

# Net Zero Energy Buildings: Raising Awareness & Showcasing Technologies



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# Overview

Buildings account for 33 percent of the total electricity consumption in India. As such, it is critical to go beyond business as usual and leapfrog to cutting edge innovation in the building sector to consume less energy and save emissions. Net Zero Energy Buildings (NZEBS) offer a solution to sustainably meet the energy needs of growing Indian cities with the least climate change impact. NZEBs are buildings that, through renewable means, produce as much energy as they consume, when accounted for annually.

The U.S.- India bilateral Partnership to Advance Clean Energy – Deployment Technical Assistance (PACE-D TA) Program provided support to the Bureau of Energy Efficiency in demonstrating the technical feasibility of the NZEB concept and promoting awareness about NZEBs in India.

## NZEB Knowledge Portal

The Program has developed a knowledge portal on NZEB to serve as a one-stop online platform for all information related to NZEBs.



## Key Features

### Knowledge Centre

The Knowledge Centre is the technical core of the portal. It highlights the technical aspects of achieving a NZEB through passive strategies, efficient HVAC, efficient lighting, efficient equipment, and integration of renewable energy technologies.

### Definitions & Policies

This section provides complete information about what constitutes an NZEB and NZEB definitions by boundary and metrics. The portal also keeps stakeholders abreast of innovative NZEB policies and initiatives contributing towards NZEB roadmaps globally.

## Case Studies

This section features information on national and international success stories to inspire architects, developers, manufacturers, consultants and other stakeholders.

## NZEB Alliance

The Program has also established a NZEB alliance to facilitate knowledge sharing and networking between industry stakeholders. The Alliance currently has 131 members.

## NZEB Pilot Project

One of the world's oldest known center for learning – Nalanda University – is being revived as a modern university while keeping its illustrious legacy intact. The Program assisted Nalanda in developing the NZEB vision and establishing the technical specifications and evaluation criteria for the NZEB campus. This will help the University to bring down its energy and emissions footprint to zero by employing passive architecture design strategies.

This project will demonstrate the technical feasibility of the NZEB concept and also provide the opportunity to engage stakeholders across the building value chain and disseminate information about tools, technologies, costs, performance, and measurement and verification data over a period of time. When completed, the Nalanda University will be India's first 'Net Zero' Energy, Emission, Waste and Water campus in India.



## About Nalanda University

Nalanda is a postgraduate, research intensive, international university supported by the participating countries of the East Asia Summit. Nalanda is known for being one of the world's oldest centers for learning (fifth-twelfth century A.D.) Located in Rajgir, the university has committed itself to stringent environmental targets and is setting up India's first net zero energy campus.

## About the USAID PACE-D TA Program

The USAID PACE-D TA Program is a part of the overall Partnership to Advance Clean Energy (PACE) initiative, the flagship program under the U.S.-India Energy Dialogue. The five year Program, implemented in collaboration with the Ministry of Power and Ministry of New and Renewable Energy, has three key components: energy efficiency, renewable energy and cleaner fossil technologies. The Program's focus is on institutional strengthening, capacity building, technology pilot projects, innovative financing mechanisms and increasing the awareness of clean energy technologies.

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