

# CLEAN ENERGY RESEARCH INITIATIVE

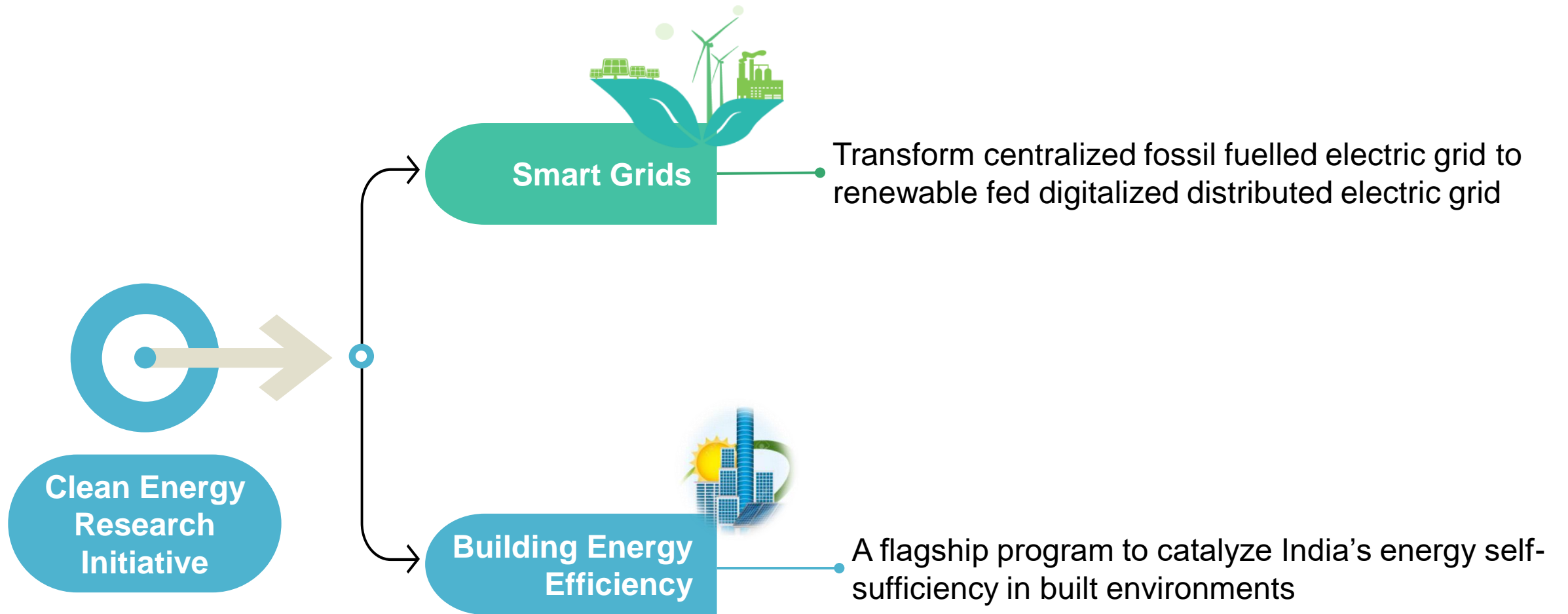
Climate, Energy and Sustainable Technology Division  
Department of Science and Technology



DEPARTMENT OF  
SCIENCE & TECHNOLOGY  
Ministry of Science and Technology  
Government of India



## R&D Areas



# Program **Outlay**

## SMART GRIDS PRIORITIES

01

Large Scale  
Distributed Generation  
Integration



02

Energy Storage and  
Service Reliability



03

Advanced  
Distribution  
Management  
System



05

Charging  
Infrastructure for  
Electric Vehicles



04

Data Analytics,  
Communication and  
Cyber Security



06

Smart Grid  
Business  
Models



## DST Initiatives to Advance Smart Grids R&D and Demonstration



5 projects  
&  
2 Centres

### India - UK



Academic Institutions - 27



Industries/Utilities - 28



Investment (in crores) - 97



1 project

### India - USA



Academic Institutions - 27



Industries/Utilities - 28



Investment (in crores) - 111



MISSION  
INNOVATION  
accelerating the clean energy revolution

9 projects

### India-MI countries



IC1 member countries - 9



Academic Institutions - 17



Industries/Utilities - 16



Investment (in crores) - 37



2 projects

### India - EU

Joint call on Integrated Local Energy  
Systems; Rs.24.19 crores



# RESEARCH PROGRAMS

## India-US Center for Building Energy Research & Development (CBERD)



- 1 team
- ₹22 Crore

## National Initiative to Promote Habitat Energy Efficiency (I-PHEE)



- 36 teams
- ₹34 Crore

## India-UK Energy Demand Reduction in the Built Environment



- 4 teams
- ₹19 Crore

## Mission Innovation IC7: Global Cooling Prize (GCP)



- 4 teams
- ₹9 Crore

## I-PHEE

Catalyze technology development & create R&D infrastructure for

- Low carbon building materials
- Low energy HVAC systems
- ICT and building controls
- Design Integration

TRL 3-4

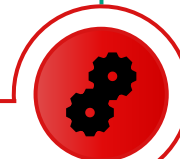
## India-US CBERD

Develop proof of concepts in heating and cooling technologies, ICT and building controls

2012



TRL 4-6



2015

## India-UK Program

Scale up high impact technologies for energy demand reduction and synthesize multi-stakeholder engagement

TRL 5-7



2018

## IC7: GCP

Harness global talent to develop market ready technologies for affordable low energy cooling of Indian buildings.

TRL 7



2019





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