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COMPANY Environmental P R O F I L E

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(Water Reuse)



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➡ waste water management



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01

PPA



From the fact that the co-founder of Sohay Inn is an environmental scientist, from the scientific background of most of the board members and from operating under the ESG umbrella and responsible investment principles; we believe that the natural resources are sacred treasures, so we have to save them for the upcoming generations, contributing in achieving SDGs adopted by the United Nations (2030 agenda for sustainable development)

We, as real estate developers, are taking upon ourselves turning the real estate sector from consumption into production and from wastefulness into conservation by construct new or adaptively renovate existing buildings to save energy, water and other resources and reduce waste and emissions, as a new module of sustainable, smart and green buildings

Productive Passive Adaptive (PPA) Buildings

02

Sohay Inn Environmental

KPIs

built on five main pillars

I Energy Efficiency



II Carbon Emission Mitigation



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➡ Unconventional Water Resource
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IV Indoor Air Quality



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➡ waste water management





I

Energy Efficiency

Energy production (Renewable energy)

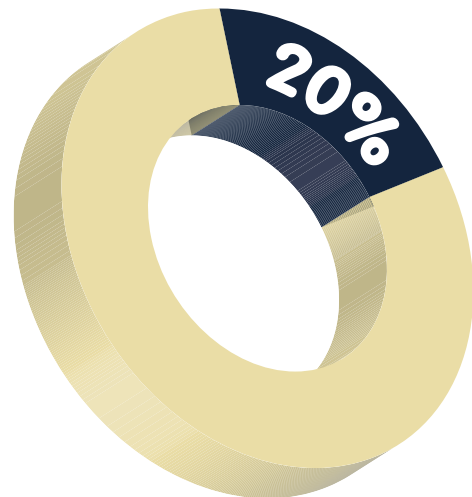
Egypt, especially Sohag governorate, has a privileged location on 26° latitude in the Sunbelt region. So, the sun is considered the most available form of renewable energy resources in the urban city.

According to the global solar atlas, Sohag receives an affordable amount of solar radiation (~ 6.8 kwh/m² per day) in addition to the moderate temperature (~ 25°C) over the year, which maintains the efficiency of the solar panel to the end of its lifespan. This makes the rooftop PV systems is the most available and affordable renewable energy resource for buildings

Therefore, one of Sohay Inn priorities is to use solar energy as a resource of electricity which represents an average of 20% of electricity consumption of the buildings.

This makes our buildings

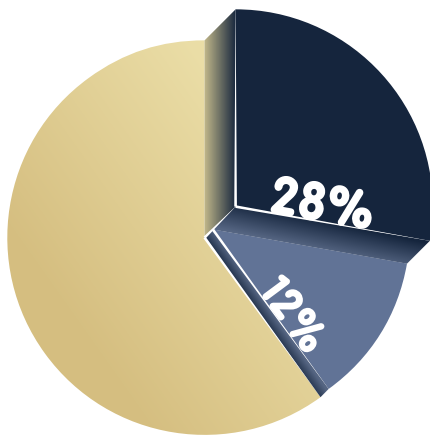
PRODUCTIVE



Share of solar energy
in electricity generation

II

Carbon Emission Mitigation



28% of real estate share in carbon emissions result from operation processes, and **12%** result from buildings construction



Energy Hierarchy

Real estate sector is responsible for more than 1/3 of global energy consumption, and approximately 40% of carbon emissions in Egypt, 70% of these emissions are released as a result of buildings operations. This makes energy conservation and responsible consumption of energy on the top priority of the energy hierarchy

Energy conservation in buildings operation is achieved through several techniques such as; thermal isolation of the building, using energy starved devices and using light sensors for entrances and halls. This is in addition to the role of renewable energy production in energy conservation and carbon emission elimination, as each kilowatt of electrical energy produced from renewable resources can avoid about more than 90% of carbon generated by production from fuel

This makes our buildings

PASSIVE

III

Water Efficiency

➤ Unconventional Water Resource
(Water Reuse)

In terms of maximizing the benefit from each drop of water, which was adopted by the Egyptian water policy, and since there are wasted non-traditional water resources that can be used for several purposes e.g. planing and cleaing works. This leads to minimize the consumption of water, which makes our buildings

PRODUCTIVE

➤ Rationalizing water consumption

Applying advanced techniques such as smart tapes and faucets for rationalizing the consumption of water can make difference in facing the water crisis. This makes our buildings

PASSIVE

IV

Indoor Air Quality

Indoor Air Quality (IAQ) refers to the air quality within and around buildings and structures, especially as it relates to the health and comfort of building occupants

Air quality management within buildings

Sohay Inn has its own scientific-based air quality system which is mainly depends on biological indicators of highly selected shadow plants, by which the air efficiency is determined. This system is used as a pre-indicator for pathogenic air pollutants inside buildings



Air quality management around buildings

One of Sohay Inn main principles is that as we work on developing our projects and preserving the internal environment of our facilities, we also work on preserving the external environment, by developing the surrounding areas and increasing green spaces through planting types of plants and trees which are almost extinct due to the urban sprawl within cities. Those are irrigated with water generated from our buildings



V

Waste Management

As the first company considering waste management as a major principle in its environmental aspect, our target of waste management system is to manage wastes in an environmentally-safe manner and maintain sustainability of our buildings.

➡ Solid waste management

Solid waste as an unavoidable by-product of most human activities, represents a broader challenge that affects human health and livelihoods, environment, and prosperity. Therefore, highly controlled smart solid waste management system is applied to well-manage waste for maintaining the general health of people inside buildings. This is applied by installing a smart, safe and suitable (3S) sorting system which is considered as a pre-recycling step.



Safe

consider safety and security standards

Smart

contain automatic opening technique and induction system for monitoring and informing about the type of wastes to be disposed in

Suitable

Oral introduction system in the mother tongues to be suitable for all levels of people even less educated or illiterate people

➤ Waste water management

We aim to discharge waste water in a way that doesn't cause harms to the general sanitation system and preserve the environment

Waste water management plan is built on separating the grey wastewater (low polluted wastewater with residues from washing, bathing, laundry, and any water disposed through hand wash basins) from black wastewater (heavily polluted wastewater containing high concentrations of fecal matter and urine)

Through this discrete discharge system, there are monitoring spots, where waste water samples are taken to be analyzed as a pre-indicator of any pathogens or infections occurred. This system is considered a pre-treatment step, thus once the government has a plan for waste water treatment in urban cities, our buildings will be the first to implement that plan

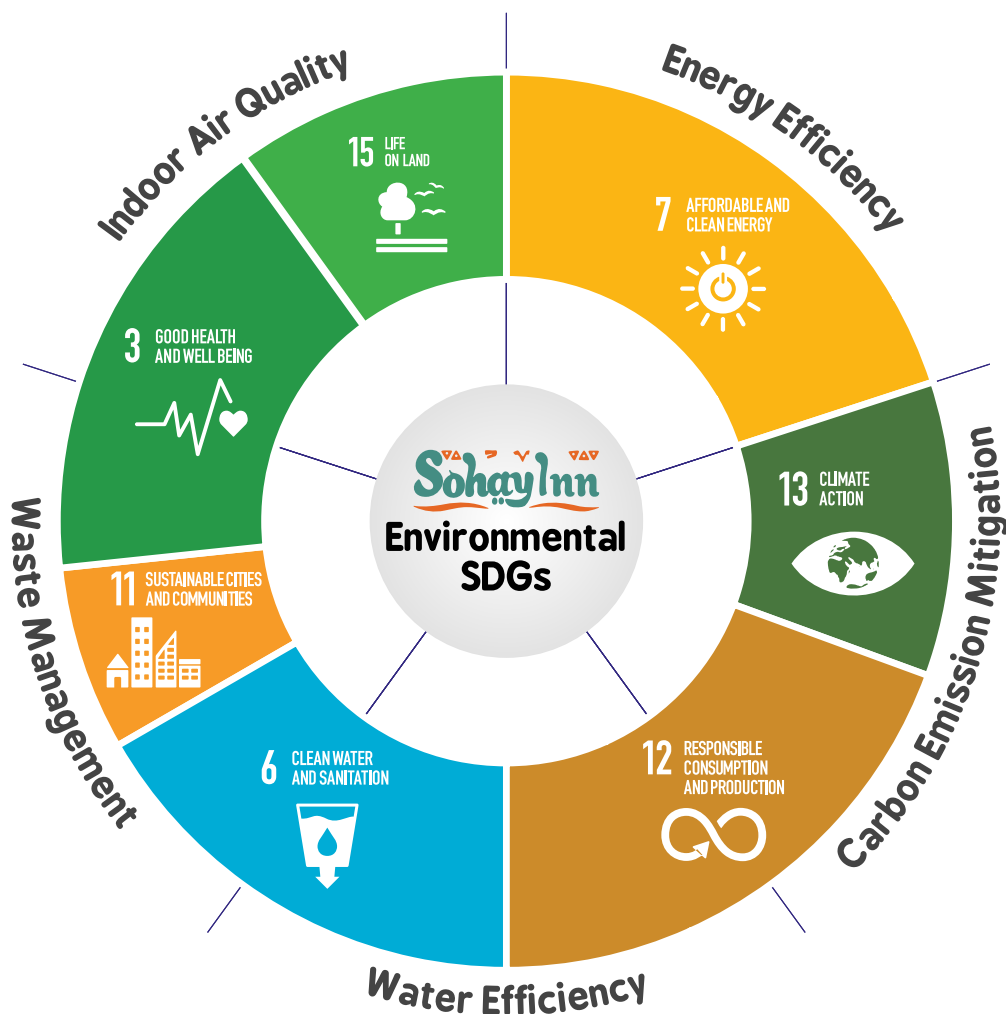


03

Adaptation

This integrated system allows sustainable, smart and green buildings, by achieving 7 of SDGs, to be able to mitigate their impacts on the environment, face climate change and be flexible to adapt future environmental issues. This makes our buildings

ADAPTIVE

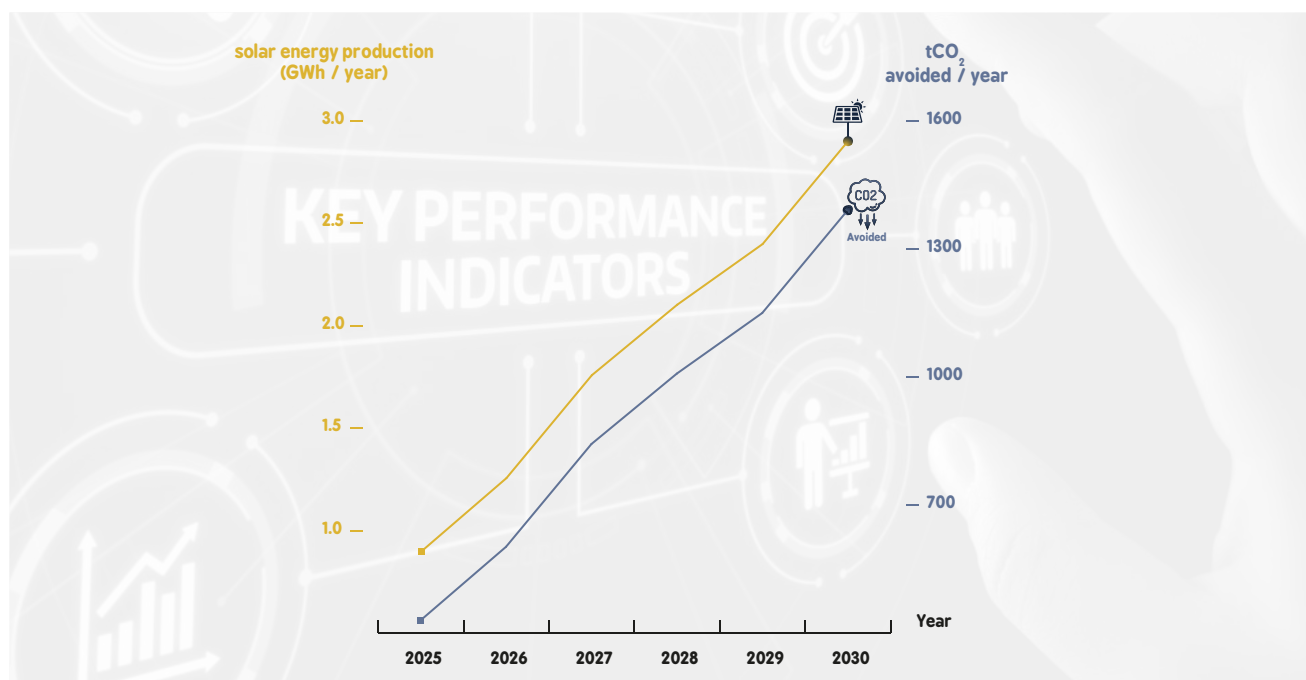


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Our Environmental KPIs achievements

By applying this system to our current and upcoming projects, it is estimated that by 2025, our development projects produce an average of 897 MWp of electricity from solar energy per year, representing about 20 % of the total consumption of electricity. This results in avoiding of more than 430 tCO₂ emissions per year. In terms of water efficiency, this system generates an annual amount of more than 1000 l/d of water used for planting

Our target by 2030 is to reach about 2.9 GWh of electricity produced from solar energy per year results in avoiding about 1,424 tCO₂ per year and generate about 2,457 l/d of water for planting



THANK YOU



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FOR
THE NEW REPUBLIC**