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1. Executive Summary:

AG Energies is a renewable energy company based in Tanzania, aiming to establish itself as a leader in the East African region in providing sustainable energy solutions. Our primary focus areas for the next five years include the establishment of an Electric Vehicle (EV) assembling line, a Lithium-Ion battery assembling line, and continuing our Engineering, Procurement, and Construction (EPC) activities in Tanzania. Additionally, we will serve as the East African repair center for inverters.

2. Mission Statement:

AG Energies is dedicated to driving the transition to sustainable energy solutions in Tanzania and the East African region by providing innovative renewable energy products and services, while fostering economic growth and environmental stewardship.

3. Objectives:

1. Establish an Electric Vehicle (EV) assembling line by the end of 2024.
2. Develop a Lithium-Ion battery assembling line by 2026.
3. Expand EPC activities in Tanzania and neighboring regions by 2024-2029.
4. Establish AG Energies as the premier repair center for inverters in East Africa by 2024-2029.
5. Promote local employment and skill development in the renewable energy sector.
6. Ensure sustainability and environmental responsibility in all business operations.

4. Strategies:

4.1. Electric Vehicle (EV) Assembling Lane:

- Collaborate with international EV manufacturers for technology transfer and training.
 - Secure partnerships with international suppliers for components and materials.
 - Implement rigorous quality control measures to meet international standards.
 - Offer after-sales services and maintenance to build customer trust and loyalty.
- Train and develop a repair network of local technicians.

4.2. Lithium-Ion Battery Assembling Line:

- Invest in research and development to optimize battery performance and efficiency.
- Establish partnerships with global battery manufacturers for technology transfer and supply chain support.
- Develop a robust recycling program for end-of-life batteries to minimize environmental impact.
- Ensure compliance with safety and regulatory standards in battery production.

4.3. Engineering, Procurement, and Construction (EPC) Activities:

- Strengthen relationships with government agencies, NGOs, and private sector partners for project opportunities.

- Expand the range of renewable energy solutions offered, including solar, wind, and hydroelectric systems.
- Focus on efficiency and cost-effectiveness in project implementation to maximize client satisfaction.
- Prioritize local sourcing of materials and labor to support economic development.

4.4. East African Repair Centre for Inverters:

- Invest in training and certification for technicians in inverter repair and maintenance.
- Develop a comprehensive inventory of spare parts to minimize repair time.
- Offer remote diagnostic services to quickly identify and address issues.
- Provide warranty support and ongoing customer education to prolong inverter lifespan.

5. Local Employment and Skill Development:

- Collaborate with local vocational training institutions to develop specialized courses in renewable energy technologies.
- Implement apprenticeship programs to provide hands-on experience for aspiring technicians.
- Offer career advancement opportunities and competitive wages to attract and retain talent.

6. Sustainability and Environmental Responsibility:

- Prioritize energy-efficient practices in all business operations, including manufacturing, transportation, and office facilities.
- Minimize waste generation through recycling, reuse, and responsible disposal methods.
- Advocate for policies that promote renewable energy adoption and environmental conservation.
- Engage in community outreach and education programs to raise awareness about the benefits of clean energy.

7. Financial Projections:

7.1. Initial Investment Breakdown:

N.	Activity/Investment	Value (\$)
1	Electric Vehicle (EV) Assembling Line	\$5 million
2	Technology Transfer and Training	\$1 million
3	Facility Setup and Equipment	\$2 million
4	Supply Chain Development	\$1 million
5	Quality Control Implementation	\$1 million
6	Lithium-Ion Battery Assembling Line	\$3 million

7	Research and Development	\$1.5 million
8	Technology Transfer and Supply Chain	\$1 million
9	Recycling Program Development	\$500,000
	Total Initial Investment	\$8 million

7.2. Projected Revenue Growth:

N.	Year	Revenue (USD)
1	Year 1 (2024):	\$2 million
2	Year 2 (2025)	\$4 million
3	Year 3 (2026):	\$6 million
4	Year 4 (2027):	\$8 million
5	Year 5 (2028):	\$10 million
6	Year 6 (2029):	\$12 million
	Total Projected Revenue	\$42 million

7.2.1 Financial projection for 12 months – First year

7.3. Break-even Point:

- Year 3 (2026): Total Revenue exceeds Total Operating Costs and Capital Expenditure.

7.4. Return on Investment (ROI):

- Expected ROI: 15-20% annually, with cumulative ROI reaching 60-80% by the end of Year 5.

7.5. Net Profit Margin:

- Year 1 (2024): 5-8%
- Year 2 (2025): 8-10%
- Year 3 (2026): 10-12%
- Year 4 (2027): 12-15%
- Year 5 (2028): 15-18%
- Year 6 (2029): 18-20%

8. Employment Impact:

- Initial Employment Opportunities Created: 50-100 jobs (including technicians, engineers, administrative staff, etc.).

- Projected Employment Growth: 10-20% annually, with increased demand for skilled labor as operations expand.

- Contribution to Local Economy: Salary payments, taxes, and procurement of goods and services from local suppliers.

9. Market Analysis:

- Renewable Energy Market Growth Rate: 15-20% annually, driven by government incentives, environmental awareness, and declining costs of renewable technologies.

- Competitor Analysis:

N.	Name	Activities
1.	TRI	Electric Tree wheeler selling Assembling tree wheeler
2.	Ekoglobe	Support from SolutionsPlus for swapping and charging EV solutions in Tanzania.
3.	Elico foundation	NGO engaging in E mobility with electrical tree wheeler and in the establishment of a comprehensive policy framework for the deployment and scaling up of e-mobility in Tanzania.
4.	EMO	A mobility company offering transportation services in Tanzania. Supported by PREO.

10. Risk Management:

N.	Risk	Description	Mitigation measures
1	Political and Regulatory Risks	Fluctuations in government policies and regulations pertaining to the adoption and usage of electric vehicles. This includes potential changes in tax incentives, import/export regulations for electric vehicle components, and infrastructure development plans. Moreover, political stability and shifts in leadership can influence the direction of e-mobility initiatives and investment climate.	Monitor changes in government policies, tariffs, and regulations affecting the renewable energy sector. Staying attuned to local political dynamics and regulatory changes is essential for navigating these risks and fostering a conducive environment for the growth of e-mobility in Tanzania.
2	Supply Chain Risks	Dependence on imported components and raw materials may expose the supply chain to disruptions due to international trade issues, customs delays, or geopolitical tension	-Diversifying suppliers and sourcing locally where feasible, maintaining buffer stocks to mitigate sudden shortages, and establishing contingency plans for alternative sourcing routes.
3	Technological Risks	Issues related to battery performance, durability, and degradation over time can impact the reliability and lifespan of EV.	-Stay abreast of advancements in EV and battery technologies to remain competitive and adapt to market trends. -Conducting research and development to improve battery technology, including advancements in energy density, charging speed, and longevity. Implementing rigorous testing and quality control measures to ensure the reliability and safety of batteries used in EVs. Offering warranties and maintenance programs to address potential battery-related concerns and provide peace of mind to consumers.

11. Environmental Impact:

- Carbon Emission Reduction: Estimate the potential reduction in carbon emissions through the adoption of EVs and renewable energy systems.

Total GHG emissions reduced/avoided: A petrol bajaj consumes 9 liters of gasoil per day so 0.63 tCO₂e/ litre. A bajaj has a life span of 8 years (96 months). **60,938 tCo2e reduced in 5 years.**

- 1409KWh/month of energy savings per 3 EV.

- Environmental Compliance:

AG Energies is committed to environmental compliance in all aspects of its operations, including the assembly and supply of electric vehicles (EVs) and batteries in Tanzania. Our approach to environmental compliance encompasses several key areas to ensure sustainable practices and minimize the ecological footprint of our activities:

AG Energies has its Health Safety & Environment system policy and procedures where we commit to creating and maintaining a safe, secure and healthy environment in which work as per the Occupational Health and Safety Act, No.5 of 2003 of Tanzania. We follow the Environmental Management Act of 2004, National Environmental Policy of 1997 and the Environmental Management regulations of 2019 from NEMC.

We also have our own Environmental policy where we adopt the following practices:

1. Conserve energy, water and natural resources;
2. Commit to purchase environmentally preferred products;
3. Reuse, Recycle and Reduce;
4. Promote environmental education, awareness and outreach.

Waste produced during a site installation has low environmental impact on the environment as it can be re-used and/or biodegradable. All the products are packed in wooden boxes or re-usable cardboard boxes (PV panels/Solar Pumps). Site and waste clearing are done automatically after the end of each installation and no waste is left behind. The broken PV panels, cables, wooden and boxes are taken back to Dar Es Salaam. Refurbishment of out of use batteries and solar panels collected are done by AG energies

AG Energies has a partnership with two Tanzanian 'collection-transportation and safe disposal Companies (Chilembo Company limited and Steel com Limited) for re-use of disposed lead acid Batteries and electronic equipment. These companies are NEMC registered e-waste management companies.

1. Manufacturing Processes: We adhere to strict environmental regulations and standards throughout the manufacturing process of EVs and batteries. This includes sourcing materials from sustainable suppliers, implementing energy-efficient production methods, and minimizing waste generation. By incorporating eco-friendly practices into our manufacturing processes, we strive to reduce resource consumption and environmental impact.

2. Waste Management: AG Energies implements comprehensive waste management practices to responsibly handle manufacturing by-products, packaging materials, and end-of-life components. We prioritize waste reduction, reuse, and recycling wherever possible to minimize landfill disposal and promote circular economy principles. Proper waste segregation, treatment, and disposal procedures are integral to our commitment to environmental stewardship. We are in partnership with

3. Emissions Control: We prioritize emissions control measures to mitigate air and water pollution associated with our manufacturing operations. AG Energies invests in state-of-the-art emission control technologies and regularly monitors air and water quality to ensure compliance with regulatory standards. By reducing emissions of harmful pollutants, we contribute to safeguarding public health and protecting the environment for future generations.

4. Environmental Monitoring and Reporting: AG Energies conducts regular environmental monitoring and reporting to track our environmental performance and identify areas for improvement. We engage with relevant regulatory authorities, environmental agencies, and stakeholders to transparently communicate our environmental initiatives and compliance efforts. By fostering open dialogue and accountability, we demonstrate our commitment to environmental responsibility.

5. Continuous Improvement: We are committed to continuous improvement in environmental compliance and sustainability. AG Energies regularly reviews and updates our environmental management systems, policies, and practices to reflect evolving regulatory requirements and industry best practices. We invest in employee training and engagement initiatives to foster a culture of environmental awareness and responsibility throughout our organization.

Conclusion:

AG Energies is committed to driving positive change in the renewable energy sector in Tanzania and the East African region. By focusing on innovation, quality, and sustainability, we aim to become a trusted partner for businesses, governments, and communities seeking reliable and affordable energy solutions. Through our strategic initiatives outlined in this business plan, we are confident in our ability to achieve our goals and contribute to a cleaner, brighter future for generations to come.