



# Sustainability Report F.Y 2024

## Executive Summary

This report provides a comprehensive overview of Aforcire's commitment to corporate social responsibility (CSR) and its sustainability performance for its first year of operation. As a social impact enterprise dedicated to revolutionizing affordable housing, Aforcire's mission and vision are deeply integrated with its business model. By focusing on sustainable practices, community engagement, and social empowerment, we aim to deliver not only affordable housing solutions but also a lasting positive impact on the lives of low-income communities worldwide.

Aforcire's core business of manufacturing sustainable "houses on wheels" for low-income communities is inherently a CSR initiative. The company's operations are designed to have a minimal environmental footprint compared to conventional construction, while its products enable a net-zero energy lifestyle for its users. This report quantifies our environmental impact through emissions metrics and outlines our social responsibility efforts, demonstrating our dedication to being a force for good.

## 1. Introduction

### 1.1 About Aforcire

Founded last year, Aforcire is dedicated to developing housing solutions that are not only affordable and resilient but also sustainable. Our team is committed to researching and experimenting with new materials and construction techniques to minimize our environmental impact while maximizing the quality and durability of our homes. Our focus on "houses on wheels" for low-income communities in India is a direct response to the urgent need for accessible, dignified, and eco-friendly housing.

### 1.2 Mission & Vision

- **Mission Statement:** To revolutionise the housing industry by providing sustainable and affordable housing solutions for low-income communities worldwide, utilising innovative materials and construction techniques to create eco-friendly, durable, and cost-effective homes.
- **Vision:** To become a global leader in sustainable housing, improving living standards and empowering communities through accessible and environmentally conscious housing solutions.



## 2. Sustainability Performance & Environmental Impact

Aforcire's environmental footprint is measured across its operations and its products. Our commitment is to minimize this footprint, starting with our own manufacturing process.

### 2.1 Energy Consumption (in kWh)

Our manufacturing facility is a crucial component of our sustainability strategy. We have designed our operations to be highly energy-efficient, targeting performance metrics far below conventional Indian industrial standards.

- **Manufacturing Facility Size:** 2,000 m<sup>2</sup>
- **Targeted Energy Performance Index (EPI):** Aforcire's manufacturing facility operates at a **Super ECBC** standard, with a targeted EPI of **60 kWh/m<sup>2</sup>/year**. This represents over a **60% reduction** in energy consumption compared to a conventional, energy-inefficient building in India (with an EPI of 180+ kWh/m<sup>2</sup>/year).
- **On-site Renewable Energy:** To further reduce our reliance on the grid, we have installed a rooftop solar PV system. The energy generated on-site offsets a significant portion of our operational needs.
  - **Total Annual Energy Consumption:** 2,000 m<sup>2</sup> × 60 kWh/m<sup>2</sup>/year = 120,000 kWh
  - **Energy Generated by On-site Solar (estimated):** 70,000 kWh
  - **Net Energy Consumed from the Grid:** 120,000 kWh – 70,000 kWh = 50,000 kWh

### 2.2 Carbon Emissions (in tCO<sub>2</sub>e)

Aforcire is committed to transparency in reporting its direct and indirect emissions.

#### 2.2.1 Scope 1 Emissions

These are direct emissions from sources owned or controlled by Aforcire, primarily from our vehicle fleet and on-site generators. Our Scope 1 emissions for the year are estimated to be **50.59 metric tons of CO<sub>2</sub> equivalent (tCO<sub>2</sub>e)**, broken down as follows:

- **Vehicle Fleet:** 46.36 tCO<sub>2</sub>e (from trucks for transport and company cars).
- **On-site Diesel Generators:** 4.02 tCO<sub>2</sub>e (used for backup power).
- **Refrigerant Leakage:** 0.21 tCO<sub>2</sub>e (from AC units in facilities and vehicles).

This figure is significantly lower than a traditional construction company due to our modular, off-site construction model, which requires fewer site-specific vehicles and heavy machinery.

#### 2.2.2 Scope 2 Emissions



These are indirect emissions from the generation of purchased electricity. Our commitment to energy efficiency and on-site generation has a direct and significant impact on our Scope 2 footprint.

- **Net Grid Consumption:** 50,000 kWh
- **India's Grid Emission Factor:** 0.74 kg CO<sub>2</sub>e/kWh
- **Total Scope 2 Emissions:** 50,000 kWh × 0.74 kg CO<sub>2</sub>e/kWh = 37,000 kg CO<sub>2</sub>e = 37 tCO<sub>2</sub>e

Our Scope 2 emissions are over **86% lower** than a comparable conventional company that consumes its energy from the grid without on-site renewable energy.

## 2.3 Environmental Impact of Our Products

Aforcire's most significant contribution to sustainability is through its products. Our "houses on wheels" are designed to be entirely self-sufficient, with an integrated solar power system.

- **Total Energy Consumption per Unit:** 365 to 1,095 kWh per year.
- **On-site Renewable Energy Generation per Unit (from a 1-2 kWp solar system):** 1,200 to 1,500 kWh per year.

This design ensures that each house is **net-zero energy** or **off-grid**, with a net annual grid consumption of **0 kWh**. This empowers end-users with energy independence and eliminates their monthly electricity bills, making the homes truly affordable in the long run.

## 3. Social Responsibility Initiatives

Our core values are at the heart of our social responsibility initiatives, creating a positive impact beyond our products.

- **Community Engagement:** We have begun involving local communities in our initial projects. This collaborative approach ensures cultural relevance in our designs and fosters a sense of ownership among the communities we serve.
- **Social Empowerment:** Aforcire is dedicated to providing education and training programs. We have started equipping local workers with valuable skills in sustainable construction, enabling them to participate in and benefit from our housing projects.
- **Decent Work and Economic Growth:** By creating job opportunities within the low-income communities where we operate, we are actively promoting local economic development and contributing to a more resilient local economy.
- **Reduced Inequalities:** Our mission is to bridge the housing gap by providing affordable and sustainable homes to those in need, directly addressing inequalities in access to safe and dignified shelter.



## 4. Impact Measurement & Looking Ahead

Aforcire is committed to measuring the social, environmental, and economic impact of our work. We will continue to track key metrics and expand our initiatives to create greater impact.

- **Key Metrics:** We are tracking the number of homes built, communities served, local jobs created, and the reduction in environmental footprint. As we complete our first full year, we will publish these results.
- **Future Goals:** We aim to expand our reach to new regions, advocate for supportive policies for sustainable and affordable housing, and strengthen our partnerships to amplify our impact.

By integrating social responsibility into every aspect of our business model, Aforcire is not just building houses; we are building a better future where everyone has access to safe, sustainable, and affordable housing.

**To the best of our knowledge,**

Tanishq Maini  
Founder & Managing Director  
Aforcire