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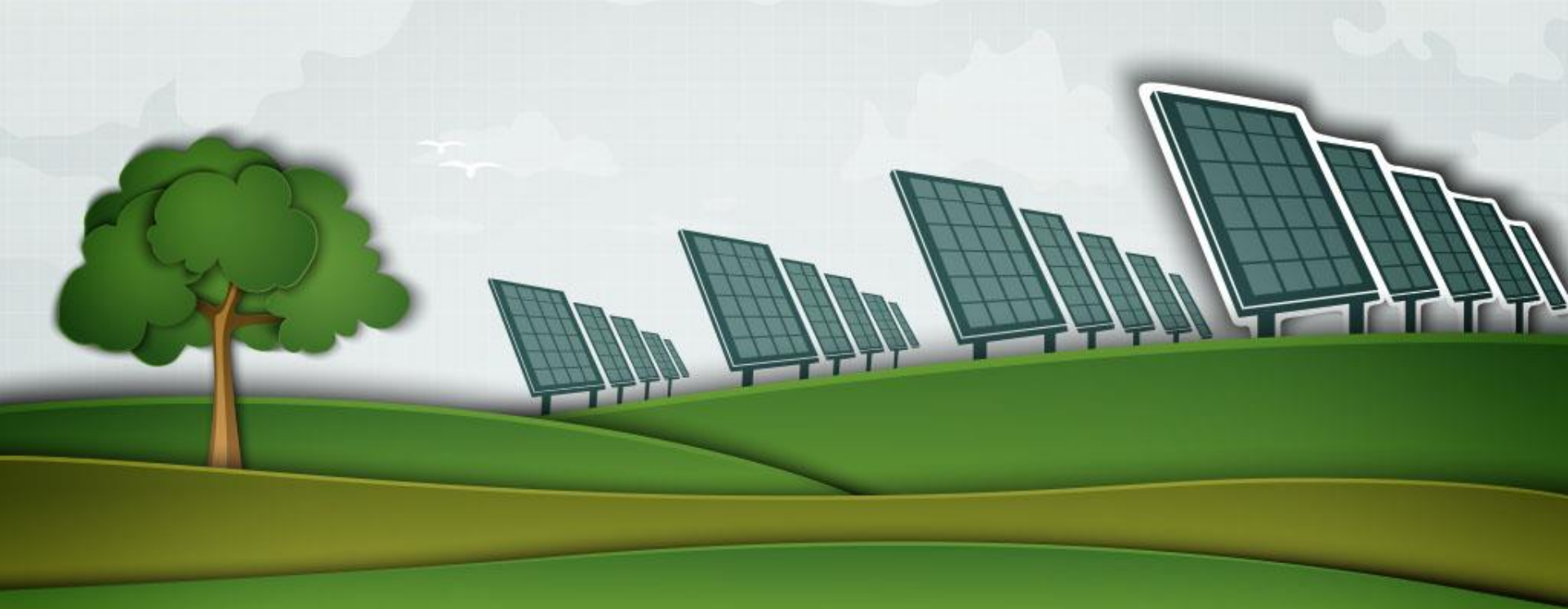
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EnGreen's Solar Park Initiative in Mumbai, India



Executive Summary

- The study shall explain the business model of EnGreen and the offers that it provides to connect with customers
- Identification of the Gap which stated that Mumbai needs the installation of a cost-saving Photovoltaic system
- Locations shall be proposed which might include the city of Mumbai and areas within it
- Overall the study shall illustrate how EnGreen will perform the installation of the solar parks and how it will be beneficial for the people



Introduction

- The business model of EnGreen, which makes sustainable energy products and offers related services, will be looked at in this piece. Additionally, EnGreen offers services that are connected. By putting up a solar-powered social noise barrier, everyone can chop down traffic noise. This would make things go better. That's a good start. Right now, every traveller is worried about the traffic on the roads around the world. Obaiden propose that the problem gets worse when pollution rises. So, the problem is getting worse. To become more well known in Mumbai, India, is the company's main strategy goal. According to Laura Soares, Hao Wang (2023) PVNBs (solar Photovoltaic noise barrier) are structures designed to mitigate noise levels and produce clean energy. A solar system that gets power from the sun will be part of the system along with a noise blocker system. These parts work well together.



Solar Panel
(Source: Kuldeep et al. n.d)

Overview of the Business Idea

- A very effective method for controlling pollution was developed from the initial studies on photovoltaic nanobrushes (PVNBs). Several areas are more likely to be affected by traffic noise than others, according to studies on environmental noise barriers.
- Considerations such as construction temperature, solar position, barrier size, and materials should be considered when organising the installation of photovoltaic noise barriers.



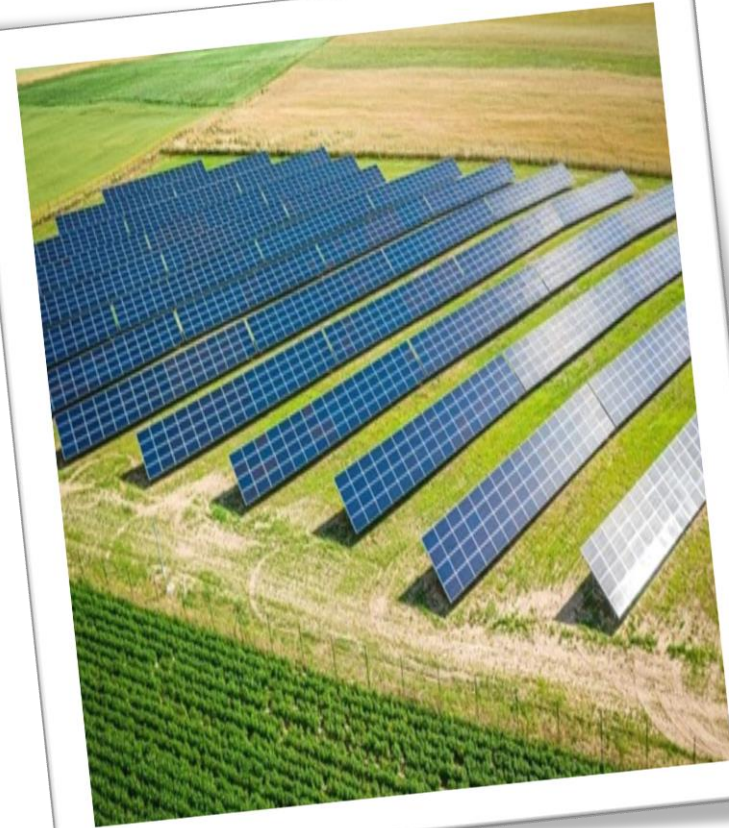


Description of the start-up plan, Market Analysis and Value proposition

- EnGreen has decided to start up the installation of Solar parks in different areas of Mumbai like Dharavi, Borivali, Ulhas Nagar, Pratap Nagar, and Tulshet Pada
- Reduction in the reliance on fossil fuels and increase in the use of renewable energy
- Every park will have around 30 solar panels which will generate around 43.5 kWh of electricity
- The company will encourage people through ads and social media to influence the importance of solar panels
- It provides the best deal for people to buy from the company along with the warranty

Gap Identification in Business Initiation

- In Mumbai, India, the installation of a dollar photovoltaic (PV) system often leads to cost savings. In order to ensure that this technology is accessible to all individuals, it is of the utmost importance (Kuldeep et al., n.d.).
- For instance, the Northeastern region of Mumbai, India receives a significantly lower amount of sunlight compared to the Southwest region. Although the phrase could be used to describe the process of generating solar energy, its application is contingent upon the specific locations where the systems are required to be installed.





Proposed Location and Legal Entity

- This is a result of the fact that the level of pollution caused by traffic in this location is significantly higher than in other areas
- As part of an efficient and legislated strategy, the city of Mumbai in India plans to generate fifteen percent of its electricity from renewable sources by the year 2020 (Kumar et al. 2020)



Strategic Priorities (Financial, customer, product and services) of EnGreen to fill up the gap

- The financial strategy the company uses is Investment planning
- For the customers, EnGreen is always up to the market and notices the aspect where it wants the customers to know everything
- Providing feedback through online communication helps the company connect with customers
- As per Product strategy, the company looks into the goals of the company and requirements of the customer
- This helps them to stay connected with the customers and build a proper customer base.

SWOT Analysis

Strength	Weakness
• Efficient technologies that are both scalable and user-friendly, with minimal maintenance or repair needs. • The government's failure to provide adequate economic growth and growth promotions, along with insufficient funding, are both evident.	• Due to the substantial financial investment required, large firms are frequently selected. • Base load is one area where distributed system structures can be related to problem.
Opportunities	Threats
• Solar park initiatives are being pursued by the authorities with lofty ambitions. • To get fundamental legislation and project clearances, developers of solar systems are required.	• The significant perils of becoming obsolete due to the advent of emerging technologies. • During the off-season, there is a decline in the cash flow.

Competitors

The Competitors are:

- Tata Power Solar: Manufactures Solar modules, Solar cells, Solar Home Lighting systems, and others
- Adani Solar: Provide services like Solar EPC (Engineering, Procurement, and Construction) and Rooftop
- Vikram Solar: Maintains Solar power plants, supplier of Solder Wire and Flux





Strengths and Weaknesses of Tata Power Solar, Adani Solar and Vikram Solar

Tata Power Solar

Strengths

- The company is expanding since it has large reserves and low Debt-Equity Ratio
- The presence of the can be seen in countries like Singapore, Kuwait, Malaysia and others

Weaknesses

- It consists of limited shares due to intense competition
- There is a limited presence in South India as it consists of the lucrative market it has no presence in Central India

Adani Solar

Strengths

- The equity share capital has been invested to create assets that will be operational.
- It is small but has a workforce of around 2000 employees

Weaknesses

- It is present in few states like Haryana, Maharashtra and Gujrat
- It has a lower share of market in comparison to private companies like Tata Power

Vikram Solar

Strengths

- The company consist of 25 manufacturing plants overall India which produces 10000 MT bulk of explosives
- It perform in construction, mining and other areas

Weaknesses

- It consist High cost of replacement of established expertise
- It has shortage of technical resources along with Financial resources

Target Market

Environmentally sustainable energy production, including photovoltaic (PV) systems and other alternative energy sources, has the potential to mitigate urban issues like noise pollution. Conducting market research on the solar noise barrier industry in India, London, and Mumbai will be our subsequent course of action.



Solar Panel
(Source: Kuldeep et al. n.d)



Strategies to Capture the Target Market

- In Mumbai, India, photovoltaic solar barriers were installed utilising an assortment of techniques. In Mumbai, India, navigational and market knowledge are indispensable. A business can increase the effectiveness of its marketing and sales strategies by placing particular emphasis on the aforementioned categories.
- A further benefit is that it draws in people who are concerned about the environment in Mumbai, India, by highlighting the positive environmental benefits, such as a decreased reliance on fossil fuels and a smaller carbon footprint.





Annual Operational plan of the company

- Planting Solar plants
- Frequent maintenance of the thermal-based components
- Testing of circuit
- Thermal imaging
- Retro commissioning
- Effective data interpretation



Management Summary of EnGreen

- 197 countries to battle with climatic change
- A total of 350 million trees everyday
- Committing to clean up oceans
- To take up solar panel parks installation

Financial Plan

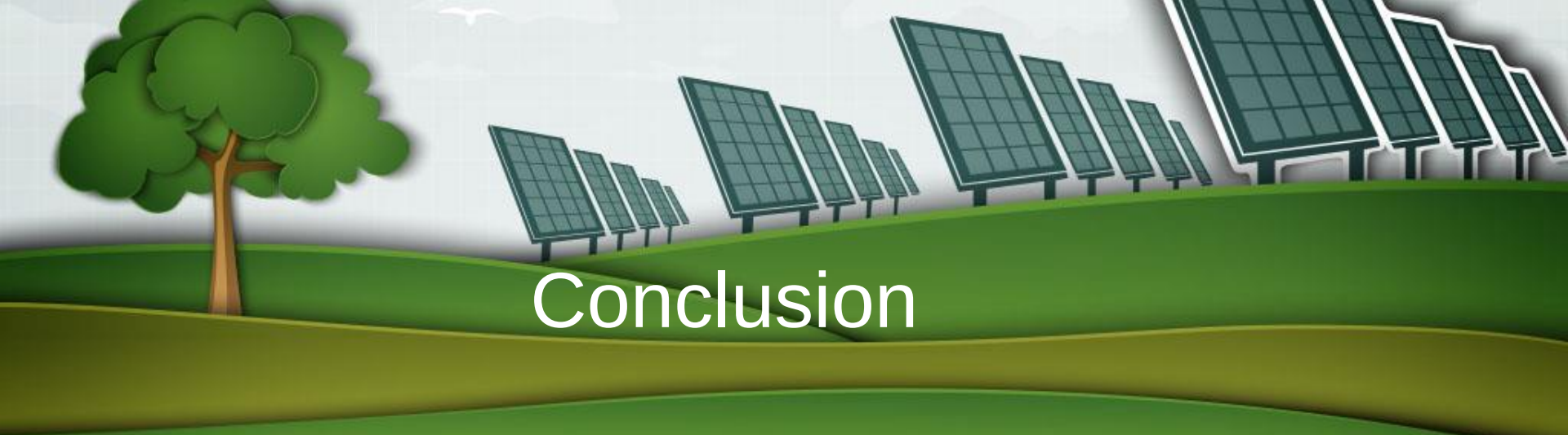
- To make microgrid systems more reliable and efficient, a total of \$600,000 will be spent on research and development (Zhong et al. 2021)
- The proposal was based on a budget of 1,300,000 dollars
- Continuing support, marketing, and sales, as well as administrative chores, will all receive guidance and support from the \$500,000 that has been set aside specifically for this purpose
- The distribution of 800,000 dollars will be distributed in an equal manner across the installation, consumer support, and maintenance aspects



An illustration of a solar farm on a green hill. In the background, several rows of solar panels are mounted on the hillside, angled towards the sun. To the left of the panels, there is a single green tree with a brown trunk. The sky is light blue with a few white clouds. The foreground is a green field.

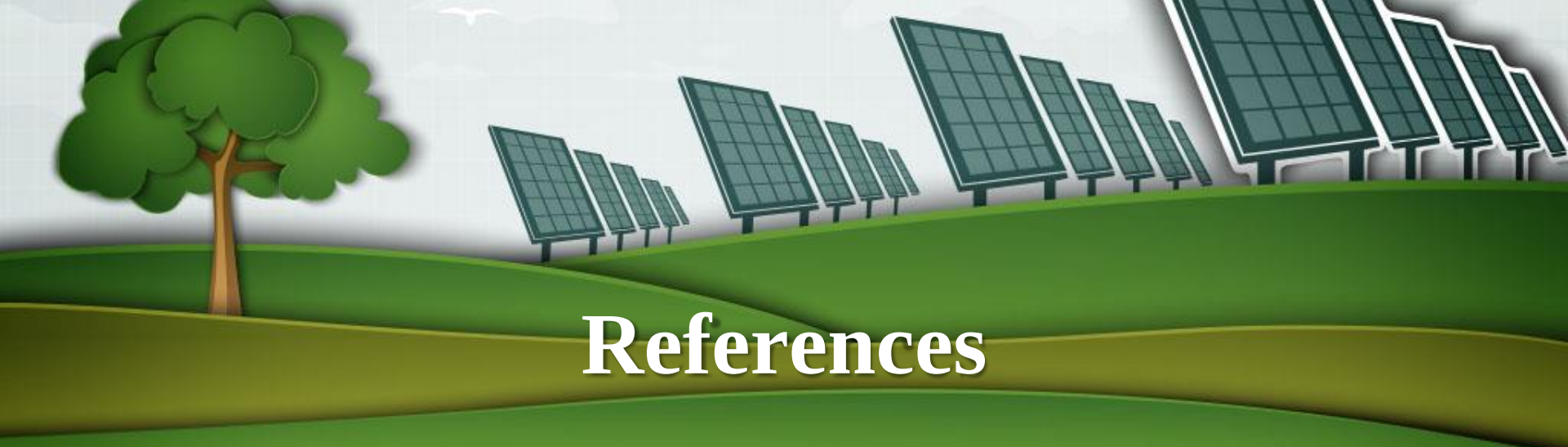
Management Summary

- Engreen is going to hire various solar technology expert who applies creativity and technical mastery to maximize solar park performance.
- Engreen solar park is positioned as a leader in sustainable and effective solar solutions by this well-coordinated team.



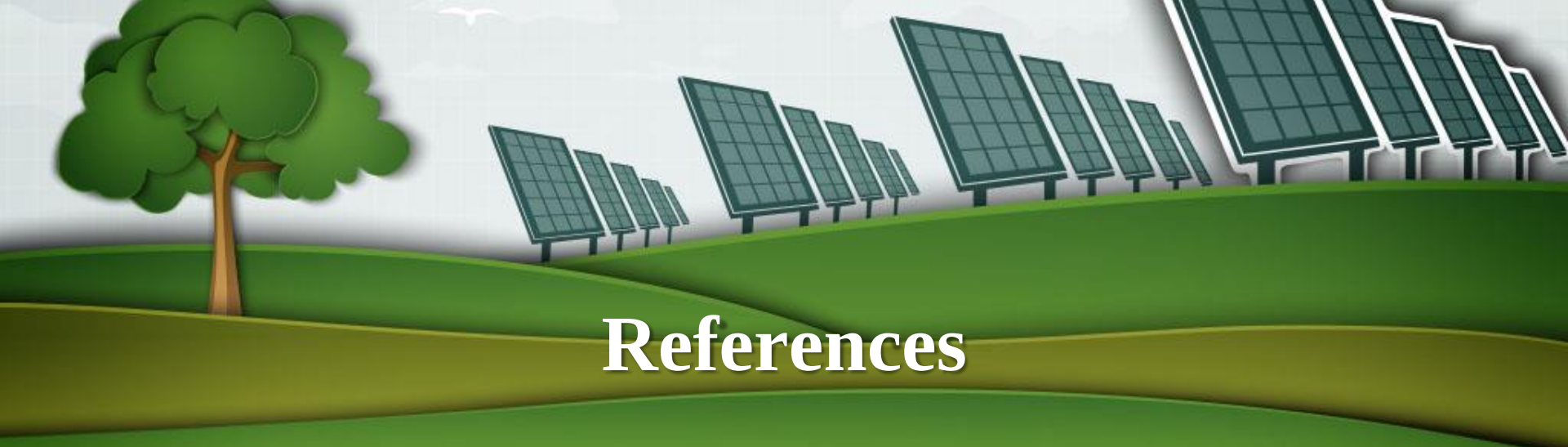
Conclusion

- One promising commercial initiative that makes use of renewable energy is the Engreen Solar Park. Its unique strategy combines environmentally friendly methods with sustainable electricity generation to produce a synergy that makes it stand out. Engreen stands out as the greatest option since it combines cost-effective energy solutions with environmental responsibility, balancing business success with environmental benefit.



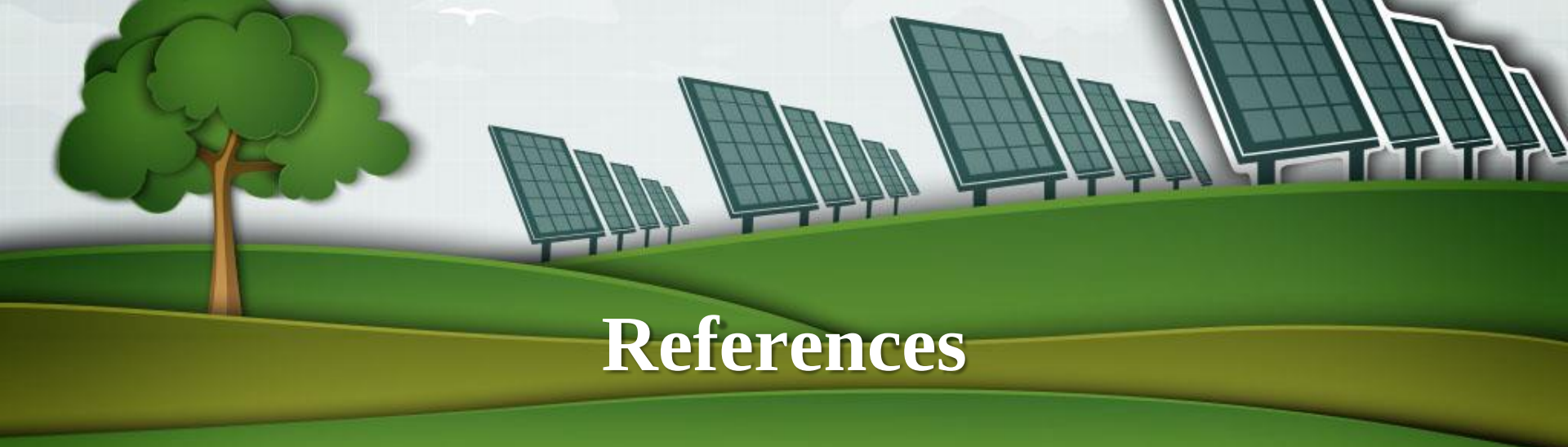
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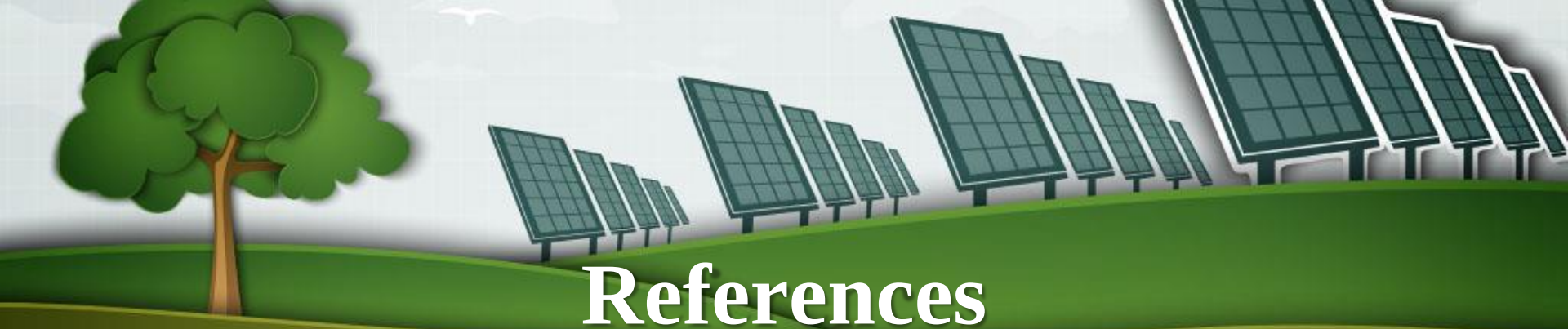
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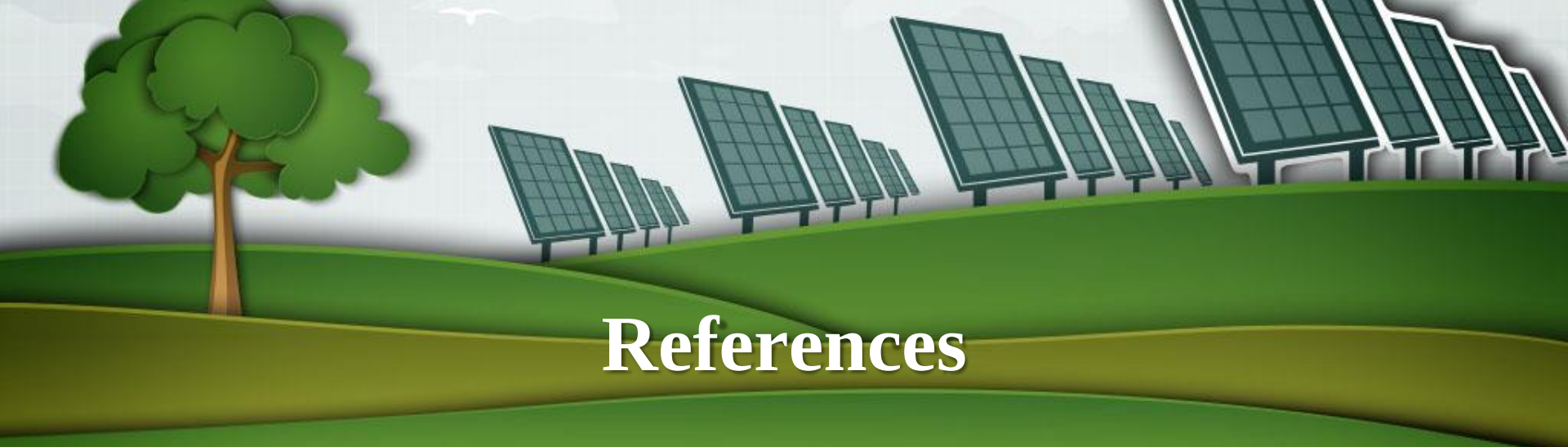
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THANK YOU



1. Title Slide

- Title: "EnGreen's Solar Park Initiative in Mumbai, India"
- Subtitle (optional): "Harnessing Renewable Energy for a Sustainable Future"

2. Introduction

The business model of EnGreen, which makes sustainable energy products and offers related services, will be looked at in this piece. Additionally, EnGreen offers services that are connected. By putting up a solar-powered social noise barrier, everyone can chop down traffic noise. This would make things go better. That's a good start. Right now, every traveller is worried about the traffic on the roads around the world. Obaiden et al. say that the problem gets worse when pollution rises. So, the problem is getting worse. To become more well known in Mumbai, India, is the company's main strategy goal. PVNBs, which stand for solar photovoltaic noise barriers, protect listeners and lower noise while producing energy in an eco-friendly way. That's another name for PVNBs. A solar system that gets power from the sun will be part of the system along with a noise blocker system. These parts work well together.

3. Overview of the Business Idea

- A very effective method for controlling pollution was developed from the initial studies on photovoltaic nanobrushes (PVNBs). Several areas are more likely to be affected by traffic noise than others, according to studies on environmental noise barriers.
- Considerations such as construction temperature, solar position, barrier size, and materials should be considered when organising the installation of photovoltaic noise barriers.

A very effective method for controlling pollution was developed from the initial studies on photovoltaic nanobrushes (PVNBs). Several areas are more likely to be affected by traffic noise than others, according to studies on environmental noise barriers. As a result, these areas could start to blend, making them harder to differentiate. Solar noise barriers were demonstrated by Agathokleous and Kalogirou to be a potential solution to these issues multiple times in 2020. A lot of nations are starting to worry about air pollution. Photovoltaic panel sound barriers are one solution to the problem of road noise pollution. Some important factors to think about while designing photovoltaic noise barriers include building temperature, solar location, barrier size, and

material composition. There is a wide range of potential uses for solar system noise reduction filters. It is possible to produce a milder form of acoustic energy by reducing or refocusing its propagation away from its initial point of origin. The incorporation of dollar cells above photovoltaic panels reduces carbon emissions and noise even further. This is accomplished by converting solar parks into electricity.

4. Gap Identification in Business Initiation

- In Mumbai, India, the installation of a dollar photovoltaic (PV) system often leads to cost savings. In order to ensure that this technology is accessible to all individuals, it is of the utmost importance (Kuldeep et al., n.d.).
- For instance, the Northeastern region of Mumbai, India receives a significantly lower amount of sunlight compared to the Southwest region. Although the phrase could be used to describe the process of generating solar energy, its application is contingent upon the specific locations where the systems are required to be installed.

Through the utilisation of solar photovoltaic (PV) technology, it is frequently possible to get a wide variety of energy sources at a cost that is not too expensive. The production of electricity consequently results in extremely high expenses. In Mumbai, India, the installation of a dollar photovoltaic (PV) system often leads to cost savings. In order to ensure that this technology is accessible to all individuals, it is of the utmost importance (Kuldeep et al., n.d.). The cost of installing photovoltaic (PV) noise barriers is significantly higher than the cost of installing conventional noise barriers. In spite of these challenges, it is of the utmost importance to convince prospective clients to have financial investments. When it comes to attention, the market should be given precedence.

When it comes to promoting itself, the most efficient method for Mumbai, India is to educate the general public about the city's advantages. These advantages include the city's commitment to green energy (the development of renewable energy), noise reduction, and long-term progress.

According to Hegde et al. 2020, several regions receive a much higher amount of sunlight than others. For instance, the Northeastern region of Mumbai, India receives a significantly lower amount of sunlight compared to the Southwest region. Although the phrase could be used to

describe the process of generating solar energy, its application is contingent upon the specific locations where the systems are required to be installed.

When it comes to gaining approvals, the limits and procedures that are in place in the Mumbai industry are very demanding. The marketing materials should include an explanation of the regulatory processes, as well as the manner in which the company would aid customers in finding their way through them.

According to Benöhr and Gebremedhin (2021), the rise in the demand for renewable energy sources is accompanied by an increase in market competitiveness. In order to separate photovoltaic noise barriers from those of the competition, it is necessary to address differentiating aspects such as integrated energy storage and modern noise reduction technologies.

5. Proposed Location and Legal Entity

This is a result of the fact that the level of pollution caused by traffic in this location is significantly higher than in other areas. As part of an efficient and legislated strategy, the city of Mumbai in India plans to generate fifteen percent of its electricity from renewable sources by the year 2020 (Kumar et al. 2020). Even though it appears to be brilliant, this idea is absolutely necessary for the new business plan that PVNBs have adopted.

6. SWOT Analysis

Strength	Weakness
● Efficient technologies that are both scalable and user-friendly, with minimal maintenance or repair needs. ● The government's failure to provide adequate economic growth and growth promotions,	● Due to the substantial financial investment required, large firms are frequently selected. ● Base load is one area where distributed system structures can be related to problem.

along with insufficient funding, are both evident.	
Opportunities	Threats
• Solar park initiatives are being pursued by the authorities with lofty ambitions. • To get fundamental legislation and project clearances, developers of solar systems are required.	• The significant perils of becoming obsolete due to the advent of emerging technologies. • During the off-season, there is a decline in the cash flow.

7. Target Market

- Environmentally sustainable energy production, including photovoltaic (PV) systems and other alternative energy sources, has the potential to mitigate urban issues like noise pollution. Conducting market research on the solar noise barrier industry in India, London, and Mumbai will be our subsequent course of action.

Due to transportation developments, a greater number of people are able to travel to industrialised nations such as Mumbai, India, and other regions. A 2021 study conducted by Gu and colleagues shows that there is an increasing trend in both the frequency and severity of noise pollution. An increasing number of businesses are recognising the financial and environmental advantages that noise barriers can offer on their facilities. In Mumbai, India, an extensive strategy is now being formulated to set specific goals for the development of environmentally viable infrastructure that relies on renewable energy sources. The concept encompasses the implementation of solar noise barriers.

8. Strategies to Capture the Target Market

- In Mumbai, India, photovoltaic solar barriers were installed utilising an assortment of techniques. In Mumbai, India, navigational and market knowledge are indispensable. A

business can increase the effectiveness of its marketing and sales strategies by placing particular emphasis on the aforementioned categories.

- A further benefit is that it draws in people who are concerned about the environment in Mumbai, India, by highlighting the positive environmental benefits, such as a decreased reliance on fossil fuels and a smaller carbon footprint.

A variety of implementation strategies were employed to incorporate photovoltaic solar barriers in Mumbai, India. In Mumbai, India, market knowledge and the ability to navigate it are essential. A business can increase the effectiveness of its marketing and sales strategies by placing particular emphasis on the aforementioned categories. By concentrating a greater allocation of resources, the efficacy of solar noise barriers can be enhanced. The partnership between environmental organisations and local authorities is an alternate method that can be utilised. The process of incorporating these concerns into urban planning projects can be sped up with the participation of multiple individuals working together.

It is possible that the provision of subsidies and additional benefits could serve as a means of encouraging manufacturers to support the environmental goals that the government has set. According to the findings of Soares and Wang (2023), this methodology results in increased costs for customers at the same time as it encourages a considerable amount of adoption in metropolitan areas and on main thoroughfares. Furthermore, it is essential to focus an emphasis on the long-term advantages that photovoltaic noise barriers offer. The economic benefits, which include reduced electricity bills and the possibility of profit production from extra energy generation, will fascinate prospective owners from both the commercial and residential sectors. These benefits will be attractive to prospective buyers. A further benefit is that it draws in people who are concerned about the environment in Mumbai, India, by highlighting the positive environmental benefits, such as a decreased reliance on fossil fuels and a smaller carbon footprint.

9. Financial Plan

- To make microgrid systems more reliable and efficient, a total of \$600,000 will be spent on research and development. Zhong et al. (2021) offered a financial strategy that

incorporates energy storage, renewable energy technologies, and the integration of smart infrastructure. The proposal was based on a budget of 1,300,000 dollars. Continuing support, marketing, and sales, as well as administrative chores, will all receive guidance and support from the \$500,000 that has been set aside specifically for this purpose. The distribution of the 800,000 dollars will be distributed in an equal manner across the installation, consumer support, and maintenance aspects.

According to Zhang et al. (2022), in order to successfully support photovoltaic noise barriers in the Mumbai, India market, a considerable financial investment is required to construct a sustainable energy company strategy. This is the case in order to establish a sustainable energy business strategy. In addition to spending that is absolutely necessary, the budget ought to have major funding sources from outside sources. To make microgrid systems more reliable and efficient, a total of \$600,000 will be spent on research and development. Zhong et al. (2021) offered a financial strategy that incorporates energy storage, renewable energy technologies, and the integration of smart infrastructure. The proposal was based on a budget of 1,300,000 dollars. Continuing support, marketing, and sales, as well as administrative chores, will all receive guidance and support from the \$500,000 that has been set aside specifically for this purpose. The distribution of the 800,000 dollars will be distributed in an equal manner across the installation, consumer support, and maintenance aspects.

It is absolutely necessary to have a sum of three million and two hundred thousand dollars. The following is a list of examples of potential sources of money from outside sources: In addition to this, the business plan will investigate the possibility of forming partnerships with venture capital firms that are primarily focused on sustainable practices and renewable energy. These investors are a good fit for the company since they choose to invest their money in sectors that are not only innovative but also have a substantial impact on the industries in which they operate. The ability to commit financial resources to initiatives that support the progress of renewable energy and the enhancement of climate resilience is a capability that is available to both the federal government and the provincial governments. This kind of support includes initiatives such as grants and subsidies. In order to gradually minimise the costs associated with development, organisations would actively pursue a variety of finance sources using proactive strategies.

It is possible to acquire cash for the procurement of infrastructure and equipment by utilising business financing options in addition to regular bank loans. This is a feasible option that can be attained. According to Zimmerman's forecast, by the year 2020, there will be participation in the sector of renewable energy from businesses that are financially competent. For the reason that climate-resilient energy projects have the potential to have positive effects not just on society but also on the environment, impact investors and crowdfunding platforms may be drawn to these initiatives. It is anticipated that this will be carried out to evaluate these potential sources of extra funding. This company can achieve financial and operational advantages by developing partnerships with significant entities, such as technology suppliers in the renewable energy industry or well-established energy corporations. These relationships give the company the opportunity to accomplish both of these goals.

10. Conclusion

Among the many different types of consumers that the photovoltaic noise barriers that are currently available on the market in Mumbai, India cater to are environmentalists. The reason for the restrictions is that they are in place to assist in the process of sustainable development. Additionally, the government has enacted regulations and incentives to stimulate the utilisation of renewable and sustainable energy sources. One example of how innovation, eco-consciousness, and urban design are converging to make Mumbai, India a greener metropolis in the coming years is the installation of solar photovoltaic (PV) noise barriers.

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