Bello, M.O., Bekun, F.V., 2021. Sustainable electricity generation: the possibility of substituting fossil fuels for hydropower and solar energy in Italy. *International Journal of Sustainable Development and World Ecology* 28, 429–439. Available at: <https://doi.org/10.1080/13504509.2020.1860152>
10. Twidale, S. (2019). Explainer: Britain's Big Six energy suppliers to shrink to five. Available at: <https://www.reuters.com/article/us-e-on-results-britain-explainer-idUSKBN1Y31H4>