



Bureau of Energy Efficiency



सत्यमेव जयते
Government of India
Ministry of Power



giz Deutsche Gesellschaft
für Internationale
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ANGAN

Augmenting Nature by Green Affordable New-habitat

A Courtyard for Revolutionary Change in Building Energy Efficiency
An International Conference on Building Energy Efficiency

9th-11th September, 2019 | Hotel The LaLIT, New Delhi





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THIS PRESENTATION WAS SHARED BY

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FOR THE SESSION:

“Policy Framework for Energy Efficiency in Buildings (Rating and Labelling System)”

DURING ANGAN 2019

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Energy Efficiency Label for Residential Buildings

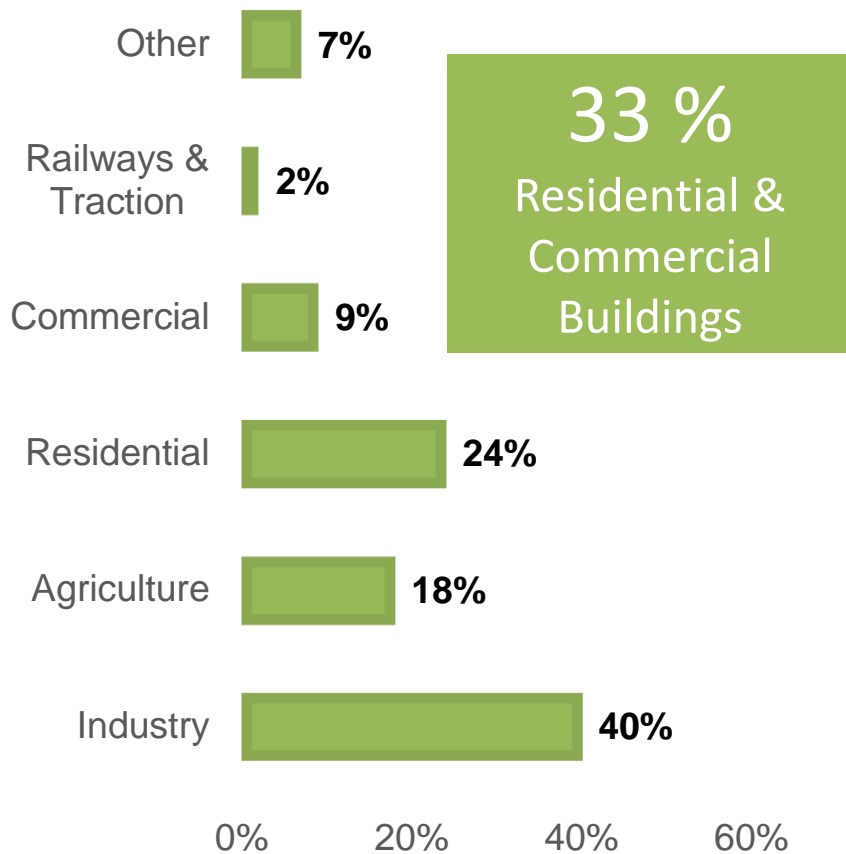


India's Electricity Scenario

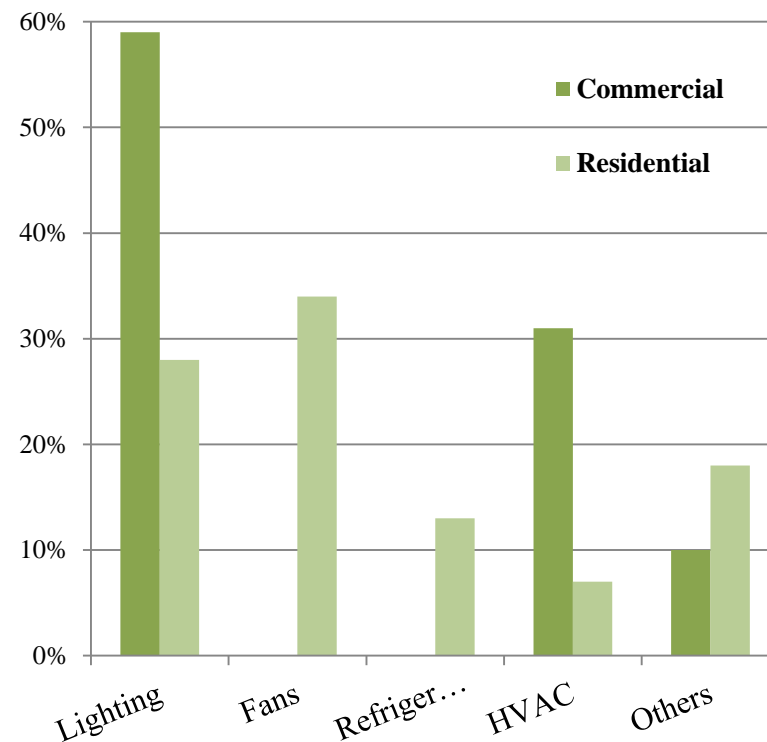


Electricity Consumption in 2016-17=1066 BU

TOTAL ELECTRICITY CONSUMPTION (BU) IN 2016-17



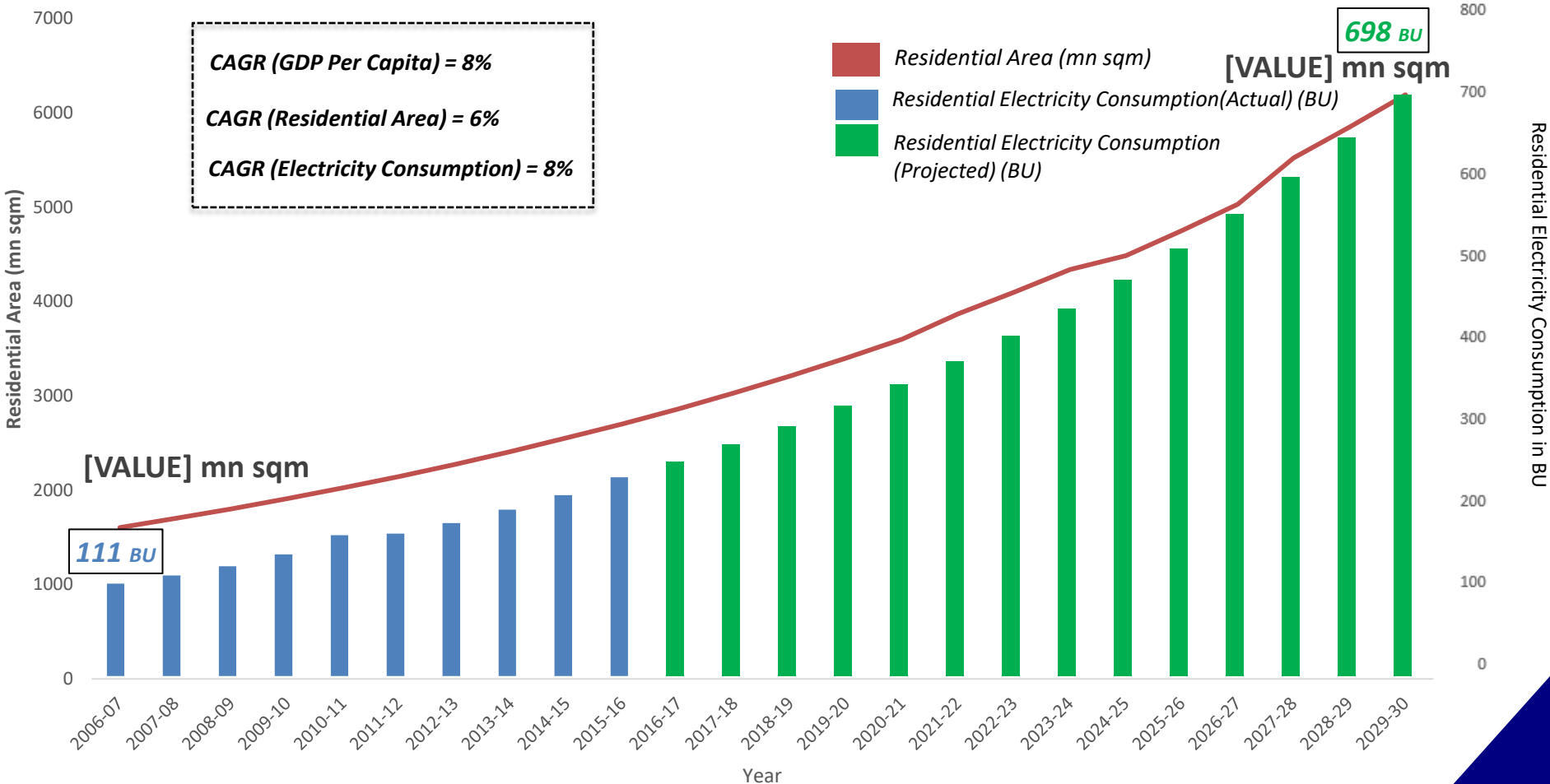
Electricity Consumption Pattern



Source: Energy Statistics 2018

Building Sector- Built up area and electricity consumption projection

Residential Electricity Consumption Vs Area





India will add
3 Billion m² by 2030 of New
residential building w.r.t
Year 2018

Need of labelling Program



Making energy efficient homes to tackle the soaring energy consumption in the residential sector

Help consumers make an informed decision while buying/leasing through the provision of direct, reliable & costless information

A step forward from EcoNiwas Samhita 2018 launched by Ministry of Power on 14th December 2018 by motivating consumers to move towards energy efficient designs

Objective of labelling Program



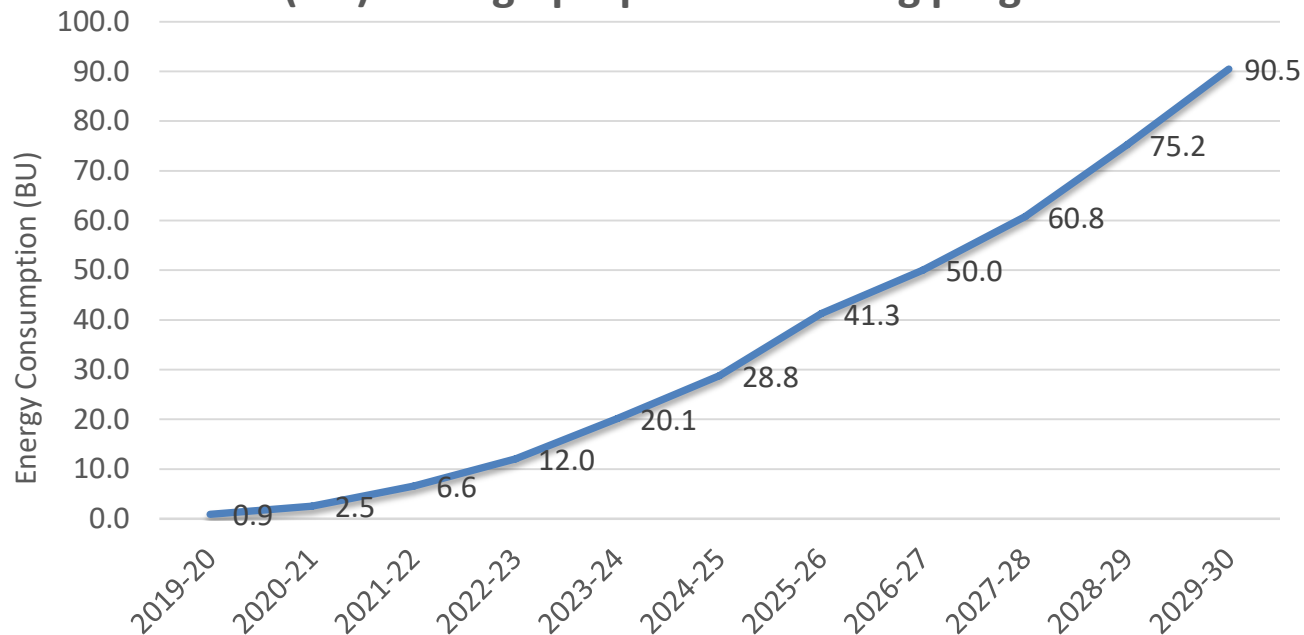
To assist public & building industry to identify the extent to which a new or existing house has the potential through design & construction to be of high efficiency in its use of cooling & heating energy

To facilitate rating of the thermally efficient dwelling unit design & construction in a manner that is nationally coordinated & consistent and is regionally sensitive to variations in climate

Potential of Energy Savings in New residential buildings



Total (New and Existing buildings)- Saving Potential (BU) through proposed labelling program



The estimated energy saving potential through proposed labelling program is around 388 BU by year 2030 which is greater than the energy consumption in 2016 (250 BU)

Potential of Energy Savings in New residential buildings



Summary of energy savings considering 2018-19 as base year		
Year	Savings (BU)	CO2 million tonnes
2019-20	0.9	0.74
2020-21	2.5	2.05
2021-22	6.6	5.41
2022-23	12	9.84
2023-24	20.1	16.48
2024-25	28.8	23.62
2025-26	41.3	33.87
2026-27	50	41
2027-28	60.8	49.86
2028-29	75.2	61.66
2029-30	90.5	74.21
TOTAL	388.7	318.73

Ancillary benefits of the program



Stimulate the larger energy efficient material & technologies market for residential buildings

Additional set of professionals to complete the process of residential label granting shall be a stimulant to Indian job market

Will encourage manufacturers to invest in energy efficient materials & thus support Make in India program

Disposable income generated from the energy savings will help stimulate other sections of the economy

Helps the nation work towards fulfilment of Global Sustainable Development Goals 7 of United Nations: Affordable & Clean Energy

Features of labelling Program



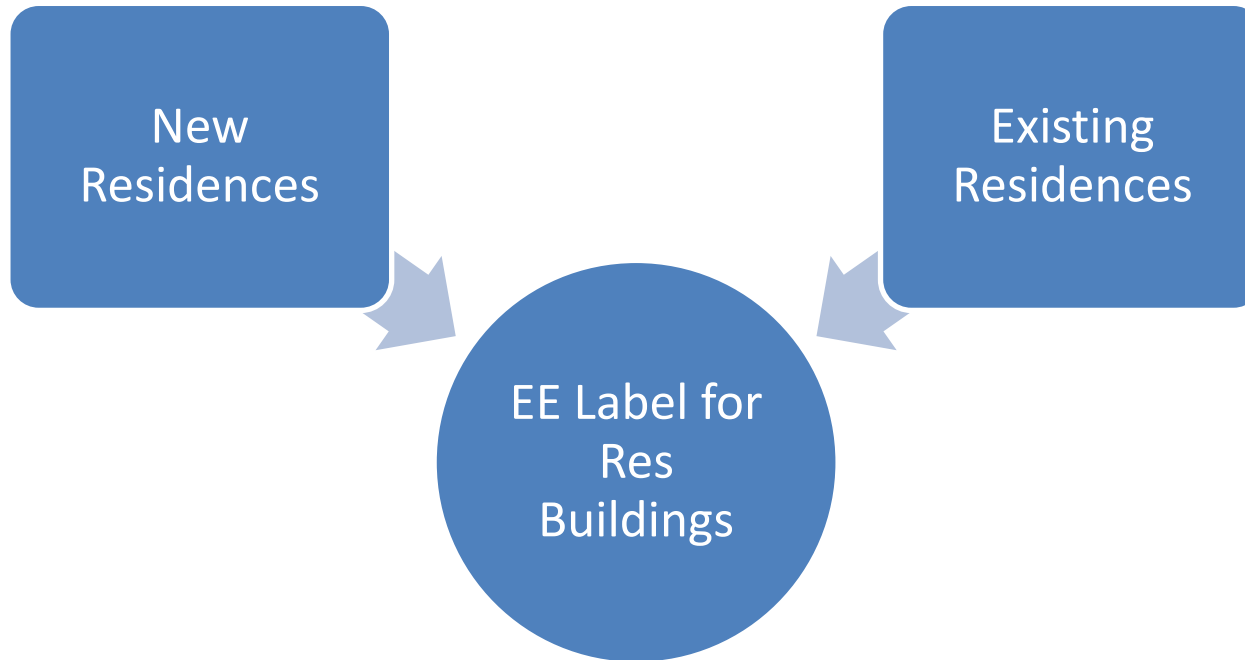
Choice for Consumers to select EE Homes

Encourages consumers to improve EE

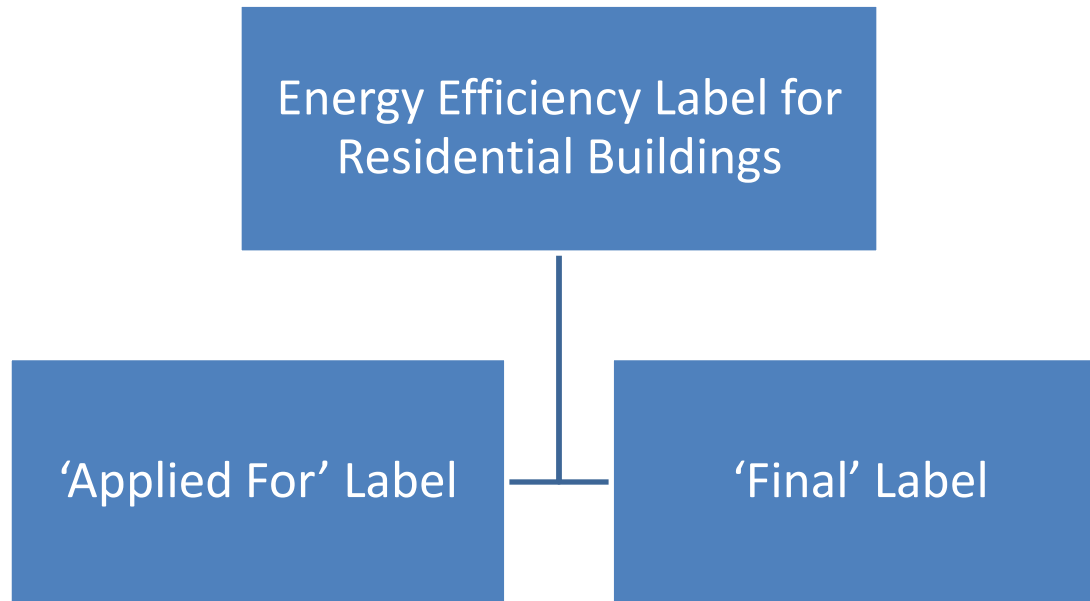
Peer to Peer Comparison

Provide information on the potential and actual energy use of buildings

Scope of labelling Program



- Program covers all types of residential buildings
- Making EE label a mandatory information required during real estate transaction/leasing will help in achieving the program's objectives



- 'Applied For' Label: This label is applicable for new buildings with construction permit issued by the authorities having jurisdiction. This label shall be mainly used for marketing of the property.
- 'Final' Label: This label is applicable for existing and new buildings. For new building, this label can only be awarded after the occupancy certificate is issued by the authorities having jurisdiction.

Residential Building Star Rating Plan



Hot & Dry

★	55 < EPI ≤ 67
★★	47 < EPI ≤ 55
★★★	38 < EPI ≤ 47
★★★★	29 < EPI ≤ 38
★★★★★	EPI ≤ 29

Warm & Humid

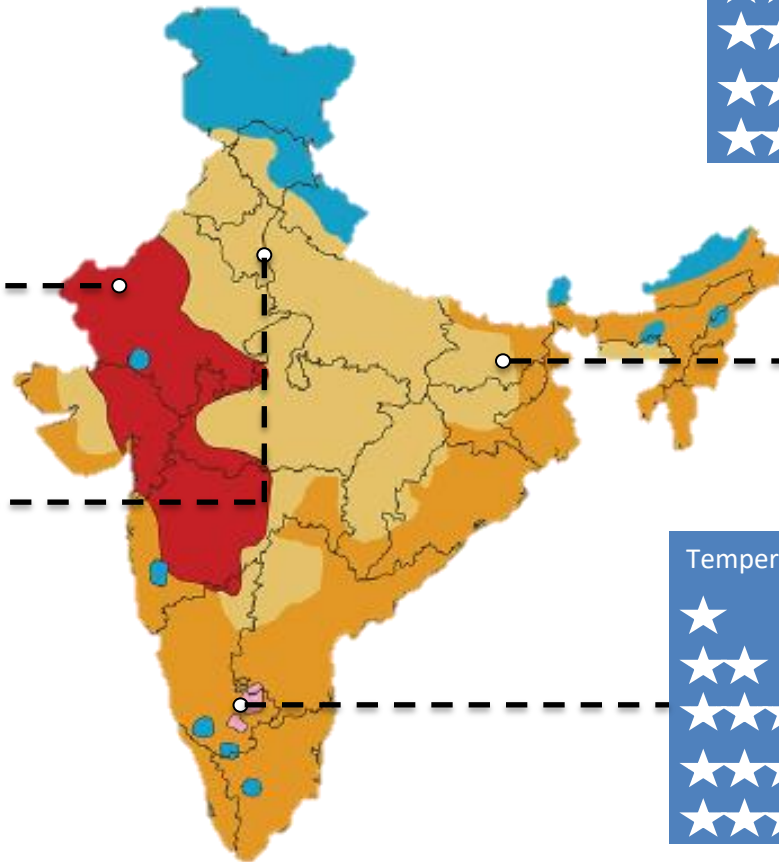
★	58 < EPI ≤ 64
★★	49 < EPI ≤ 58
★★★	39 < EPI ≤ 49
★★★★	30 < EPI ≤ 39
★★★★★	EPI ≤ 30

Composite

★	52 < EPI ≤ 60
★★	45 < EPI ≤ 52
★★★	37 < EPI ≤ 45
★★★★	29 < EPI ≤ 37
★★★★★	EPI ≤ 29

Temperate

★	28 < EPI ≤ 31
★★	24 < EPI ≤ 28
★★★	21 < EPI ≤ 24
★★★★	17 < EPI ≤ 21
★★★★★	EPI ≤ 17



LEGEND

■	Hot and Dry
■	Warm and Humid
■	Composite
■	Temperate
■	Cold

National Objective of labelling Program



- Move towards energy self sufficiency
- Helps To achieve Indian NDC Targets
- Market Transformation for Energy Efficiency

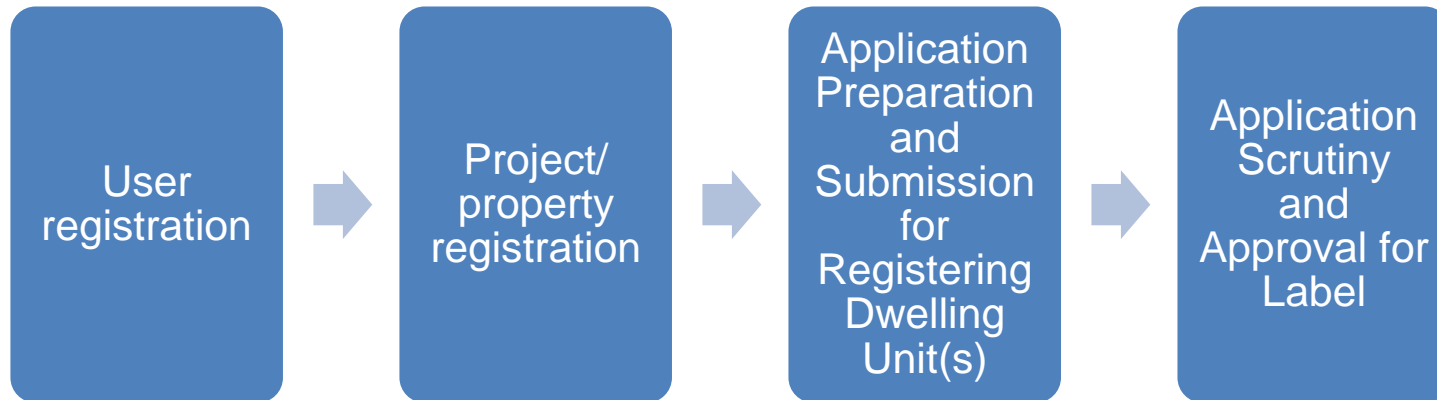




NAME: ABC
ADDRESS: XXX

- The plaque will be provided to the applicant (developer or owner) of the respective residential dwelling upon approval of 'Final' label. The developer or owner would be required to submit request to BEE for the plaque.

Application Process



Validity of label and plaque from the date of approval by BEE

'Applied For' Label (New Construction)	3 Years
'Final' Star Label (New Construction)	5 Years
'Final' Star Label (existing construction)	5 Years
Name plaque	Linked with validity of respective Final Star Label

Thank you

