



**Ministry of Housing and Urban Affairs
Government of India**



Technology Transition through Light House Projects

25 August 2023

Technology Sub Mission under PMAY(U) – Activities undertaken

Global Housing Technology Challenge- (GHTC-India) -2019

54 proven innovative technologies shortlisted

Schedule of Rates issued for 34 technologies

Compendium of 54 technologies

E-course: **NAVARITIH**

6 Light House Projects

Technology Innovation Grant (LHPs/ DHPs/ ARHCs)

Live Laboratory

TECHNOGRAHIS

LHP Chennai & LHP Rajkot inaugurated by Hon'ble Prime Minister



Indian Housing Technology Mela (IHTM) – 2021/ Indian Urban Housing Conclave 2022

Inaugurated by Hon'ble Prime Minister

Promoting Indigenous & Innovative Construction Techniques, Processes & Materials for Low & Mid-Rise Houses

Compendium of Technologies

Training, Capacity Building, Handholding & IEC Support

States/UTs to mainstream these construction technologies



Climate Smart Building Program with GIZ - 2021

Collaboration with GIZ to enhance climate resilience & thermal comfort in housing

Technical Assistance, Thermal Comfort Action Plan

Trainings, Webinars/ Webcasting on LHPs

RACHNA (*Resilient, Affordable and Comfortable Housing through National Action*): 150 trainings under Azadi ka Amrit Mahotsav covering 11,000 participants

Task Force for mainstreaming innovative technologies constituted







Global Housing Technology Challenge-India

Hon'ble Prime Minister laid foundation stones of six LHPs on
1st January 2021

- ❑ **GHTC-India** organized to **identify innovative proven construction technologies** from across the globe which are **Rapid, Green, Disaster Resistant & Sustainable**.
- ❑ **54 Innovative technologies** shortlisted under GHTC-India
- ❑ **State Challenge** for site selection for Light House Project (LHPs)
- ❑ **6 distinct innovative technologies** for six LHPs at **Rajkot, Indore, Lucknow, Ranchi, Chennai & Agartala**



Light House Projects at a Glance

Location	Technology	No. of Houses	Project Cost (Cr.)	3D Perspective View
Chennai	Precast Concrete Construction System- Precast Components Assembled at Site	1,152	₹ 116.27	
Rajkot	Monolithic Concrete Construction using Tunnel Formwork	1,144	₹ 118.90	
Ranchi	Precast Concrete Construction System – 3D Volumetric	1,008	₹ 134.00	
Indore	Prefabricated Sandwich Panel System with Pre-engineered Steel Structural System	1,024	₹ 128.00	
Lucknow	Stay In Place PVC Formwork with Pre- Engineered Steel Structural System	1,040	₹ 130.90	
Agartala	Light Gauge Steel Framed (LGSF) System with Pre-engineered Steel Structural System	1,000	₹ 162.50	

Light House Project: Chennai, Tamil Nadu



LHP Chennai



Light House Project: Rajkot, Gujarat



**Inauguration by Hon'ble Prime
Minister on 19th October
2022**

LHP Rajkot



LHP Indore



LHP Lucknow



LHP Ranchi



LHP Agartala



LIGHT HOUSE PROJECTS : LIVE LABORATORIES

GLOBAL HOUSING TECHNOLOGY CHALLENGE INDIA

TECHNOGRAHIS

Change Agents of Innovative and Sustainable Construction Technologies

Scan and enrol:



Target Group :-

- Faculty & Research Students
- Technical Professionals
- Central/States/ULB Officials
- Construction Agencies
- Builders/ Developers
- Startup/Innovators/Entrepreneurs
- Other Concerned Stakeholders

[Click here for more details](#)

- LHPs are promoted as Live Laboratories
- Stakeholders are enrolled as Technograhis
- Onsite visits/study tours Web based trainings
- e-Modules/ Courses
- Interaction with domain experts
- Collaboration with international Universities

40,000+
Technograhis
Enrolled



Building Capacities For Innovative Construction Technologies & Thermally Comfortable Affordable Housing

Indo German Energy Programme:
Climate Smart Buildings

150 Trainings under Azadi ka Amrit Mahotsava:

- 11,000 participants with Resource & Mentor Institutes



CPWD Constructed Buildings using Innovative Technologies

Technology used in various projects by CPWD – 2019 onwards	Contract Value (₹ In Cr.)
Monolithic Concrete Construction using Aluminium formwork	4487.59
Pre-cast concrete construction system	2111.07
Pre-engineered Buildings (PEB) – steel structure with light weight infills	711.76
Tunnel-Form Technology	348.77
Other Innovative technologies	5746
Total	13405.19



CPWD Constructed Buildings using Innovative Technologies



MP flats at BKS Marg, New Delhi

**Monolithic
Concrete
Construction
System using
aluminium form
work**

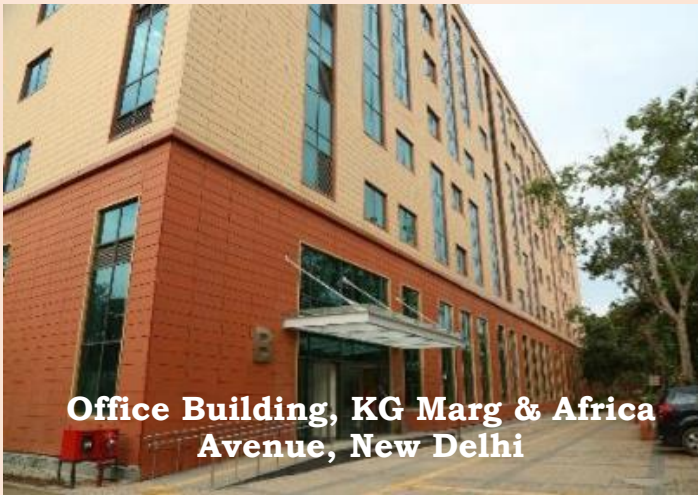
Rs. 4487.59 Cr.



NIT Andhra Pradesh

**Precast
Technology**

Rs. 2111.07 Cr.



Office Building, KG Marg & Africa Avenue, New Delhi

**Steel Structure
with Light
Weight Infills**

Rs. 711.76 Cr.



Residential Quarters,
Chennai

**Tunnel
Formwork**

Rs. 348.77 Cr.

Other Housing Projects being implemented by States using innovative technologies through Public/Private Agencies

Sl. No	Technology	States	No of Houses being constructed
1	Monolithic construction systems	Andhra Pradesh, Tamil Nadu, Maharashtra	10,00,000
2	Precast RCC Technology	Maharashtra, Tamil Nadu, Delhi, Uttar Pradesh	6,00,000
3	Precast 3 D Volumetric Technology	Andhra Pradesh	2,000
4	Monolithic RCC using Tunnel Formwork	Karnataka	43,282
5	Light Gauge Steel Frame Structure (LGSF)	Kerala (LIFE Mission)	1,000
6	Precast concrete construction system and Monolithic RCC using Aluminum Formwork.	Chennai, Tamil Nadu, Andhra Pradesh (ARHCs)	48,113
Total			16,94,395



Precast Concrete Construction



**Light House Project (1152 DUs, G+5)
in Chennai by B.G.Shirke**



**Pragati Towers in Bhoiwada,
Mumbai (S+23) by L&T**



**Tower for Urbana, Kolkata
(G+45) by L&T**



**Construction of 1500 (G+10) Multi
Storey Housing Project with Prefab
Technology at Sholinganallur for
Tamilnadu Housing Board, Chennai by
B.G.Shirke**



**Construction of 1696 EWS & 280 Cat. II
houses and Construction of 2561 EWS &
419 Cat. II houses by using Prefab
Technology at Narela, New Delhi by
B.G.Shirke**

Monolithic construction Tunnel Formwork System – Private builders



South City Bengaluru (2003)



Eden Park, Chennai (2011)



Monolithic Concrete Construction - Aluminum Formwork System - Private Builders



Snapshot of projects using Light Gauge Steel Construction system



Houses for Orissa Power Generation Corporation, Jharsuguda, Orissa by Everest Industries Ltd.



Lounge & Stud Farm of Hyderabad Race Club by Jindal Steel and Power Ltd.



Paradise Avenue Project, Jammu
Built up Area: 1,35,000 sqft (234 DUs) by MGI Infra Pvt. Ltd.

Prefabricated Steel Structure with Prefab Cement Sandwich Panels



Omkar Pawai, Transit Camp, Mumbai, Total Built up Area : 3.5 lac sqft G+7, 5 bldgs/ 205 sqft (1 BHK) 1,700 units by HIL Limited



DLF EWS Bldg., DLF Phase 5, Gurgaon, Total Built up Area: 3.9 lac sqft, 2010 units of 194 sqft (1BHK) by HIL Limited

THANK YOU