وزارة السياحة
Ministry of Tourism

THE BUSINESS CASE FOR SUSTAINABILITY IN TOURISM

THE VALUE OF SOLAR POWER GENERATION

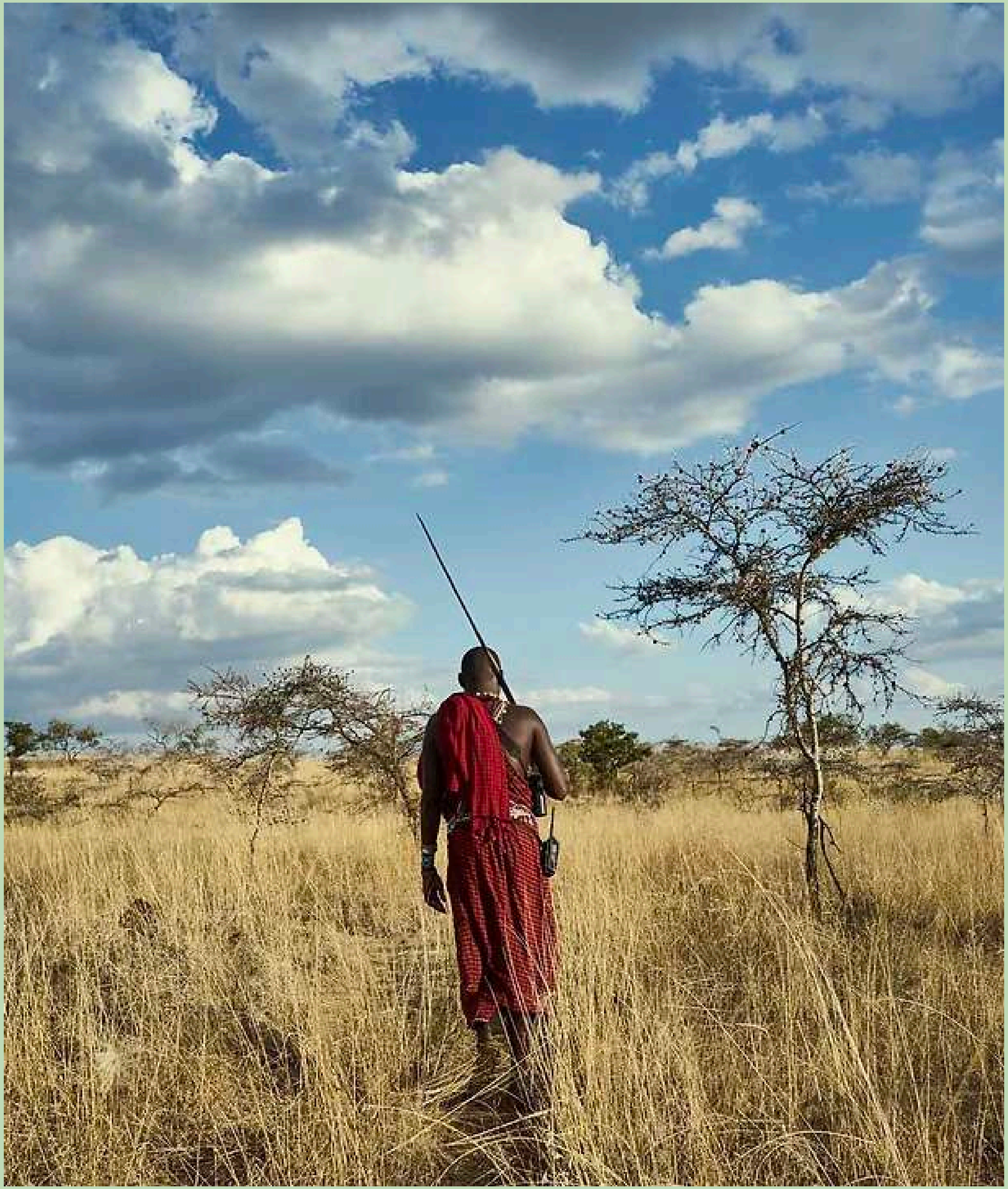
October 2023

ABOUT THE SUSTAINABLE TOURISM GLOBAL CENTER (STGC)

The Sustainable Tourism Global Center (STGC) is the world's first multi-country, multi-stakeholder global coalition, incubated within the Ministry of Tourism of Saudia Arabia, that will lead, accelerate, and track the tourism industry's transition to net-zero emissions, as well as drive action to protect nature and support communities. It will enable the transition while delivering actionable and easy-to-use knowledge, tools, best practices, financing mechanisms and innovation into the tourism sector. The STGC was announced by His Royal Highness the Crown Prince Mohammed Bin Salman during the Saudi Green Initiative in October 2021 in Riyadh, Saudi Arabia. His Excellency Ahmed Al Khateeb, Minister of Tourism for Saudi Arabia then led a panel discussion during COP26 (November 2021) in Glasgow, United Kingdom, to elaborate on how the Center will deliver on its mandate with founding country representatives and experts from partner international organizations.

HIGHLIGHTS

- Travel & Tourism is not only impacting but significantly impacted by climate change and environmental degradation. Without concerted action, Travel & Tourism emissions will rise by 20% by 2030.
- To reach the sector's ambitious goals, actionable and accessible solutions are needed, combined with additional amounting to US$ 220-310 billion a year through to 2030.
- The implementation of sustainable solutions in travel is good for business, and increasingly expected from investors and travellers alike. According to a 2019 HSBC survey, 94% of investors consider ESG important; while a 2022 Expedia study revealed that 9 in 10 travellers look for sustainable travel options.
- Facilities account for 30% of the estimated 5.2 GT of CO2 emissions generated by the Travel & Tourism sector in 2019. Of this 30% of emissions linked to facilities, 74% comes from heating, cooling, and the powering of buildings.
- Given the emissions and costs associated to powering facilities, it is important to find alternative solutions to proactively reduce the energy consumed. One of these solutions is solar power generation.
- The case of the Chyulu Wilderness Camp in Kenya clearly showcases across scenarios A and B that the use of solar power generation versus diesel plants is highly economically beneficial in the medium and long-term.
- Scenario A, which has both systems operating 24 hours a day, reveals **break-even point of just 2.69 years** and savings of **US$ 499,920** after 5 years, **US$ 1,580,676** after 10 years and US$ 2,661,432 after 15 years.
- Scenario C, which takes a global perspective beyond Kenya, thereby removing costs associated to the Kenyan tax regime, highlights a **break-even point** of l**ess than 2 years,** 1.95 years, and savings related to using solar power generation amounting to **US$ 658,791** after 5 years, **US$ 1,737,248** after 10 years and **US$ 2,815,705** after 15 years.



INTRODUCTION

Accounting for over 10% of global GDP and 1 in 10 jobs on the planet in 2019, Travel & Tourism is one of the world's largest sectors. In fact, prior to the pandemic, Travel & Tourism accounted for 1 in 4 jobs new jobs created globally. Whilst the sector was faced its worst crisis in history as a result of the COVID-19 pandemic, it has bounced back with forecasts predicting the continued growth of the sector to 2030 and beyond.

The sector not only drives economic growth, but also poverty reduction, peace and tolerance whilst having a positive impact on local communities and the livelihoods of people touched by Travel & Tourism. Yet, despite Travel & Tourism's tremendous value, the sector is responsible for roughly 8.1% of carbon emissions globally. Travel & Tourism is not only impacting but significantly impacted by climate change and environmental degradation, which are a "code red for humanity".

The climate and biodiversity crises are effectively jeopardizing the future of Travel and Tourism. From the growing scepticism of youth to deteriorating ecosystems and increasing destinations at risk to overwhelmed communities. And, without concerted action, Travel & Tourism emissions will rise by 20% by 2030[i] , further harming our planet. Many destinations, including island states, are especially vulnerable to the risks and impacts of climate change, requiring the Travel & Tourism sector to be part of the solution.

To act on this urgent agenda and achieve a reduction of 40% of Travel & Tourism related GHG emissions from the 2019 baseline by 2030, will require all key stakeholders, small and large, public, and private, to come together to commit, invest and accelerate to change. According to Systemiq and STGC, additional investments required in travel & tourism transport and facilities, nature and resilience would amount to US$

220-310 billion a year through to 2030[ii]. Yet to ultimately achieve progress, coordination, and collaboration across stakeholders will be needed as well as actionable and accessible solutions, tools as well as best practices to inspire and facilitate the transition.

In this case studies in action series, the Sustainable Tourism Global Center (STGC) explores specific climate and environmental challenges faced by the Travel & Tourism sector, making the business case for climate action. Each edition will delve into a distinctive challenge, and through concrete and quantifiable examples, provides insights and solutions for key stakeholders, which will ultimately benefit people and planet alike.

Given the growing focus on the shift towards renewable energy, showcasing the value and success of such approaches is key. In this context, this edition focuses specifically on the business case for climate action and delves into the challenge of emissions and the potential of solar power generation as a solution. In 2019, facilities, including operations and construction, accounted for 30% of all Travel & Tourism emissions[iii]. Of this 30% of emissions linked to facilities, 74% comes from heating, cooling, and the powering of buildings[iv]. Given the emissions and costs associated to powering facilities, this report aims to provide an alternative solution in the form of solar power generation for small and medium sized hotels. The case of the Chyulu Wilderness Camp in Kenya is used to bring this issue to life and illustrate the sustainability and financial benefits of shifting to solar power generation where feasible.

THE BUSINESS IMPERATIVE FOR CLIMATE & ENVIRONMENTAL ACTION

To ensure that commitments are translated into practices, there is a need for increased awareness particularly for small and medium sized enterprises on the benefits and value of a more sustainable approach, not only to local communities and environmental ecosystems, but from an economic bottom line. Indeed, the implementation of sustainable solutions in travel is good for business, whilst also being increasingly expected from investors and travellers alike.

In the last ten years there has been a significant shift in in the focus of investors on sustainability and ESG data more specifically. Today, corporate data relating to carbon footprints and labour policies among others have become the norm. Investors are known to increasingly screen out poor ESG performers. According to a 2019 HSBC survey, 94% of investors consider ESG important[v].

Albeit for different reasons than investors, travellers are also increasingly paying attention to their environmental impact and how to travel more sustainably, particularly in the wake of COVID-19. According to a 2022 Expedia study, 9 in 10 travellers look for sustainable travel options[vi]. The research however reported that 70% of those surveyed felt overwhelmed by starting the process of being more sustainable travellers. While the majority of travellers believed the cost of "sustainable travel" remained too high to date, nearly 70% of those surveyed noted that they would be willing to "sacrifice convenience to be a more sustainable traveller".

The integration of sustainable business practices has been proven to enable profitability and cost-effectiveness in many cases in the medium to long-term. Indeed, according to a global cross-sector study from EY in 2021, sustainability companies outperformed their industry peers on key profitability metrics[vii]. In fact, a survey amongst small and medium sized enterprises in the US revealed that more than 25% of businesses experienced savings as a result of sustainability[viii].

The increased data and awareness combined with expectations from investors, regulators, and travellers alike, have led, over the past decade, to a growing number of businesses pivoting their focus towards sustainability- across industries including the Travel & Tourism sector.

THE CHALLENGE: FACILITIES' ENERGY USE IMPACT ON EMISSIONS & COSTS

Facilities account for 30% of the estimated 5.2 GT of CO2 emissions generated by the Travel & Tourism sector in 2019. Of this 30% of emissions linked to facilities, 74% comes from heating, cooling, and the powering of buildings[ix]. Given the emissions and costs associated to powering facilities, it is important to find alternative solutions such as renewable energy to proactively reduce the energy consumed.

The switch to renewable energy sources, such as solar panels, microgrids and geothermal energy, will effectively lower the facility's carbon footprint. These solutions can often be fitted onsite whilst also being more cost effective; thus, supporting the majority of hotels, but particularly those in remote areas.
Another important lever in addressing Travel & Tourism's operational facilities emissions is heating, ventilation and air conditioning (HVAC), which account for half the sector's operational emissions. Investing in the most recent air conditioning systems, could for instance reduce a facility's energy consumption by 45%[x].

THE CASE: THE VALUE OF SOLAR POWER GENERATION

Increasingly travellers are making sustainability as they travel, with 70% more likely to choose an accommodation if it has implemented sustainability practices[xi]. This shift is aligned with a 2022 Expedia study revealing that 9 in 10 travellers look for sustainable travel options[xii]. The growing focus of travellers on sustainability, combined with the economic benefits associated with these solutions provides unique opportunity for hotels, both small and large, to proactively address the emissions related to their facilities.

A shift to renewable energy sources, such as solar power generation, microgrids and geothermal energy, can meaningfully lower the carbon footprint of facilities. This case focuses specifically on solar energy, which harnesses the sun's energy and makes it usable.

Solar power is increasingly being considered as a sustainable alternative to other sources of energy, yet globally it still only accounted for 3.6%[xiii] of global energy generation in 2021. In recent months, Saudi Arabia's crown prince announced the installation of 750,000 solar panels which will be connected to the world's largest battery that will power renewable energy to two of its gigaprojects, notably, NEOM and the Red Sea Project[xiv]. While solar power can support the sustainability drive of countries, destinations, and communities alike, it becomes a true necessity in regions where grid electricity is inaccessible.

This case aims to provide insights, particularly for small hotels, which are off-grid, by using the real-world example of the Chyulu Wilderness Camp[xv], a student camp in Southern Kenya funded by the prestigious Swiss school, Institut Le Rosey, we will analysis the costs of providing electricity to the camp.

THE CONTEXT OF THE CHYULU WILDERNESS CAMP

Since 2008, Institut Le Rosey sought Kenya as an invaluable platform, where to expose its students to the practice of sustainability, ecotourism, and the celebration of indigenous cultures. Through a partnership with the Maasai Wilderness Conservation Trust (MWCT), an indigenous community-based organization that gained recognition at Rio+20 by the United Nations; they successfully constructed the first fossil fuel-free lodge in Africa.

Together, Le Rosey and MWCT designed of an educational student camp with a focus on long-term sustainability. The choice of how to produce electricity, cook food, offer safari activities, and manage water collection, treatment, and heating were all pivotal considerations. The camp embraced technologies designed to minimize environmental impact.

Through the installation of a photovoltaic system, the camp achieved self-sufficiency, meeting all its electrical needs. This included the operation of custom-made electric safari vehicles and induction kitchens. Rainwater was collected for toilet flushing, and a well provided the camp's drinking water. A solar thermal system was also engineered for water heating, and used water was naturally recycled into a pond, which serves as a habitat for wildlife.

COMPARING & QUANTIFYING THE IMPACT OF SOLAR POWER GENERATION

This case explores two potential solutions, notably the conventional approach involving a diesel power plant and an alternative based on photovoltaic solar power. The assessment compares the generation of the same amount of power in two different ways and details the associated costs. Although a hybrid of these two options is plausible, this study delves into the costs and benefits of each separately. The objective is to understand the environmental and economic benefits of the zero-emissions solution.

In the context of this case study, the following specific power systems are compared:

1. **A photovoltaic (PV) solar system** with an installed capacity of 313.5 kW photovoltaic panels, featuring 300 kW inverters, 162 kW battery inverters for backup, and a storage capacity of 173 kW.
2. **A diesel power plant** with a total output of 148 kW, comprising one 100 kW generator and another 48-kW generator.

The implications for the solar system are that it can potentially generate 300 kW of energy per hour during daylight while having an energy availability of 162 kW at any given time (during nighttime or periods without sunlight).

To illustrate this, consider the system's power availability at midday versus midnight. At midday, under optimum solar radiation (absence of clouds), the system could generate up to 300 kW per hour. The installed PVs exceed the generating capacity (313.5 kW of PVs versus 300 kW of inverters), allowing for a greater energy yield and an extended peak power (300 kW) duration. The SMA inverters used in the system can accommodate PVs up to 50% more than their instant output. This allows for greater energy production, as the system could generate 100% of its nominal power even when not during maximum solar radiation, thanks to a higher PV power. In other words: with up to 150% of PVs, the inverters will provide 100% of their nominal powers for a longer time during the day. This is a very important and little-known feature of PVs systems, which can allow a higher energy yield, per PV inverter. At midnight, on the other hand, in the absence of solar radiation, the solar system draws from the energy stored during the day, providing up to 162 kW per hour.

In comparison, the diesel power plant system can supply 148 kW per hour at any given time if both generators run simultaneously at their maximum capacity. As such, this case study compares systems with comparable power outputs.

While the solar system will produce, on average, 1,401 kWh per day, the alternative solution of a diesel plant, where the 100 kW generator would run 18 hours and the 48 kW generator the reaming 6 hours, would produce 1,566 kW per day.

An important consideration while comparing these two solutions, is that the solar system would allow double the energy per hour (300 kW versus 148 kW), during maximum solar radiation (midday), making use of induction kitchens and Electric Vehicles more practical, as it would allow a much higher peak energy consumption, than the diesel plant.

The following section will compare three scenarios: two where both systems provide energy 24/7 **(Scenario A and C)**, and one **(Scenario B)**, where the diesel plants are off for 6 hours and provide power for 18h a day. **Scenario C** has same power usage assumptions of **Scenario A**, but will be comparing costs at source, without freight and taxes.

SCENARIO A

Scenario A is most realistic, having both systems operating 24 hours a day. In this scenario, the solar system paired with battery storage, operates by default 24 hours a day. This scenario also has the diesel power plant having the bigger generator running 18 hours a day, and the smaller 6 hours a day, providing energy 24/7, just as the solar system would. The below table shows observed, rather than assumed, costs for the Chyulu Wilderness Camp.

Scenario A: 24 hours power, with 100 kW x 18 h and 48 kW x 6 hours				
Solar System	*Nominal Power (kW)*	*Capital Cost*	*Operating Cost per year*	Notes:
Back up Generator	100	$103,993	$2,146	Based on 5 hours per month, with 0.22 lt x kW at 75% capacity [1]
PVs	313.5	$476,843	$0	
PVs inverters	300			
Battery storage	172.8			
Battery inverters	162			
Total	**162**	**$580,836**	**$2,146**	Max power output considered is from batteries inverters
Daily production	**1,401**			Based on 4.468 kW/kWp per day [2]
Diesel Plant	*Nominal Power (kW)*	*Capital Cost*	*Operating Cost per year*	Notes:
Generator 1	100	$103,993	$217,837	With 0.22 lt per kW for the 100kW Gen, and 0.26 lt per kW for the 48 kW Gen [1]
Generator 2	48	$25,017		And a procurement cost of 1.2% (transport) and 2.5% for lubricants, etc. [3]
Total	**148**	**$129,010**	**$217,837**	
Daily production	**1,566**			Based on 75% capacity, with 18 h x 100 kW and 6 h x 48 kW

While the capital costs, after shipping and taxes, is higher initially for the solar system (US$ 580,836) in comparison to the diesel plant (US$ 129,010), the operational costs of the solar system are significantly lower. In effect, the operational costs annually for the solar system are US$ 2,146 annually, while the diesel plant operational costs amount to US$ 217,837 annually, given that a liter of diesel cost US$ 1.21 in Kenya (first semester 2023). What is more, operating a generator has costs for lubricants and oil and air filters, which amount to about 2.5% of the diesel cost. In addition, the nearest fuel station is 60 km away: transporting the fuel to the lodge costs about 1.2% of the diesel cost.
The results, detailed on the table, shows that a photovoltaic solar system is far more advantageous than a diesel power plant, with a **break-even point of just 2.69 years** and savings of:

- **After 5 years, US$ 499,920**
- **After 10 years, US$ 1,580,676**
- **After 15 years, US$ 2,661,432**

It is important to note that the above analysis does not include the social and environmental costs of the carbon emissions of the diesel plant solution. However, with a projected consumption of 1.26 CO2 tons per day, or 460 tons per year, even with the lowest carbon offset price of US$ 15 per ton, there would be extra costs of US$ 6,900. What's more, there is more consensus that the social cost of a ton of CO2 emission is $50. With this value, the diesel plant would have an environmental cost of US$ 23,000 a year, nearly US$ 2,000 a month.

SCENARIO B

Scenario B is slightly less realistic, as it compares a 24/7 supply of electricity, with the photovoltaic solar system, to an 18 hours per day supply, by the diesel plant. Nevertheless, this scenario is worth considering given its wide adoption by the tourism industry, with diesel power plants often used for a limited time of the day. In this scenario, the diesel power plant has the bigger generator running 12 hours a day, and the smaller 6 hours a day. The below table shows observed, rather than assumed, costs for the Chyulu Wilderness Camp.

Scenario B: 18 hours power, with 100 kW x 12 h and 48 kW x 6 hours				
Solar System	*Nominal Power (kW)*	*Capital Cost*	*Operating Cost per year*	Notes:
Back up Generator	100	$103,993	$2,146	Based on 5 hours per month, with 0.22 lt x kW at 75% capacity [1]
PVs	313.5	$476,843	$0	
PVs inverters	300			
Battery storage	172.8			
Battery inverters	162			
Total	**162**	**$580,836**	**$2,146**	Max power output considered is from batteries inverters
Daily production	**1,401**			Based on 4.468 kW/kWp per day [2]
Diesel Plant	*Nominal Power (kW)*	*Capital Cost*	*Operating Cost per year*	Notes:
Generator 1	100	$103,993	$192,292	With 0.28 lt per kW for the 100kW Gen, and 0.33 lt per kW for the 48 kW Gen [1]
Generator 2	48	$25,017		And a procurement cost of 1.2% (transport) and 2.5% for lubricants, etc. [3]
Total	**148**	**$129,010**	**$192,292**	
Daily production	**1,488**			Based on 100% capacity, with 12 h x 100 kW and 6 h x 48 kW

While the capital costs, after shipping and taxes, is higher initially for the solar system (US$ 580,836) in comparison to the diesel plant (US$ 129,010), the operational costs of the solar system are significantly lower. In effect, the operational costs annually for the solar system are US$ 2,146 annually, while the diesel plant operational costs amount to US$ 192,292 annually, given that a liter of diesel cost US$ 1.21 in Kenya (first semester 2023). What is more, operating a generator has costs for lubricants and oil and air filters, which amount to about

2.5% of the diesel cost. In addition, the nearest fuel station is 60 km away: transporting the fuel to the lodge costs about 1.2% of the diesel cost.

The results, detailed on the table, shows that a photovoltaic solar system is still more advantageous than a diesel power plant, even if it were to be operational only 18 hours a day, with a **break-even point of 3.05 years** and savings of:

- **After 5 years, US$ 369,894**
- **After 10 years, US$ 1,320,623**
- **After 15 years, US$ 2,271,353**

This analysis does not include the social and environmental costs of the carbon emissions of the diesel plant solution. However, with a projected consumption of 1.15 CO2 tons per day, or 421 tons per year, even with the lowest carbon offset price of US$ 15 per ton, there would be extra costs of US$ 6324. What's more, there is more consensus that the social cost of a ton of CO2 emission is US$ 50. With this value, the diesel plant would have an environmental cost of US$21,100 a year, nearly $2,000 a month.

SCENARIO C

Whilst scenarios A and B include the specific costs linked to freight from Europe to Kenya, including importation and sales cost, these scenarios have the limitation of being too specific to the Kenyan tax regime. Scenario C provides a comparison which can be used worldwide, computing the costs at source, as charged by the suppliers (included in Appendix).

Scenario C depicts the same power usage assumptions made in Scenario A, notably, having the diesel power plant supplying energy 24/7, exactly as the solar option. Interestingly, without freight costs and taxes, the solar option is even more convenient than the diesel power plant. The results, detailed in the table below, reveal that a photovoltaic solar system is even more advantageous than a diesel power plant, when comparing pure purchasing costs.

Scenario C: 24 hours power, with 100 kW x 18 h and 48 kW x 6 hours, no import taxes				
Solar System	*Nominal Power (kW)*	*Capital Cost*	*Operating Cost per year*	Notes:
Back up Generator	100	$75,240	$2,146	Based on 5 hours per month, with 0.22 lt x kW at 75% capacity [1]
PVs	313.5	$344,426	$0	
PVs inverters	300			
Battery storage	172.8			
Battery inverters	162			
Total	**162**	**$419,666**	**$2,146**	Max power output considered is from batteries inverters
Daily production	**1,401**			Based on 4.468 kW/kWp per day [2]
Diesel Plant	*Nominal Power (kW)*	*Capital Cost*	*Operating Cost per year*	Notes:
Generator 1	100	$75,240	$217,837	With 0.22 lt per kW for the 100kW Gen, and 0.26 lt per kW for the 48 kW Gen [1]
Generator 2	48	$25,017		And a procurement cost of 1.2% (transport) and 2.5% for lubricants, etc. [3]
Total	**148**	**$100,257**	**$217,837**	
Daily production	**1,566**			Based on 75% capacity, with 18 h x 100 kW and 6 h x 48 kW

In effect, the break-even point is **less than 2 years, 1.95 years**, and the photovoltaic choice would enable savings of:

- **After 5 years, US$ 658,791**
- **After 10 years, US$ 1,737,248**
- **After 15 years, US$ 2,815,705**

LOOKING AHEAD: SOLUTIONS

While ambitious sustainability commitments have been made by the Travel & Tourism sector, concerted action, bringing together all key stakeholders is needed to accelerate this change and meet the sector's goals.

Business as usual is no longer an option. The sector is witnessing growing regulation, travellers are demanding sustainability and investors increasingly making decisions on the basis of sustainability and ESG data. Beyond being critical to key stakeholders, implementing sustainability practices is good for business and good for the planet.

The switch to renewable energy sources, such as solar panels, microgrids and geothermal energy, will effectively lower the facility's carbon footprint; with solar power being increasingly considered as a sustainable and cost-effective alternative to other sources of energy, and can be a valuable solutions to small and medium-sized hotels, especially if off the grid.

The experience of the Chyulu Wilderness Camp in Kenya showcases the clear business case for solar power, in addition to its understood environmental benefits. In effect, the three different scenarios presented, all reveal that a photovoltaic solar system is financially (and environmentally) preferrable than a diesel power plant. This solution is even more robust when considering the lifespan of the two systems.

The use of solar panels has widespread applicability particularly for small and medium sized enterprises which account for over 80% of the Travel & Tourism sector. Still, the initial financing of solar systems remains a concern for these small businesses, requiring financing mechanisms to incentivize and enable this transition.

AUTHORS

Gloria Guevara, Chief Special Advisor to the Minister, Ministry of Tourism of Saudi Arabia
Tiffany Misrahi, Senior Advisor, Chief Special Advisor Office, Ministry of Tourism of Saudi Arabia
Luca Belpietro, Founder and Executive Director, Maasai Wilderness Conservation Trust
Tahani Binnahil, G2B Advisor, Chief Special Advisor Office, Ministry of Tourism of Saudi Arabia

ACKNOWLEDGMENTS

We would like to extend our special gratitude to Luca Belpietro who compiled the case study on solar power generation on the basis of his experience and expertise in creating and leading the Chyulu Wilderness Camp in Southern Kenya.

APPENDIX

To check costs and/or contact the suppliers used for the systems described in the Case: Tesvolt, provider of the SMA battery inverters and the battery systems: **https://www.tesvolt.com/en/**, click on the upper right hand corner of the screen, on “LOGIN PARTNER PORTAL”. That will give access to the technical information and costs of the Tesvolt systems.

For the SMA solar inverters: **https://www.sma.de/en/products/solar-inverters**

For the photovoltaic panels: Jinko, **https://www.jinkosolar.com/en**

For the back up generators: Lanmar, **http://www.lanmar.it/**

The SMA solar inverters and the solar panels where purchased through this agent: **https://greensun.it/home**

The technical specifications of the systems described above, are:

SMA battery inverter:
https://files.sma.de/downloads/SI44M-80H-13-DS-en-31.pdf
SMA solar inverter: **https://files.sma.de/downloads/STP50-41-DS-en-16.pdf**
Jinko Solar panel:
https://jinkosolarus.wpenginepowered.com/wp-content/uploads/2019/03/US-Eagle-72-V-310-330w.pdf
Tesvolt battery:
https://www.tesvolt.com/_media/05%20SERVICE/03%20Downloads/A-Serie/TS_48_V/Datenblatt/RD.TI.003.E.ENG_Datasheet_TS48_v.I.01.pdf

ENDNOTES

i. https://www.systemiq.earth/wp-content/uploads/2022/11/Better-Travel-Tourism-Better-World.pdf
ii. https://www.systemiq.earth/wp-content/uploads/2022/11/Better-Travel-Tourism-Better-World.pdf
iii. https://www.systemiq.earth/wp-content/uploads/2022/11/Better-Travel-Tourism-Better-World.pdf
iv. https://www.systemiq.earth/wp-content/uploads/2022/11/Better-Travel-Tourism-Better-World.pdf
v. https://www.hsbc.com.mt/investments/why-sustainable-investing-matters/#:~:text=While%20traditional%20investment%20strategies%20might,term%20sustainable%20opportunities%20for%20all
vi. https://advertising.expedia.com/blog/sustainability/sustainable-tourism-demand-rises/
vii. https://www.ey.com/en_vn/sustainability/how-to-enhance-long-term-business-value-through-sustainability
viii. https://www.softwareadvice.com/resources/green-business-practices/
ix. https://www.systemiq.earth/wp-content/uploads/2022/11/Better-Travel-Tourism-Better-World.pdf
x. IEA. (2018). The future of cooling: Opportunities for energy-efficient air conditioning
xi. https://partner.booking.com/en-gb/click-magazine/trends-insights/new-research-reveals-increased-desire-travel-more-sustainably
xii. https://advertising.expedia.com/blog/sustainability/sustainable-tourism-demand-rises/
xiii. https://www.iea.org/reports/solar-pv
xiv. https://luxurylaunches.com/travel/red-sea-750000-solar-panels.php
xv. www.chyulucamp.com