



**PRESS INFORMATION BUREAU**  
( Research Unit )  
Ministry of Information and Broadcasting  
Government of India



## **LIGHT HOUSE PROJECTS**

(Model Housing Projects for cost-effective, environment friendly and speedier construction)

*A new era in construction technology in India – Sustainable & Disaster Resilient*

**Certificate Course on NAVARITIH Introduced**

**Affordable Sustainable Housing Accelerators – India (ASHA-India) Centres Launched**

(Ministry of Housing and Urban Affairs)

March 14, 2022

*“The houses are called light house projects in technical language but these six projects are really like lighthouses showing a new direction to the housing sector in the country.”<sup>1</sup>*

-Prime Minister Narendra Modi

### **Introduction**

The Ministry of Housing and Urban Affairs, Government of India had conceptualized a Global Housing Technology Challenge – India (GHTC- India) which aims to identify and mainstream a basket of innovative technologies from across the globe that are sustainable and disaster-resilient.<sup>2</sup> As part of the GHTC-India initiative, Prime Minister Narendra Modi laid the foundation of six Light House Projects (LHPs) in six States via video conference on 1 January 2021.<sup>3</sup>



<sup>1</sup>

<https://pib.gov.in/PressReleaseFramePage.aspx?PRID=1685339#:~:text=He%20said%20the%20houses%20are,approach%20of%20the%20present%20Government.>

<sup>2</sup> <https://ghtc-india.gov.in/Content/pdf/GHTC-Brochure%20.pdf>

<sup>3</sup> <https://pib.gov.in/PressReleasePage.aspx?PRID=1685349>

Light House Projects or LHPs are model housing projects with houses built with shortlisted alternate technology suitable to the geo-climatic and hazard conditions of the region. These projects will demonstrate and deliver ready to live houses with speed, economy and with better quality of construction in a sustainable manner.<sup>4</sup> The Light House Projects (LHPs) showcase the best of new-age alternate global technologies, materials and processes in the construction sector for the first time in the country at such a large scale.<sup>5</sup>

### **Salient Features<sup>6</sup>**

- LHP shall mean a **model housing project with approximate 1,000 houses** built with shortlisted alternate technology suitable to the geo-climatic and hazard conditions of the region.
- The **period of construction is a maximum of 12 months** from the date of handing over of sites to the construction agency after all statutory approvals. Approvals will be accorded through a fast track process by the concerned State Government.
- These LHPs shall serve as LIVE Laboratories for different aspects of Transfer of Technology to field application, such as planning, design, production of components, construction practices, testing etc. for both faculty and students, Builders, Professionals of Private and Public sectors and other stakeholders involved in such construction.
- The minimum size of houses constructed under LHP shall be in accordance with the prevailing guidelines of the **Pradhan Mantri Awas Yojana (Urban)**.
- Constructed housing under LHP will include on site infrastructure development such as internal roads, pathways, common green area, boundary wall, water supply, sewerage, drainage, rain water harvesting, solar lighting, external electrification, etc.
- Houses under LHP will be designed keeping in view the **dimensional requirements laid down in National Building Code (NBC) 2016** with good aesthetics, proper ventilation, orientation, as required to suit the climatic conditions of the location and adequate storage space, etc.
- **Convergence with other existing centrally sponsored schemes and Missions** such as Smart Cities, [AMRUT](#), [Swachh Bharat\(U\)](#), [National Urban Livelihood Mission \(NULM\)](#), [Ujjwala](#), [Ujala](#), [Make in India](#) shall be ensured during the designing of LHPs at each site.
- The structural details shall be designed to meet the **durability and safety requirements of applicable loads** including earthquakes, cyclone and flood as applicable in accordance with the applicable Indian/International standards.
- Cluster design may include innovative system of water supply, drainage and rain water harvesting, renewable energy sources with special focus on solar energy.
- Technology Providers successfully completing the construction of LHPs within the stipulated 15 months period of the contract (including three months for preparing relevant drawings and taking all statutory approvals from various agencies in State

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<sup>4</sup> <https://ghtc-india.gov.in/Content/LHP.html>

<sup>5</sup> <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1684801>

<sup>6</sup> <https://ghtc-india.gov.in/Content/LHP.html>

followed by 12 months period for actual construction) will be rewarded with USD 20,000 each. A further incentive for early completion is being provided wherein technology providers who complete LHPs in less than 12 months will receive an incrementally higher bonus of USD 2,000 for each month less than stipulated period of 12 months.

- For the subsequent allotment of constructed houses under LHPs to the eligible beneficiaries in States/ UTs, procedures of existing guidelines of PMAY (U) will be followed.

### **Location and Technology**

Six Technology providers have been selected through rigorous online bidding process for construction of Light House Projects (LHPs) at six different locations in six states. The LHPs are being constructed at **Indore** (Madhya Pradesh), **Rajkot** (Gujarat), **Chennai** (Tamil Nadu), **Ranchi** (Jharkhand), **Agartala** (Tripura) and **Lucknow** (Uttar Pradesh). They comprise about 1000 houses at each location along with allied infrastructure facilities. These projects will demonstrate and deliver ready-to-live houses at an expedited pace within twelve months, as compared to conventional brick and mortar construction, and will be more economical, sustainable, of high quality and durability.<sup>7</sup>

LHP LOCATION	TECHNOLOGY SELECTED	NUMBER OF HOUSES TO BE CONSTRUCTED
Indore Madhya Pradesh	<u><i>Prefabricated Sandwich Panel System</i></u>	1024
Rajkot Gujarat	<u><i>Monolithic Concrete Construction using Tunnel Formwork</i></u>	1144
Chennai Tamil Nadu	<u><i>Precast Concrete Construction System – Precast Components Assembled at Site</i></u>	1152
Ranchi Jharkhand	<u><i>Precast Concrete Construction System – 3D Volumetric</i></u>	1008
Agartala Tripura	<u><i>Light Gauge Steel Structural System &amp; Pre-engineered Steel Structural System</i></u>	1000
Lucknow Uttar Pradesh	<u><i>PVC Stay In Place Formwork System</i></u>	1040

8

These LHPs demonstrate a variety of technologies, including Prefabricated Sandwich Panel System in LHP at Indore, Monolithic Concrete Construction using Tunnel Formwork in LHP at Rajkot, Precast Concrete Construction System in LHP at Chennai, 3D Volumetric Precast

<sup>7</sup> <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1684801>

<sup>8</sup> <https://ghrc-india.gov.in/Content/LHP.html>

Concrete Construction System in LHP at Ranchi, Structural Steel Frame with Light Gauge Steel Infill Panels in LHP at Agartala and PVC Stay In Place Formwork System in LHP at Lucknow.

### Other Initiatives relating to Housing and Construction Technologies

#### ➤ NAVARITH<sup>9</sup>

Prime Minister declared the year 2019-20 as ‘**Construction Technology Year**’ while inaugurating GHTC-India in March, 2019 to promote new and alternate technologies at a large scale. As part of ‘Construction Technology Year’, besides LHPs, a Certificate Course on Innovative Construction Technologies namely NAVARITH (**New, Affordable, Validated, Research Innovation Technologies for Indian Housing**) and a Compendium of 54 innovative housing construction technologies which were identified through GHTC-India were released by the Prime Minister at the event. An e-Course on Vulnerability Atlas of India was also launched by the Minister of State, Ministry of Housing and Urban Affairs, as part of the ‘Construction Technology Year’.



Source: <https://www.narendramodi.in/prime-minister-narendra-modi-lays-foundation-stone-of-light-house-projects-under-ghtc-india-553168>

**Five Incubation Centres set up under Affordable Sustainable Housing Accelerators – India (ASHA-India) initiative under PMAY (U), were launched** during the event for providing incubation support to identify innovative materials, processes and technology for resource efficient, disaster resilient and sustainable construction. In addition, the five winners under Post-Prototype Technologies category for Acceleration Support were announced. These will provide a major fillip to indigenous start-ups, innovators and such stakeholders.

<sup>9</sup> <https://pib.gov.in/PressReleasePage.aspx?PRID=1685349>

## ➤ [ASHA-India](#)<sup>10</sup>

Affordable Sustainable Housing Accelerators - India (ASHA-India) aims to promote domestic research and entrepreneurship by providing incubation and acceleration support to potential future technologies. Under ASHA-India initiative, five ASHA-India Centres have been set up for providing incubation and acceleration support.

- [Indian Institute of Technology, Bombay](#)<sup>11</sup>
- [Indian Institute of Technology, Kharagpur](#)
- [Indian Institute of Technology, Madras](#)
- [Indian Institute of Technology, Roorkee](#)
- [CSIR-NEIST, Jorhat](#)

The technologies, processes and materials identified through this initiative will provide a major fillip to young creative minds, start-ups, innovators and entrepreneurs

### **Conclusion**

Bringing people and technology together, LHPs will pave the way for a new ecosystem where globally proven technologies will be adopted for cost-effective, environment friendly and speedier construction. Advantages of these LHPs are many, the primary ones being durability, climate-resilient, affordability, safety and speed. This technology revolution will help fulfil the Prime Minister's vision of 'Housing for All' by 2022. The construction needs of a rapidly urbanizing India will be catered to through the use of cutting-edge and alternate global technology innovations.

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- <https://pmmodischeme.in/lighthouse-project/>

### **Video link:**

<https://youtu.be/Sq-8tETjcvU>

**AG/HP/RC/KG**

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<sup>10</sup> <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1684801>

<sup>11</sup> [https://ghtc-india.gov.in/HomePage/inner-pages/Incubation\\_Centre.html](https://ghtc-india.gov.in/HomePage/inner-pages/Incubation_Centre.html)