

# Implementation of Energy Conservation Building Code (Hyderabad Model)



# ECBC in Andhra Pradesh and Telangana: Work that went into the code, and next steps

2009-11

2012-13

2012-13

Nov '13

Jan '14

2014-15

2015 onwards

Extensive Workshops on Energy Efficiency

Government Announced Code Process

Intensive Stakeholder Discussions

Government Announced Code will be Enacted Soon

Notification through G.O.M.S.30

Statewide Capacity Building

Code Operational in Telangana & Andhra Pradesh

- Extensive stakeholder consultations and awareness building about ECBC
- Formation of a steering committee and a technical committee to inform process and adapt ECBC to local bylaws
- Notification of ECBC through amendment to G.O.M.S.168 i.e., G.O.M.S. 30 dt. 28.01.2014.
- Implementation of ECBC in the state of Andhra Pradesh and newly formed Telangana
- Empanelment of architects - completed
- Training completed – more than 750 government officials, real estate developers and architects in AP and Telangana

# Government approach for ECBC adoption

- Government of AP (before bifurcation) has constituted a technical committee vide G.O.Rt. No. 1328 dt. 04-10-12 for preparation of state ECBC
- Objectives of Technical Committee
  - Review the existing government orders and initiatives on energy efficiency
  - Compare the requirements of the ECBC with existing orders and initiatives. Identify the changes required in the acts and building bye laws to make the ECBC mandatory
  - Describe implementation of the roadmap for ECBC adoption in Andhra Pradesh with a focus on
    - building bylaws modification,
    - ECBC compliance mechanism,
    - capacity building and training, and
    - demonstration projects
    - Incorporate lessons from other states that have adopted the ECBC

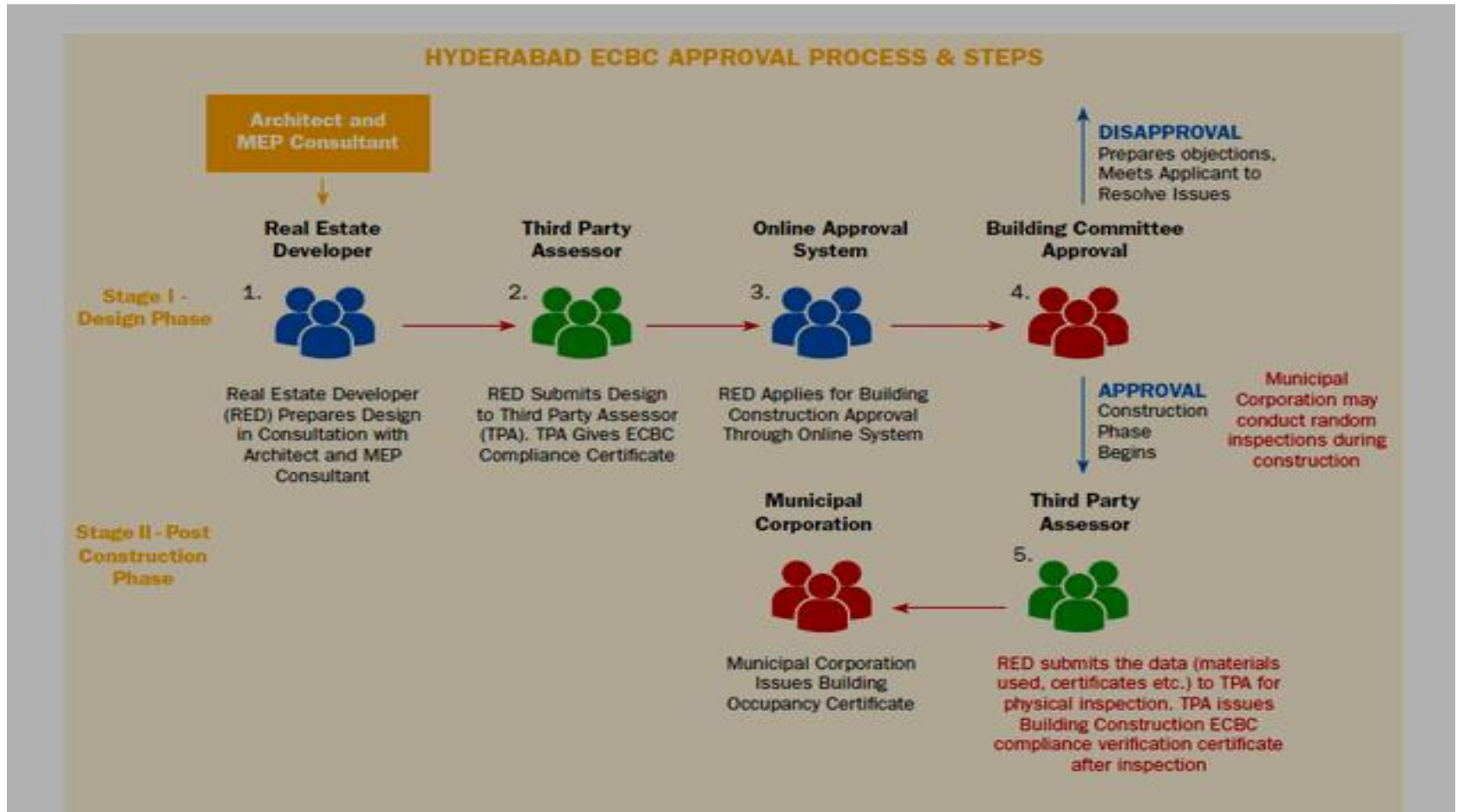
# Government approach for ECBC adoption

- Government of AP (before bifurcation) has constituted a technical committee vide G.O.Rt. No. 1328 dt. 04-10-12 for preparation of state ECBC
- Constitution of Technical Committee
  - **Chairman**
    - Principal Secretary (Municipal Administration and Urban Development Department)
  - **Member Convener and Secretary**
    - Prof Srinivas Chary Vedala, ASCI
  - **Members**
    - Principal Secretary (Energy)
    - VC and MD (SDA)
    - Commissioner (GHMC)
    - Chairman, HMDA
    - Chief Engineer (Roads and Buildings)
    - Director (Town and Country Planning)
    - Energy Economist (BEE)
    - Prof Rajkiran Bilolikar
    - Prof Vishal Garg, IIIT
  - **Invitee Members**
    - CREDAI (Confederation of Real Estate Developers Association of India)
    - APREDA (AP Real Estate Developers Association)

# Outcome of Technical committee

- Technical Committee prepared a roadmap for adoption of the ECBC in the state within the state's existing legal framework, based on the Technical Committee's analysis and expert recommendations.
- The Committee submitted its report for adoption of ECBC along with suggested changes in GO 168 – which is basically talks about municipal Building Rules in AP
- Further, Government of AP, based on the technical committee recommendations, has announced mandatory Energy Conservation Building Code (ECBC) for all commercial buildings and Non-Residential buildings that have plot area of more than 1000 square meters or built up area of 2000 square meters and certain categories of buildings such as multiplexes, hospitals, hotels and convention centers irrespective of their built up area through **G.O.M.S.30 dt. January 28, 2014.**

# Building Approval Process – Hyderabad Model

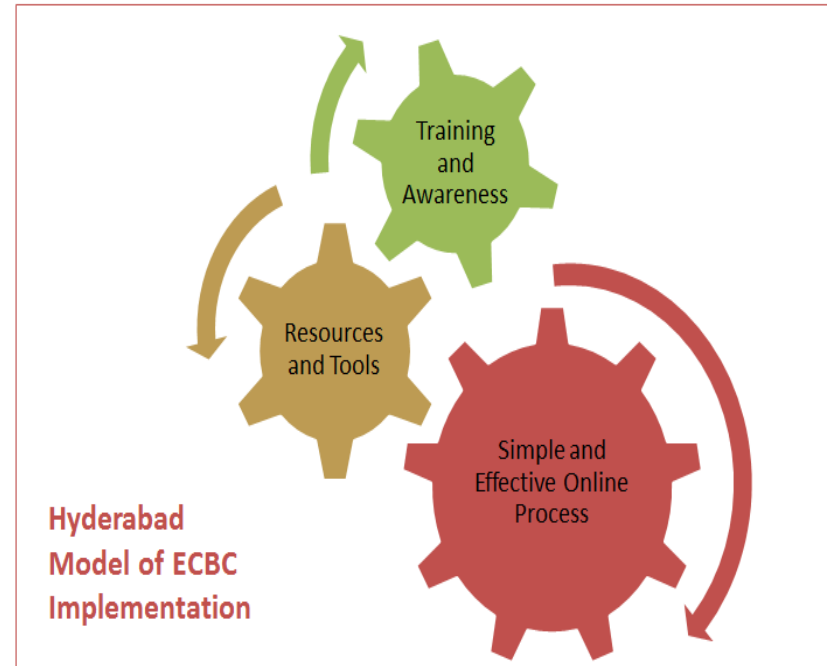


# ECBC Implementation status

- For effective implementation of ECBC and achieve higher level of compliance following activities were completed in the state with the support of Administrative Staff College of India (UNDP-GEF-BEE funding)
  - Empanelment of Third Party Assessors for ECBC compliance verification and issuing the certificate. 42 Third Party Assessors are empanelled.
  - More than 750 participants which includes government officials from town & country planning, municipal bodies, electricity utilities etc. and private people like Architects, Real Estate Developers and Engineers etc. are trained in the state of Andhra Pradesh as part of capacity building.

# Further Action

- Setting up Technical Committee (set by GO 1328) for ECBC implementation at each ULB Level
- Strengthen the implementation framework
- Strengthen the Third Party Assessors framework by defining rules and regulation
- Directions for Commercial building approval committees at each ULB level to scrutinize ECBC as ***15c of GO 168 in the application forms***
- Strengthen the Online Building Approval System by Incorporation of ECBC in an effective way
- Promotion and outreach plan for ECBC





# Step 1 Formation of Technical Sub-Committee for regular review of ECBC compliance

**A core group of representatives to lead the implementation of critical tasks**

- Commissioner – ULB
- Chief City Planner - ULB
- VC & MD / CEO – TNREDCL/SECM (SDA)
- Director TCPO (Town and Country Planning office)
- Representative from Electricity Utilities
- Roads and Buildings Representative
- ASCI – IIIT - NRDC

# GHMC Building Application- ECBC incorporation

- Provisions for ECBC empanelled TPA are to be incorporated in Part I, table C point 4 of building application form of GHMC as shown below

<b>C DETAILS OF BUILDER / LICENSED PERSONNEL</b>				
S. No.	Name	Address	License No.	Validity
1	..... Builder / Developer			
2	..... Architect/Engineer/Surveyor			
3	..... Structural Engineer			
<b>4</b>	<b>..... ECBC Empanelled TPA</b>			

# GHMC Building Application- ECBC incorporation

- Provisions for ECBC compliance documents (compliance report) in Part I, table E, point 33 of building application form of GHMC as shown below

25	Structural Drawings <i>(G.O.Ms.No.541 MA, dt:17.11.2000)</i>			
26	Undertaking Rs.100/- Non judicial stamp paper duly stating whether the construction is taken up by the owner. <i>(G.O.Ms.No.541 MA, dt:17.11.2000)</i>			
27	Declaration-Cum-Undertaking on Rs.100/- Non Judicial Stamp Paper from the Owner and Builder. <i>(G.O.Ms.No.541 MA, dt:17.11.2000)</i>			
28	Undertaking on Rs.100/- NJS by Owner, Builder, Architect, Structural Engineer (Duly Notarised). <i>(G.O.Ms.No.541 MA, dt:17.11.2000)</i>			
29	Undertaking on Rs.100/- NJS paper jointly by owner and Builder seeking Occupancy Certificate. (Duly Notarised). <i>(G.O.Ms.No.541 MA, dt:17.11.2000)</i>			
30	Joint undertaking on Rs.100/- Non Judicial Stamp paper for not stocking Building materials on road margin not to enclose balconies, usage of parking, payment of special sanitation charges, garbage charges and not to increase number of units. <i>(G.O.Ms.No.541 MA, dt:17.11.2000)</i>			
31	Comprehensive Insurance Policy for 3 years <i>(G.O.Ms.No.541 MA, dt:17.11.2000)</i>			
32	Undertaking on Rs. 20/- NJS paper for handing over road widening portion wherever applicable.			
<b>33</b>	<b>ECBC compliance report issued by empanelled Third Party Assessor ( as per G.O.M.S. 30 MA&amp;UD, dt 28.01.2014)</b>			

# GHMC Building Application- ECBC incorporation

- Provisions for ECBC compliance certificate (issued by empanelled TPA) in Part III table A, point 13 of building application form of GHMC as shown below

6	NOC from AAI, wherever applicable			
7	NOC Fire Services & Emergency Department, wherever required			
8	Structural stability certificate issued by CE, GHMC			
9	NOC of Commissioner of Police, wherever required			
10	NOC of Traffic Assessment Report from Traffic Police, wherever required			
11	NOC from Heritage Conservation Committee			
12	Report from Irrigation/Revenue Department in case of lands abut water bodies, Water courses & nalas			
<b>13</b>	<b>ECBC Compliance Certificate issued by Empanelled TPA</b>			

# Step 2 – Online Building Approval System Updation

ECBC Component should be strengthened in the online building application system of ULBs - First time in India

GHMC already uploaded the same and few screen shots are here...

# Incorporation of ECBC in GHMC online Building Approval System

The screenshot displays the 'Application Form' for 'Rajkiran Bholikar [Citizen]' in the GHMC online Building Approval System. The interface includes a sidebar menu with options like 'Applications', 'Draft Applications', 'New Application', 'Submission Pending', 'Submitted Applications', 'Resubmitted Applications', 'Occupancy', and 'Application Status'. The main form area is titled 'Application Form' and has tabs for 'General Information', 'Applicant Information', and 'Application Checklist'. The 'Applicant Information' tab is active, showing fields for 'Architect/ Engineer/ Surveyor Information' and 'Applicant's Information'. The 'Architect/ Engineer/ Surveyor Information' section includes a dropdown for 'Consultant type' (set to 'ECBC Third Part Assessor'), and fields for 'Name', 'License Number', 'Mobile Number', 'Address', 'Validity', and 'E-mail ID'. The 'Applicant's Information' section includes fields for 'Owner Name/ Firm Name (in Full)', 'Address Line 1', 'City', 'Pin Code', 'Landline Number', 'Address Line 2', 'State/Province/Region', 'Email', and 'Mobile'. The user's name 'Rajkiran Bholikar' is visible in the top right corner.

Architect/ Engineer/ Surveyor Information	
Consultant type	ECBC Third Part Assessor
Name	ECBC Third Part Assessor
License Number	Licensed Engineer
Mobile Number	Structural Engineer
	Licensed Surveyor
	Town Planner
Address	
Validity	
E-mail ID	

Applicant's Information	
* Owner Name/ Firm Name (in Full)	Rajkiran Bholikar
* Address Line 1	Bellarista Rd no 3 Banjara hills
* City	Hyderabad
* Pin Code	500034
Landline Number	
Address Line 2	Apartment, Suite, Unit, Building, Floor, etc.
* State/Province/Region	
* Email	rajkiran@atc.org.in
* Mobile	9704087688

# Incorporation of ECBC in GHMC online Building Approval System

Rajkiran Bilolikar [ Citizen ]

Proposal Risk Category : ▾

Application Type:                      Locality:                      No. of Storeys: NA

Application Form

7	Site is the part of LRS approved?		<input type="radio"/> Yes <input type="radio"/> No
8	Latest market value issued by sub registrar concerned in rupees per sq. yards, duly incorporating the site under reference in the part of survey number/piece of land/unapproved layout?		<input type="radio"/> Yes <input type="radio"/> No
9	Contour plan to be submitted in the list of drawing.		<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> NA
10	Revenue sketch issued by the Tahsildar concerned duly incorporating the site under reference in the survey number (if site is part of survey number)		<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> NA
11	Risk insurance policy as per G.O. Ms. No. 168 MA & UD dt: 07-04-2012 rule 5 (18)		<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> NA
12	Undertaking as per the G.O.Ms. No. 168 MA & UD dt: 07-04-2012, Rule 5(18)		<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> NA
13	Declaration Certificate by the Architect		<input type="radio"/> Yes <input type="radio"/> No
14	Whether the proposed height of the building is more than 10 Mt. ?		<input type="radio"/> Yes <input type="radio"/> No
15	Whether the site is falling within the vicinity of Raw water channel/ pipe line of Krishna, Godavari, Osman Sagar & Manjeera Water?		<input type="radio"/> Yes <input type="radio"/> No
16	Whether proposed site falls within the distance of 1000 Mt. from Military Airport?		<input type="radio"/> Yes <input type="radio"/> No
17	Whether proposed site/building falls in special regulation area as Jubilee Hills or Banjara Hills?		<input type="radio"/> Yes <input type="radio"/> No
18	For Commercial Building with plot area more than 1000 sq meters or built up area more than 2000 sq meter, or if the building is a Multiplex, Hospital, Hotel or Convention Center, then irrespective of built up area; ECBC checklist to be enabled		<input type="radio"/> Yes <input type="radio"/> No
19	Is this a vacant plot		<input type="radio"/> Yes <input type="radio"/> No

18	For Commercial Building with plot area more than 1000 sq meters or built up area more than 2000 sq meter; or if the building is a Multiplex, Hospital, Hotel or Convention Center, then irrespective of built up area; ECBC checklist to be enabled		<input type="radio"/> Yes <input type="radio"/> No
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# Incorporation of ECBC in GHMC online Building Approval System

Proposal Risk Category :

Application Form

7	Site is the part of LRS approved?		<input type="radio"/> Yes <input type="radio"/> No
8	Latest market value issued by sub registrar concerned in respect per sq. yards duly incorporating the site layout?		<input type="radio"/> Yes <input type="radio"/> No
9	Contour plan to be submitted?		
10	Revenue sketch is reference in the submitted plan?		
11	Risk insurance policy submitted?		
12	Undertaking as per ECBC submitted?		
13	Declaration Certificate submitted?		
14	Whether the proposed building is in Godavari, Osman Sagar or other notified area?		
15	Whether the site is in Godavari, Osman Sagar or other notified area?		
16	Whether proposed building is in Godavari, Osman Sagar or other notified area?		
17	Whether proposed building is in Godavari, Osman Sagar or other notified area?		
18	If site/building is greater than 1000 Sq. Meters then ECBC Check list to be enabled.?		
19	Is this a vacant plot?		

**View Mandatory Document List** ✕

In case "If site/building is greater than 1000 Sq. Meters then ECBC Check list to be enabled.?" holds true then you would require to submit following additional document(s).

Sr.No.	Document Name
<i>No data found</i>	



# Incorporation of ECBC in GHMC online Building Approval System

Greater Hyderabad Municipal Corporation  
హైదరాబాదు మహానగర పాలక సంస్థ

Home Our Services Payments e-Registrations Value Added Services Enquiry Others Fri, Jan 27, 2017 11:50:35 PM

## The Making of A Global City

Mr. K. Chandrababu Naidu  
Chief Minister  
Government of Telangana

Mr. K. T. Rama Rao  
Hon'ble Minister for Housing, Industries, Water,  
IT &MS Affairs, Govt. of Telangana

Mr. Banjari Suresh Babu  
I.R. Mayor  
GHMC

### 1st NATIONAL URBAN DEVELOPMENT SUMMIT

TOWARDS HOLISTIC DEVELOPMENT

Chief Guest  
Mr. K. T. Rama Rao  
Hon'ble Minister for Housing, Industries &  
IT &MS Affairs, Govt. of Telangana

Guest of Honor  
Mr. Banjari Suresh Babu  
I.R. Mayor  
GHMC

GHMC is implementing the Er  
Green Hyderabad

DPMS - Submi:  
Area wise Fire stations in GHMC, Low lying areas in 4

#### DPMS Online

Pre-DCR Help Manual  
Pre-DCR Video Tutorial-I Tutorial-II  
Pre-DCR tool for 32 bit OS,64 bit OS  
Sample Draw file with Pre-DCR  
Sample Draw file without Pre-DCR

UNSAFE BUILDINGS DUE TO NON-COMPLIANCE OF FIRE SAFETY MEASURES, In Educational Institutions (Engineering Degree & Schools), Function Halls & Hospital.

How Do I | What's New | Our City | Achievements | Downloads

What are the online services provided by www.ghmc.gov.in  
How to pay my Property tax bill online  
Where can I request a birth or death certificate  
What is the requirement for submitting an application for building  
How to pay my Trade License Fee  
How do I Calculate my Property Tax  
How can I know the status of an ongoing works

FAQs on Online Compliance System for ECBC

FAQs on Online Compliance System for ECBC

# Step 3 Building Approval Committee

**A dedicated ULB-ASCI-IIIT resource included in Commercial Building Application Committee meetings for handholding support to ULBs**

- **Reviewing submitted projects**
- **Answering queries on ECBC requirements and process**
- **Ensuring ECBC compliance requirements are fulfilled**
- **Tracking and reporting progress**

# Step 4 Framework for Third Party Verification

- **Equip ULBs for ECBC compliance**
- **Create pool of minimum ECBC experts with certification**
- **Entrust institutional support to ULBS for effective implementation of ECBC**

# Andhra Pradesh and Telangana Case – Key Lessons and Roadmap

- **Lesson 1**

- Creating a sense of urgency for ECBC at the highest level – Preferably at the Chief Secretary level

- **Lesson 2**

- Institutional complexity and ownership in implementation of ECBC

- *Garrent Hardin's 'Tragedy of Commons'*

- Urban Development Departments at the State level shall anchor ECBC

- **Lesson 3**

- Code adaptation – Should be made applicable to town planning
- ULB involvement

- **Lesson 4**

- Incentives are split in the sector – create incentive structure for builders

- **Lesson 5**

- Code should be made mandatory – linked to reforms

- **Lesson 6**

- Capacities to support change at the state level
- Third party assessment for ECBC

# Thank You

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