

# Bridging the Information Gap: Energy and Sustainability Disclosures for Homebuyers

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Prayas (Initiatives in Health, Energy, Learning and Parenthood) is a non-Governmental, non-profit organization based in Pune, India. Members of Prayas are professionals working to protect and promote public interest in general, and interests of the disadvantaged sections of the society, in particular. Prayas (Energy Group) works on theoretical, conceptual, regulatory and policy issues in the energy and electricity sectors. Our activities cover research and engagement in policy and regulatory matters, as well as training, awareness, and support to civil society groups. Prayas (Energy Group) has contributed to policy development in the energy sector as part of several official committees constituted by Ministries, Regulatory Commissions and the Planning Commission / NITI Aayog. Prayas is registered as SIRO (Scientific and Industrial Research Organization) with Department of Scientific and Industrial Research, Ministry of Science and Technology, Government of India.

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# Executive Summary

India's residential real estate market is expanding rapidly, driven by urbanization, rising incomes, and growing demand for housing in cities such as Pune. At the same time, buildings account for a significant and increasing share of electricity and water consumption, particularly due to cooling loads and lifestyle-driven demand. While policy instruments, building codes, and voluntary green building rating systems have evolved to promote resource-efficient construction, the information available on adoption and performance of these measures to homebuyers remains limited, fragmented, and difficult to interpret.

This report identifies a critical information gap in India's residential real estate market. It highlights that improved energy and sustainability disclosures in buildings can strengthen transparency and enable informed decision-making at the consumer end. It suggests that although supply-side interventions such as building energy codes, environmental regulations, and certification frameworks have helped in improving design and construction practices, adoption of the same remains low. Further translation of the measures adopted by developers have not been translated into consumer-friendly information. Hence, homebuyers often lack clear, comparable, and verifiable information on the long-term implications of their purchase decisions in terms of energy consumption, water use, thermal comfort, operating costs, and environmental impact. The effectiveness of the supply-side interventions ultimately depends on the extent to which they are adopted and on whether their benefits are recognized and valued by homebuyers.

To assess current disclosure practices, the study conducted a structured review of 58 residential projects in Pune, including both certified and non-certified building projects. Information was collected from MahaRERA filings, developer websites, certification databases, brochures, and other publicly available sources. Evidence from this study shows that only 31% of projects disclose energy savings and 43% disclose water savings, often without consistent benchmarks or methodologies. As a result, available information is fragmented, non-standardized, and difficult to interpret. The analysis shows that sustainability claims are largely feature-based (e.g., rainwater harvesting, solar water heating, low-VOC paints) with little information on performance-based parameters. Further, stakeholder consultation with developers, green building consultants, and sector experts confirmed that although sustainability measures are being adopted, there is no consistent framework for communicating their benefits to consumers.

Using a Social, Technological, Economic, and Policy (STEP) framework, the study finds that it is essential to align the supply-side interventions such as regulations, codes and certification mechanism with consumer centric information disclosures. The analysis underscores that improvements in building performance alone are insufficient unless accompanied by clear communication that enables consumers to recognize and value these improvements and make informed purchases.

In response to these findings, the report proposes a standardized, consumer-centric sustainability disclosure framework for residential projects. The framework identifies measurable and verifiable parameters across key themes: compliance with local building byelaws, building materials and envelope

design, energy efficiency, water efficiency, EV-ready infrastructure, appliance efficiency (where applicable), and indoor environmental quality. The parameters are selected based on three principles: relevance to homebuyers, impact on operational performance, and measurability and verifiability. The proposed format can help in translating technical information into simple and structured disclosures that enable comparison across projects while remaining practical for developers.

Further the report also suggests pathways for institutional adoption of the suggested disclosures by integration with existing mechanisms, including Unified Development Control and Promotion Regulations (UDCPR) processes and MahaRERA registration requirements. Capacity building for developers, regulators, and practitioners, along with consumer awareness initiatives, will be essential to ensure effective adoption.

Standardized sustainability disclosures can improve transparency, empower homebuyers, and strengthen developer accountability. By making building performance simple and comparable at the point of purchase, these disclosures can shift sustainability from a niche marketing strategy to a main factor in housing quality and long-term operational costs. In India's fast urbanizing context, this is a crucial step toward bringing residential market practices in line with long-term energy efficiency, climate, and urban resilience goals.

# 1. Introduction

India's building sector is expanding rapidly to meet the housing and infrastructure needs of a growing urban population. While this growth supports economic development and improved living standards, it also has important implications for long-term energy demand, resource use, and environmental sustainability.

The residential sector already accounts for about **24% of total electricity consumption in India** (1) and demand is expected to rise significantly in the coming decades. Projections suggest that residential electricity demand could **nearly triple by 2070 under net zero policy scenario** (2). Much of this increase is likely to be driven by rising cooling needs and higher ownership of household appliances (3). At the same time, improvements in appliance efficiency and changes in consumer behaviour could moderate demand growth (4) under net-zero scenarios, highlighting the importance of energy-efficient building design.

Buildings typically last for several decades, and design decisions made during construction have long-term impacts on energy use and its impact on the urban environment. Factors such as building orientation, materials, and envelope design influence energy consumption throughout the building's life. Importantly, **more than 80% of the floor space expected to exist in India by 2050 has yet to be built** (5). This presents both an opportunity and a risk. If new construction continues to follow conventional practices, India could lock in high energy demand for decades. On the other hand, incorporating passive cooling strategies, efficient building envelopes, and energy-efficient design at the construction stage can significantly reduce long-term energy use.

Since improving sustainability in buildings is a systemic challenge, it involves multiple actors and factors. These include social, technological, economic, and policy drivers, collectively referred to as the STEP framework, which influences building performance and market behaviour. Understanding the interaction between these dimensions is essential for identifying opportunities to strengthen energy efficiency outcomes in the residential building market. The sections presented in this report examine the current landscape of policy instruments, market practices, and information environments in the residential sector, and consider how these elements together shape the adoption and visibility of sustainability and energy efficiency measures in housing developments.

As with any transformative change, the adoption of sustainability measures in the building sector is influenced by a combination of **social, technological, economic, and policy factors**, which is referred to as the **STEP framework**. This framework provides a structured lens for understanding the drivers shaping building performance and market behaviour.

**Social factors** include rising expectations of indoor comfort, changing lifestyles, and growing awareness of environmental issues. These trends influence consumer demand for improved housing quality and sustainable building features.

**Technological factors** relate to the availability and adoption of energy-efficient building materials, passive design strategies, improved construction practices, and high-efficiency appliances. Technological advances expand the range of options available for reducing energy consumption in buildings.

**Economic factors** shape the financial feasibility of sustainability measures. Construction costs, lifecycle savings, access to finance, and property market dynamics influence the extent to which developers and homebuyers adopt energy-efficient design features.

**Policy and regulatory factors** play a particularly important role in steering the building sector toward improved sustainability outcomes. Building codes, environmental regulations, and voluntary certification systems establish performance benchmarks and encourage the integration of sustainability considerations into building design and construction.

These factors operate from both the demand and supply sides of the residential building market, and often overlap. Technological and policy factors play a central role on the supply-side and determine what is feasible and implemented by developers. Availability of cost-effective technologies, building materials, and design practices, along with regulatory requirements and certification frameworks, influence project-level decisions.

Social and economic factors mainly shape homebuyer preferences and willingness to pay for sustainability features on the demand-side. Awareness of environmental issues, expectations of comfort, and sensitivity to lifecycle costs influence whether such features are valued in purchase decisions.

The factors from both the demand and supply sides reinforce as well as constrain each other. For example, policy mandates and technological advancements can enable the adoption of efficient design features, but their scale of implementation depends on market demand and the ability of developers to recover costs. Similarly, consumer awareness and demand for better-performing homes can incentivize developers to go beyond minimum compliance and adopt advanced sustainability measures.

India has introduced several **policy instruments, building codes, and voluntary rating systems** to improve energy efficiency and sustainability in buildings. This report presents a review of major green building rating systems used in India, including their certification processes and the weight given to different sustainability measures. While these frameworks guide developers in adopting better design practices, their impact also depends on whether sustainability considerations influence decisions in the housing market.

Despite growing attention to sustainable construction, there is no requirement for developers to consistently disclose sustainability information in residential project marketing or sales materials.

While certified projects (e.g., IGBC, GRIHA) have information available through certification platforms, this information is not consistently translated into consumer-facing formats for homebuyers. The information provided to buyers varies widely across projects. Where sustainability features are mentioned, they are often selective and presented in different formats, making comparisons difficult. As a result, homebuyers often lack clear information about a building's energy efficiency, environmental performance, and likely operating costs. This study also examines current disclosure practices among green residential projects in Pune using information available in the public domain.

The lack of clear and comparable information affects both consumer protection and the functioning of the housing market. Transparent disclosure of sustainability and energy performance can help buyers make informed decisions, encourage developers to compete on measurable performance, and promote the adoption of sustainable and energy-efficient design measures. It can also support broader policy goals related to climate action, energy security, and sustainable urban development.

To address this gap, this study proposes a **standardized sustainability disclosure framework** that can be verified by green building consultants and included in residential project marketing materials. The framework is based on an online survey of green residential buildings in Pune, a review of existing green building rating systems, and discussions with industry professionals. These methods help ensure that the framework is both technically sound and practical to implement.

This report aims to support **policymakers, regulators, urban local bodies, developer associations, and real estate professionals** in strengthening sustainability governance in the residential sector. It may also serve as a reference for developing policies that require standardized sustainability disclosures and align real estate market practices with India's broader energy and climate goals.

The next section presents a review of the **major green building rating systems and regulatory frameworks** applicable to residential buildings in India, including their structure, scoring systems, and certification processes. It also discusses their limitations as tools for communicating clear and comparable sustainability information to homebuyers.

## 2. Overview of Existing Building Sustainability Practices

Over the past two decades, building codes, environmental regulations, and voluntary certification systems have established performance benchmarks and encouraged the integration of sustainable design in buildings. Within this broader landscape, green building rating systems and related regulatory frameworks have emerged as some of the most visible supply-side mechanisms influencing residential construction practices and embedding sustainability considerations into project-level decision-making. An overview of these policy and market instruments provides useful context for understanding how sustainability objectives are translated into design and construction practices in the residential sector. In the following section we present the review of major green building rating systems and regulatory frameworks applicable to residential buildings in India, highlighting their structure, point allocation, and compliance mechanisms. It also examines their limitations as consumer information tools, particularly in conveying clear, comparable, and performance-based outcomes to homebuyers.

### 2.1 Overview of Major Green Building Rating Systems in India

In India, residential buildings are primarily certified under five major green building rating systems.

1. Indian Green Building Council (IGBC) developed by Confederation Indian Industry (CII) – IGBC Green Homes
2. Green Rating for Integrated Habitat Assessment (GRIHA) developed by The Energy and Resources Institute (TERI) – SVAGRIHA (for built-up area between 100 m<sup>2</sup> and 2,500 m<sup>2</sup>) or GRIHA Version 6 (for built-up area above 2,500 m<sup>2</sup>)
3. Green and Ecofriendly Movement (GEM) developed by ASSOCHAM
4. Leadership in Energy and Environmental Design (LEED) developed by US Green Building Council (USGBC)
5. Excellence in Design for Greater Efficiencies (EDGE) developed by the International Finance Corporation (IFC)

As these rating systems are developed by different organisations, they follow independent certification processes, timelines, and evaluation methodologies. Among these, IGBC Green Homes is the most popular system in India (6).

Though these rating systems play an important role in promoting sustainability awareness and encouraging adoption of green measures, their voluntary adoption and difference in the weightages assigned to green parameters result in significant variation in how sustainability is defined, measured, and communicated across projects.

### 2.2 National Rating Systems and Regulatory Context

Among the rating systems currently in use, GRIHA has been formally adopted as the national green building rating system (7). In Maharashtra, the adoption of GRIHA is mandatory for all government and semi-government buildings (8). However, for private residential developments, adoption remains voluntary, limiting its capacity to achieve large scale impact.

Additionally, the Bureau of Energy Efficiency (BEE) has developed the Energy Conservation and Sustainable Building Code for Residential Buildings, also referred to as Eco Niwas Samhita (ENS) or ECBC-R (9). This code establishes minimum energy performance standards for residential buildings based on envelope performance, passive design and energy efficiency ratings/measures.

The applicability of ECBC-R is determined by one or more of the following criteria:

- Connected load  $\geq$  100 kW, or
- Contract demand  $\geq$  120 kVA, or
- Plot area  $\geq$  3,000 m<sup>2</sup>, whichever is more stringent.

As of March 2026, ECBC-R has not been notified in Maharashtra.

Adoption/implementation of building codes (including ECBC-R) and green building rating systems primarily focus on fulfilling compliance requirements and do not address how sustainability is disclosed to consumers in the real estate market. Hence, there is a need for mechanisms that can translate technical compliance parameters into simple, accessible and comparable information for homebuyers.

## 2.3 Structure of Green Building Rating Systems

### 2.3.1 Categories and Credit Types

All major green building rating systems follow a broadly similar structural approach, wherein points are allocated across multiple sustainability categories. Common categories include:

- Energy efficiency
- Water efficiency
- Materials and resources
- Indoor environmental quality
- Sustainable site planning and transport

Despite the similarity in structure, the number of credits, performance thresholds and point allocation mechanisms vary considerably across rating systems. Each system defines its own criteria, documentation requirements and evaluation processes. Projects seeking certification must demonstrate compliance with prescribed parameters to earn points, which are then aggregated to determine the final rating level.

Although diversity in methodologies is inherent to different rating systems, it can lead to challenges in cross-project comparison and in consistently interpreting ratings as indicators of performance.

This diversity in methodologies complicates cross-project comparison and limits the ability of consumers and regulators to interpret ratings as indicators of predicted or certified performance, especially where post-occupancy performance is not consistently measured or disclosed.

### 2.3.2 Mandatory versus Optional Credits

A key feature of all rating systems is the distinction between mandatory (prerequisite) credits and optional (performance-based) credits. Compliance with mandatory credits is required for projects to become eligible for certification and optional credits allow projects to get additional points to achieve higher rating levels.

However, the number and stringency of mandatory credits differ across systems, as do the total available points and weightages assigned to each category. As a result, two projects with the same rating under the same rating system may demonstrate significantly different sustainability outcomes.

This raises concerns from a homebuyer perspective, as rating levels alone may not be sufficient to convey the extent of sustainability measures implemented.

## 2.4 Distribution of Points Across Sustainability Categories

The analysis of the point distribution across major rating systems shows significant variation in the emphasis placed on different sustainability criteria. The approximate percentage allocation across categories across rating systems is as follows:

- **Energy efficiency:** 15–30% of the total points
- **Materials and resources:** 14–18% of the total points
- **Water efficiency:** 8–23% of the total points
- **Indoor environmental quality:** 12–14% of the total points
- **Site planning and transport:** 20–24% of the total points

The variation in the ranges indicate that even though these are the core components of all rating systems, their relative importance varies significantly.

Such variation has two key implications.

1. It allows projects to achieve certification by prioritizing non-energy measures, even though operational energy use is a major contributor to emissions and household costs.
2. It challenges the ability of ratings to serve as a tool to convey long-term benefits from the environmental and economic perspective.

## 2.5 Weightage Assigned to Design Intent versus Operational Performance

While point allocation in most rating systems is primarily linked to design and construction-stage compliance, a few systems incorporate elements of post-construction or operational performance. Across the rating systems, points allocated to design/construction-stage compliance range from approximately 30% to 60% of the total points. For example, IGBC places greater emphasis on design-stage compliance, while GRIHA incorporates elements of post-construction assessment.

This implies that even if a project demonstrates compliance with the mandatory credits at design/construction stage it will still get a green rating which also means that operational energy performance or thermal comfort during the post occupancy stage may not be ensured.

This also implies that some certified green buildings may only perform marginally better than the conventional buildings with a possibility of not performing better than the conventional building in the post occupancy stage.

For homebuyers, this creates a confusion between the expectations associated with a "green" rating achieved and the actual experience of comfort, energy savings and utility costs. It also limits the effectiveness of rating systems as tools for reducing long-term environmental impact.

Therefore, the green rating is not a sufficient indicator of building performance if not accompanied with project-specific disclosures.

## 2.6 Limitations of Green Building Rating Systems as Consumer Information Tools

Although green building rating systems have played an important role in advancing sustainability practices within the construction sector, they also have some limitations.

- Ratings do not convey absolute performance or costs  
The green ratings usually convey relative achievements and not the actual performance of the building and costs associated with it.
- Difficulty in comparing across projects  
Differences in point allocation and weightages given to various parameters across green building rating systems along with optional credits make it difficult for the consumer to compare projects across rating systems.

The rating also does not convey specific benefits such as reduced utility bills, improved thermal comfort if not accompanied with the additional relevant information.

These limitations suggest that relying solely on green ratings or selective disclosure of adopted measures is insufficient to convey the true value of sustainability interventions to homebuyers.

While green building rating systems and related policy instruments have contributed to advancing energy considerations in the construction sector, their primary focus remains on guiding design and construction practices. Their effectiveness in shaping market behaviour depends on how these performance attributes are interpreted, valued, and communicated within the residential real estate market. Understanding the interaction between existing policy instruments and market responses is therefore important for assessing how sustainability considerations translate into wider adoption and awareness. This aspect is examined further in the following section.

### 3. Importance of Consumer Awareness

The effectiveness of these supply-side interventions ultimately depends on the extent to which they are adopted and on whether their benefits are recognized and valued by homebuyers. Although regulatory frameworks and green building rating systems influence how residential projects are designed and constructed, their broader impact is dependent on consumer awareness and the resulting demand for better-performing homes. When performance parameters are not presented in a clear, simple, and comparable manner, sustainability features are less likely to influence purchasing decisions, thereby limiting the overall effectiveness of policy measures. Bridging this information gap is therefore critical to ensure that improvements in building performance translate into informed choices and help improve sustainability in the built environment.

At present, information on the performance of residential projects is fragmented and difficult to navigate. Details on sustainability and energy efficiency are spread across certification documents, regulatory submissions, brochures, and technical reports, with little standardization or scope for easy comparison. This pattern is evident from our survey of more than 50 residential projects in Pune, the findings of which are presented in the following sections of this report. Even when such features are mentioned in marketing materials, they are often described in broad or selective terms, making it hard for buyers to understand what they mean for energy bills, water use, thermal comfort, or long-term operational costs. As a result, building performance seldom becomes a decisive factor in purchase decisions.

This challenge is not limited to certified green projects. Many building projects include efficiency features without formal certification, yet inconsistent and lacking consumer-oriented disclosure practices make comparison difficult. Metrics such as the Energy Performance Index (EPI) or labels like "Gold" and "Platinum" signal performance, but rarely explain expected savings or practical benefits. Without clear benchmarks and consumer-friendly communication, performance attributes remain secondary to factors such as location, price, and amenities.

## 4. Evidence from the Market: Information Gaps in Practice

### 4.1 Sources of Information Available to Homebuyers

Understanding the sources and types of information available about a residential project is important for assessing how such information informs homebuyers at the time of purchase. A prospective buyer typically encounters project-related information from multiple channels before and during the decision-making process. These sources vary depending on the type of information sought and the stage of project development.

Broadly, information available to homebuyers may be grouped into three categories: regulatory and compliance-related disclosures, certification-related information, and project marketing materials. In Maharashtra, several compliance-related documents are accessible through the Real Estate Regulatory Authority (RERA) portal. For instance, the presence of an occupancy certificate may indicate compliance with the National Building Code, while details related to project amenities and facilities can be accessed through Form 1 Table B on the MahaRERA portal. Where projects pursue green building certification, the certification status can typically be verified through documents shared by developers or certification bodies.

In addition to these formal sources, prospective buyers are also exposed to information through brochures, pamphlets, project websites, and promotional material prepared by developers or associated consultants. These materials constitute the primary marketing interface between developers and homebuyers. While these various sources collectively provide a substantial volume of project-related information, they differ significantly in purpose, format, and level of detail. Understanding how this information translates into meaningful and usable insights for homebuyers therefore requires closer examination of how it is currently communicated.

### 4.2 Nature of Information Currently Communicated

Information related to sustainability and energy efficiency is currently dispersed across multiple sources, including regulatory filings, certification documents, and project marketing materials. However, the presence of information across several platforms does not necessarily translate into clarity or comparability for homebuyers. Performance-related details are often presented in fragmented formats and are not always integrated into a coherent narrative that allows buyers to assess their practical implications.

Where green certifications are highlighted, communication typically emphasises the achievement of certification rather than explaining associated performance outcomes in consumer-relevant terms such as expected energy use, water consumption, or operational cost implications. Information available through regulatory filings such as RERA disclosures is largely aligned with existing reporting requirements, which focus on compliance-related attributes and project amenities. As a result, these disclosures do not typically include detailed information on long-term building performance or resource implications, indicating a potential area for strengthening disclosure provisions within the regulatory framework.

Encouragingly, some developers are beginning to share energy savings information for their projects, reflecting a positive shift toward greater transparency. This includes the inclusion of indicative savings or efficiency-related claims in project marketing materials. However, the format, level of detail, and consistency of such information vary significantly across projects. As a result, while sustainability-related information may be available across different sources, its usability from a homebuyer perspective remains uneven. This underscores the importance of examining how such information is currently presented in practice across residential projects and the extent to which it supports meaningful comparison or understanding for prospective buyers.

# 5. Evidence Base for Assessing Disclosure Practices

## 5.1 Methodology

To assess the state of sustainability information available to homebuyers in Pune's residential real estate market, a structured review of marketing and informational materials was conducted. The methodology was designed to capture both the breadth and depth of disclosures across multiple sources and project types.

### Types of Projects Reviewed

**Scope:** A total of 58 residential projects a mix of high and midrise buildings located within the Pune metropolitan region were analysed. The projects were selected through a purposive sampling approach, based on the availability of publicly accessible information across developer and consultant platforms, regulatory portals (MahaRERA), and certification databases. The aim was to capture as much information as was available on online sources.

**Project Types:** The sample included a mix of:

- Apartment complexes with some low and mostly high risers
- Both certified (IGBC, GRIHA, GEM) and uncertified projects (Figure 1, 2, 3)
- Projects across multiple years, as indicated by their completion and certification timelines, capturing both recent and relatively older developments in the timespan of 2013–2027
- Built-up area ranging from 920 sq. m. to 306928 sq. m.

### Sources of Information

To ensure a comprehensive view, data was collected from multiple, often non-integrated, sources:

- Digital Platforms: Consultant and developer websites, social media handles (Instagram, LinkedIn)
- Official Portals: MahaRERA project directories, certification agency databases (GRIHA, IGBC)
- Marketing Collaterals: Sales brochures, pamphlets, and sample advertisement copies
- Technical Documentation: Where available, design briefs and sustainability reports available on consultants' websites

This multi-source approach was necessary due to the absence of a centralized, authoritative repository for green building performance data in India.

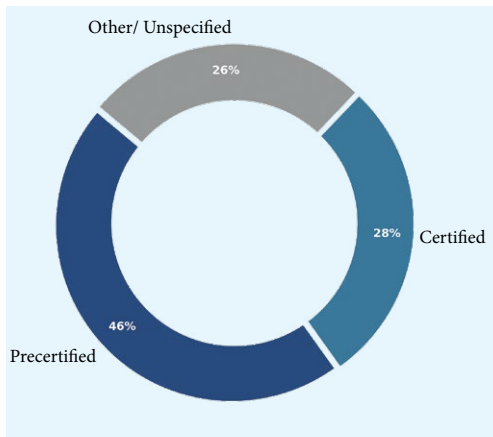


Fig. 1 : Certification status of projects studied

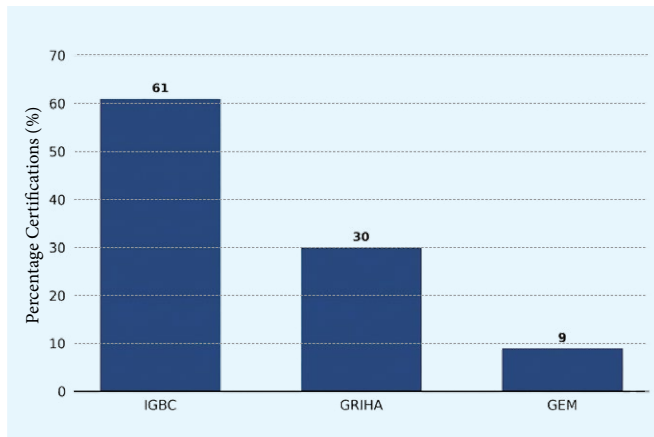


Fig. 2 : Different certifications of certified projects

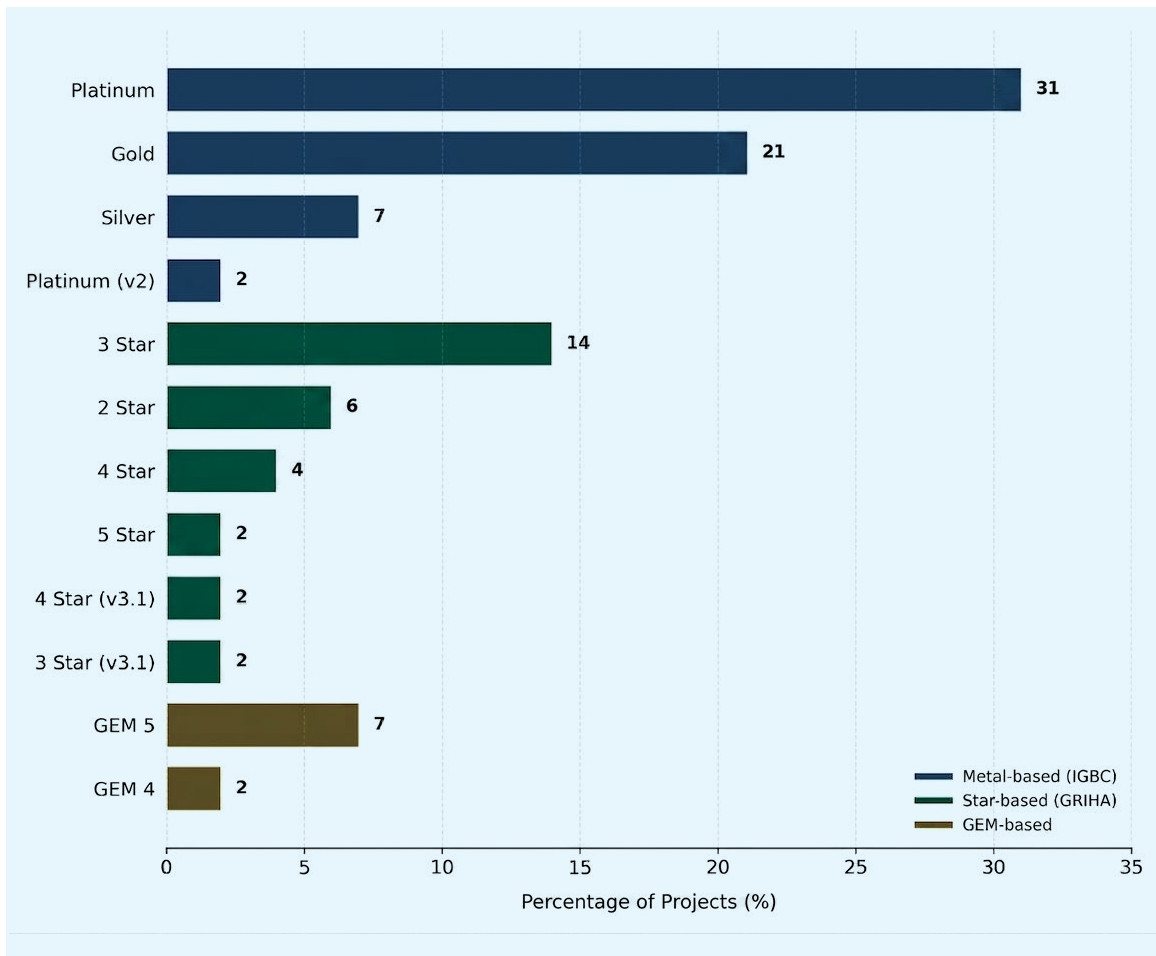


Fig. 3 : Certification levels of projects having green certifications

In addition to the market review, stakeholder consultations including a multi-stakeholder roundtable and interactions with developers and sector experts were conducted to understand practical challenges and perspectives related to sustainability disclosures.

## 5.2 Sustainability Claims Observed

Analysis of the collected materials indicates that energy efficiency messaging is largely framed around feature-based descriptions rather than performance-based outcomes. The most frequently encountered claims can be categorized as follows:

Certification Badges: Prominent display of certification logos (e.g., "IGBC Platinum Precertified," "GRIHA 3-Star") as a commonly used credibility marker.

Feature Checklists: Lists of installed or proposed green features, such as:

- Rainwater harvesting systems
- Solar water heating
- Sewage treatment plants (STP)
- Organic waste converters
- Low-VOC paints and adhesives

Material Sourcing: Claims of using "local," "eco-friendly," or "recycled content" materials (e.g., fly ash bricks, AAC blocks).

Amenity-Led Green Claims: Landscaped gardens, "green" podiums, and native plantations are often marketed as core sustainability benefits.

Vague Performance Statements: Use of non-quantified terms like "energy-efficient," "water-saving," and "enhanced daylight" without supporting metrics.

A word frequency analysis of project attribute descriptions underscores this trend. The most common terms were "water" (176 mentions), "energy" (90), "solar" (58), and "waste" (54), indicating these as key marketing themes. However, these terms were predominantly used in descriptive contexts rather than to communicate measurable performance outcomes.

### 5.3 Information Typically Provided

The review examined the nature and form of sustainability-related information currently provided across project materials.

1. Predominantly narrative disclosures. Projects list what features are included but rarely state how well they perform. For example: Common Claim: "Rainwater harvesting system provided."

In most cases, such statements do not include information on total capacity, percentage of runoff captured, or estimated reduction in municipal water demand.

2. Availability of quantitative performance information

Water Saving: Only 25 out of 58 projects (43%) disclosed a water-saving percentage. Among these, the average claimed saving was 46.7%, with a wide range (30% to 68.8%) and high standard deviation (15.4%), indicating unreliable benchmarking.

Energy Saving: Only 18 projects (31%) provided an energy-saving figure. The average was 49.8%, but performance varied wildly (10.2% to 84%), with a standard deviation of 27.1%.

Daylighting: 15 projects (26%) mentioned daylighting performance, with an average of 89% of spaces daylit.

3. Prevalence of feature-based descriptions relative to performance indicators

A tree map (figure 4) derived from the attribute taxonomy data, showing that highly prevalent attributes (e.g., Daylighting - 57%, Solar Water Heating - 34.5%) are often described, not measured. Medium-prevalence attributes (e.g., EPI - 17.2%, Thermal Comfort - 17.2%) related to actual performance are mentioned less frequently.

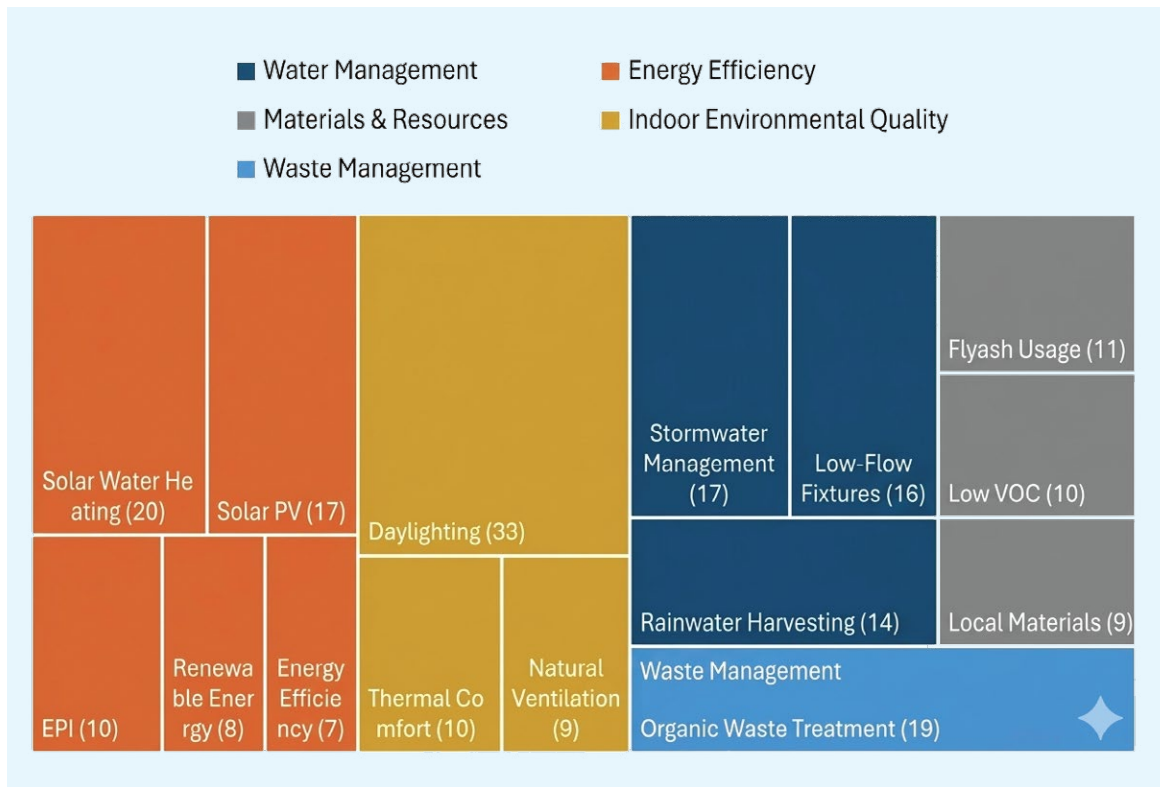


Fig. 4 : Tree map of the frequency of attributes

These observations provide a descriptive overview of the type and format of sustainability-related information currently communicated across projects. The implications of these patterns for consumer interpretation and market transparency are discussed in the following subsection.

#### 5.4 Critical Gaps Identified

The review highlights several structural gaps that limit the ability of efficiency-related as well as sustainability-related information to support informed decision-making by homebuyers and to enable meaningful comparison across projects.

##### 1. Limited disclosure of quantified energy and water performance

Across most projects reviewed, sustainability communication focuses on the presence of features rather than their measurable outcomes. Quantified indicators of operational performance are not consistently disclosed.

Energy performance indicators such as projected Energy Performance Index (EPI in kWh/sqm/year) are rarely provided, making comparison with code benchmarks or conventional construction difficult. Similarly, water-related information is generally limited to the presence of systems such as rainwater harvesting, without estimates of expected consumption or percentage reduction relative to conventional usage. Where solar photovoltaic or solar thermal systems are mentioned, their contribution to meeting total building energy demand is typically not specified.

In the absence of such quantified metrics, homebuyers may find it difficult to assess the operational implications of sustainability features.

2. Limited visibility of lifecycle and operational cost implications

Marketing and project information are generally oriented toward upfront cost, amenities, and certification status. Information on long-term operational expenditure or lifecycle cost implications is seldom provided in consumer-facing materials.

Estimates of potential savings in electricity or water expenditure, payback periods for efficiency-related investments, and long-term cost implications of building performance are not commonly communicated. As a result, the relationship between building design features and long-term household expenditure may not be readily apparent to prospective buyers.

3. Lack of standardized and comparable metrics

Information related to sustainability and efficiency is typically presented in project-specific formats, using varied terminologies and indicators. This variation makes comparison across projects challenging.

For instance, one project may describe the use of water-efficient fixtures, while another may present a percentage reduction in water consumption. Without a common set of standardized indicators, it becomes difficult for buyers to interpret relative performance or to compare alternative housing options on the basis of resource efficiency.

4. Limited translation of features into occupant comfort and health outcomes

While many projects highlight features such as daylight access, thermal comfort measures, or low-emission materials, their implications for occupant comfort and well-being are not always communicated in measurable or relatable terms.

References to thermal comfort or indoor air quality are often presented qualitatively, without accompanying performance indicators or expected outcomes. This limits the ability of homebuyers to interpret how such features may influence everyday living conditions.

5. Reliance on design-stage or precertification communication

A number of projects reviewed prominently display precertification status or design-stage approvals. While such recognitions indicate intent to meet certain sustainability criteria, they do not necessarily reflect post-construction or operational performance.

In the absence of consistent post-occupancy information or performance-linked disclosures, it may be difficult for homebuyers to distinguish between projected and actual outcomes.

6. Fragmentation of information across multiple sources

Sustainability-related information is dispersed across multiple platforms including regulatory portals, certification databases, developer websites, and marketing brochures. There is currently no single, standardized, consumer-facing document that consolidates key performance-related information for residential projects.

This fragmentation places the responsibility on homebuyers to compile and interpret information from diverse sources, which may not always be feasible or effective.

Taken together, these observations suggest that while efficiency-related and overall sustainability-related information is increasingly present within residential project communication, its current form and structure may limit its usefulness for consumer interpretation and comparison.

Addressing these gaps would require approaches that improve clarity, comparability, and accessibility of performance-related information within the residential real estate market.

## 5.5 Stakeholder Perspectives

To complement the review of project-level information, stakeholder interactions specifically with green building consultants and developers were undertaken to understand how efficiency and sustainability-related information is currently communicated and interpreted within the residential real estate ecosystem. These interactions included a roundtable of building experts jointly organised by Pune International Centre and Prayas (Energy Group), as well as informal consultations with developers, and sustainability consultants.

Discussions highlighted that while compliance requirements and green certification processes are increasingly integrated into project design, the communication of sustainability-related features to homebuyers remains uneven and non-standardized. Participants noted that developers often incorporate multiple resource-efficiency measures such as improved building envelopes, water management systems, and renewable energy installations. However, the benefits of these measures are not always translated into clear and comparable information for prospective buyers.

Stakeholders also emphasized that improved availability of credible and comparable information could support more informed decision-making by homebuyers and gradually strengthen demand for resource-efficient housing. At the same time, developers and consultants highlighted practical challenges associated with data measurement, verification, and standardization, particularly in the absence of a common reporting framework.

The consultations further explored which performance parameters may be most relevant to disclose from a homebuyer perspective and how such information could be presented in a manner that is both technically sound and easily interpretable. These inputs have informed the identification of key disclosure parameters and the development of the proposed framework presented in later sections of this report.

## 5.6 International Insights

Experiences from other countries show that clear performance disclosure systems can improve transparency and awareness in the building sector. In this section we present details of different standardized frameworks that have been adopted at country/city level which share information on a building's energy and sustainability performance at the time of construction, sale, or occupancy.

In the European Union, Energy Performance Certificates (EPCs) were introduced under the Energy Performance of Buildings Directive. These certificates provide a standardized rating of building energy performance and are required at the time of sale, rental, or construction. EPCs typically include an efficiency rating along with indicative recommendations for improvement. By presenting performance information in a comparable and easily interpretable format, the system aims to support informed decision-making among buyers and tenants and to encourage improvements in building efficiency over time (10). Evidence from housing markets in Europe suggests that disclosure of energy performance has translated into measurable demand, with energy-efficient homes consistently attracting higher price premiums. This indicates that buyers not only value but are willing to pay more for such attributes when transparently disclosed.

In the United States, a number of cities have implemented building energy benchmarking and disclosure policies. For example, New York City's benchmarking requirements mandate annual reporting of building energy and water consumption data for large buildings. The data is compiled using standardized tools and made publicly accessible. Such initiatives enable building owners, tenants, and

regulators to compare performance across similar buildings and to identify opportunities for efficiency improvements (11).

Australia's Nationwide House Energy Rating Scheme (NatHERS) provides another example of standardized performance communication. New residential buildings and major renovations are assessed using simulation-based tools to generate a star rating reflecting thermal performance. This rating is required to be disclosed in property listings and marketing materials, enabling prospective buyers to consider expected thermal performance and energy implications during purchase decisions (12).

In Singapore, building performance disclosure is integrated with broader green building policies through mechanisms such as the Building Energy Submission System and the Green Mark certification framework. Periodic reporting of operational energy performance and performance-linked recertification help maintain alignment between design intent and operational outcomes (13).

These international examples illustrate how structured disclosure practices can complement regulatory and certification frameworks and support more informed decision-making within the building sector.

# 6. Designing Consumer-Centric Disclosures

The previous sections presented a review of the policy landscape, current practices, and market insights. It highlights the need and relevance of a structured approach to communicating sustainability information in a way that is useful for homebuyers and practical for developers. While the analysis draws information from certified and emerging green projects, the proposed approach is intended for the broader residential market, to also include projects without formal certification.

Building on these insights, this section outlines the design principles and key parameters for a consumer-oriented sustainability disclosure framework for residential projects. The effectiveness of such a framework depends on selecting parameters that are measurable, relevant to long-term building performance, and meaningful from a homebuyer's perspective. The identified parameters are based on a review of existing green rating systems and their limitations as consumer information tools, complemented by expert consultations to ensure practicality, clarity, and usefulness from consumer perspective.

## 6.1 Principles for Selecting Disclosure Parameters

The shortlisting of disclosure parameters considers two important principles, design to align information with consumer needs and acceptability of the developer to disclose the information.

### 6.1.1 Relevance to Homebuyers

For sustainability disclosures to be effective, the information provided must be understandable, relatable, and meaningful to homebuyers. Technical terminology and abstract performance indicators often limit consumer engagement and reduce the usefulness of disclosed information. Therefore, the identified parameters have been structured and grouped under clear and intuitive themes that directly relate to everyday experience of the residents.

The disclosure parameters have been organised under the following headings:

- Compliance with local building byelaws
- Building materials and design measures for heat impact reduction
- Energy efficiency measures
- Water efficiency measures
- Electric vehicle (EV) ready parking infrastructure
- Appliance efficiency provisions
- Indoor environmental quality

Such thematic grouping allows homebuyers to assess how individual measures influence comfort, energy and water bills, health and future readiness of the dwelling. This approach can improve accessibility of information and help reduce information asymmetry in the real estate market.

### **6.1.2 Impact on Operational Life of the Building**

Energy and water consumption along with maintenance costs and occupant comfort in the residential buildings over their lifespan are significantly influenced by design and construction choices. The parameters selected for disclosure are therefore prioritized based on their impact on building performance during the operational phase.

Parameters related to thermal comfort, energy efficiency and water efficiency have a direct impact on household expenditure and environmental performance. Similarly, provisions such as EV-ready parking anticipate future mobility trends and reduces the need for costly retrofits later on. By focusing on such parameters, the disclosure framework encourages long-term sustainability and savings.

Emphasizing operational performance through such disclosures can contribute to improved resource efficiency and long-term cost awareness, and climate resilience.

### **6.1.3 Measurability and Verifiability**

A critical limitation of existing disclosure practices is the lack of measurable/verifiable information. To address this, the disclosure parameters were shortlisted only if they could be measured objectively and verified during or after occupancy.

Measurable disclosures ensure that disclosed information is based on quantifiable data rather than qualitative statements. Verifiability of the disclosures can enable regulators and homebuyers to validate the information provided, thereby enhancing credibility and accountability of the developer. The selected parameters are designed to be verifiable using readily available information without imposing excessive reporting burden on developers.

## **6.2 Stakeholder Consultation and Validation Process**

The identification of critical disclosure parameters was further strengthened through stakeholder consultations with green building consultants and industry experts. The stakeholder consultation with green building experts was organized after an initial shortlisting of parameters which was based on a comparative analysis of mandatory and voluntary features recommended across reviewed green building rating systems.

The comparative review focused on identifying parameters that appeared consistently across multiple rating systems and were assigned significant weightage, particularly in relation to thermal comfort, energy efficiency, water efficiency and future-ready infrastructure such as EV parking. These parameters were considered to have a substantial influence on consumer behaviour as well as on building performance during the operational phase.

Stakeholder consultation with green building experts was conducted to fulfill following objectives:

- To validate whether the shortlisted parameters adequately capture high-impact sustainability measures
- To discuss the feasibility of reporting each parameter.
- To identify challenges if any in providing data for the select parameters.
- To refine and finalize a practical, high-impact set of parameters.

Each parameter was discussed in detail to determine the specific data points that could reasonably be requested from developers.

The discussions also focused on identifying consumer-centric disclosure formats that translate technical information into easily understandable pointers. This step was critical in ensuring the effectiveness of the disclosures in enhancing transparency for homebuyers.

## **6.3 Proposed Disclosure Formats and Content**

### **6.3.1 Objectives of a Building Sustainability Disclosure**

The proposed sustainability disclosure framework is intended to serve as a transparent, standardized, and consumer-friendly format to communicate the sustainability performance of residential buildings. These disclosures will also influence the design, construction and operational performance of the building. Building sustainability disclosures are proposed with the following objectives.

#### *6.3.1.1 Enhancing transparency and informed decision-making*

The primary objective is to provide clear, reliable and comparable information on sustainability features and performance of a building to homebuyers/consumers. Disclosures will also enable consumers to understand how a building is going to perform in terms of thermal comfort, energy efficiency, water use and material selection thereby supporting informed purchase decisions.

#### *6.3.1.2 Support Compliance with byelaws and sustainability mandates*

Sustainability disclosures will help to demonstrate compliance with local building byelaws and associated mandatory sustainability provisions.

#### *6.3.1.3 Encourage adoption of sustainable building practices*

Disclosures not only improve consumer awareness by highlighting best construction practices but also support the creation of standardized benchmarks for comparing building performance. This, in turn, can drive competition among developers to deliver better outcomes. At the same time, transparent performance information can help developers better position high-performing projects potentially attracting higher returns.

#### *6.3.1.4 Improved recognition and value of green/energy efficient buildings*

Standardized sustainability disclosures will allow differentiation between conventional and energy efficient buildings. This differentiation can translate into sustainability-driven real estate market.

#### *6.3.1.5 Support policy formulation and datadriven governance*

Aggregated disclosure data can be used by policymakers and urban local bodies to assess sector-wide sustainability trends, identify gaps in implementation and refine future regulations. The disclosures thus serve as an important feedback mechanism for evidence-based policy development and continuous improvement of building regulations. The data collected through these disclosures may add value and enable/support data driven decision making by the government officials.

## **6.4 Core Disclosure Components**

The core components of Building Sustainability Disclosure need to be comprehensive yet structured, ensuring clarity for consumers while remaining practical for developers. Based on the identified essential disclosures and proposed mandatory information, the core components may be organized as follows:

<b>Sr. No.</b>	<b>Critical components identified for disclosures</b>	<b>Benefit of the disclosure for the consumer / homebuyer</b>	<b>Mandatory/ Voluntary</b>
1.	General Project Information	Enables consumers to shortlist projects based on their priorities/preferences.	Mandatory
2.	Sustainability features / measures mandated through local building byelaws	Provides transparency on sustainable design measures adopted in the project, including features that enhance accessibility, comfort, and overall liveability.	Mandatory
3.	Building Materials and Design	<ul style="list-style-type: none"> <li>- Information on type of wall materials can provide a better understanding of heat gain in the house such information can be supported by a standardized reference template or simple performance indicators that explain relative heat transfer characteristics. It will also allow homebuyer to know if there will be requirement for use of AC.</li> <li>- Details on glazing and window/door design enable consumers to better assess daylight availability and potential heat gain in the space.</li> <li>- Roof or terrace design details for the topmost floor can help buyers assess potential heat gain, the likely need for air-conditioning, and the suitability of the roof for solar PV installation.</li> </ul>	Mandatory
4.	Water Efficiency	Disclosure of plumbing fixture specifications and water metering provisions promotes awareness of water conservation measures and efficient consumption.	Mandatory
5.	EV Ready Parking	Information on the number of parking spaces equipped with EV charging points can help consumers evaluate the feasibility of comfortably owning an electric vehicle now and in the future.	Mandatory
6.	Energy Efficiency	Details on equipment efficiency can help build homebuyer confidence by setting expectations of lower electricity bills and reduced maintenance costs.	Mandatory
7.	Appliance Efficiency (if the developer is selling a furnished apartment)	Information on appliance efficiency can help homebuyers gauge potential savings on electricity bills.	Voluntary
8.	Indoor Environmental Quality	Providing details on interior paints and coatings can help promote awareness of low-pollutant finishes and allow homebuyers to better evaluate indoor air quality.	Voluntary

Details on the information to be provided for each of the identified component are given in the Annexure 1 and a sample editable format that can be adopted by the developer is included in the Annexure 2.

# 7. Implementation Pathways and Institutional Adoption

The earlier sections show that there is a gap between sustainability policies, green building practices, and the information available to homebuyers. Although rating systems and voluntary certifications exist, they have not significantly increased demand for green buildings. One key reason is that homebuyers are often unaware of the long-term benefits of green features.

Providing clear, simple, and comparable information to buyers can help bridge this gap. A structured disclosure format can make sustainability features easier to understand and help buyers make informed decisions.

For this to work effectively, the disclosure framework should be integrated into existing institutional and regulatory systems. Making sustainability disclosures a regular part of residential real estate governance can improve transparency, increase consumer awareness, and support better environmental outcomes.

The following section outlines key suggestions for implementing and integrating the proposed disclosure framework.

Implementation of a structured disclosure framework would require integration with existing institutional and regulatory mechanisms. The following section outlines possible pathways through which such integration may be explored.

## 7.1 Institutional Pathways

Adoption of the disclosure framework can be implemented simultaneously at two levels using existing platforms:

1. The Urban Development Department (UDD) can mandate compliance with the parameters suggested in the disclosures through the Unified Development Control and Promotion Regulations (UDCPR) and monitor compliance through the Building Plan Management System (BPMS) throughout the building approval process, up to the issuance of the occupancy certificate.
2. The Housing Department can mandate the inclusion of the suggested mandatory and voluntary disclosures, in a uniform format approved by the department and MahaRERA, as part of a project's RERA registration. This will ensure that consumers and homebuyers have access to the disclosures through an existing and trusted platform.

## 7.2 Role of Government and Regulators

Government departments and regulators have an important role in introducing the disclosure framework and ensuring that it is implemented effectively. A phased approach can be followed starting with residential projects that are already green-certified and later extending the requirement to all residential projects.

Green-certified projects can be the first step because most of the required data is already available with developers and design teams. This can make adoption easier in the initial stage and develop confidence among developers.

To ensure smooth rollout, government departments and regulators can assign dedicated staff and resources to monitor compliance and support the gradual implementation of the framework

### **7.3 Role of Urban Local Bodies and Utilities**

Urban Local Bodies (ULBs) and utilities can also play an important role in implementing the proposed disclosures at the city level. Building departments within ULBs can ensure compliance by integrating disclosure requirements into existing processes such as building plan approvals, stage-wise no-objection certificates, and periodic site inspections to track progress and verify completion.

The framework can also be automated and aligned with existing reporting systems to reduce duplication of effort. Integrating disclosures with current digital platforms and approval workflows can enable better data submission, verification, and monitoring. ULB's can use this data to assist various departments in planning and decision-making, including forecasting electricity demand, assessing water supply needs, and planning urban infrastructure.

### **7.4 Phased Implementation Strategy**

MahaRERA can plan for the adoption of the disclosure framework in phases, classified based on the total built-up area of residential projects. The framework may initially be mandated for residential projects with a built-up area greater than 5,000 sq. m., followed by projects with a built-up area greater than 2,000 sq. m., and eventually extended to all residential projects under the purview of RERA (projects with a built-up area greater than 500 sq. m. or buildings with more than eight residential apartments).

A phased implementation approach can encourage greater acceptance of the disclosure framework among developers, thereby ensuring wider adoption and smoother implementation.

### **7.5 Empowering Consumers Through Awareness**

Awareness campaigns can be designed to empower consumers and homebuyers by improving their understanding of green building features and the associated benefits. Such efforts can be led by State Designated Agencies (SDAs), in line with their mandate to promote energy-efficient buildings, along with support from urban local bodies, civil society organisations, and consumer groups. These sessions can help consumers recognize the long-term advantages of sustainable residential buildings.

Increased consumer awareness can drive higher demand for green features in residential projects. As demand rises, developers will be encouraged to increase the supply of green projects, ultimately contributing to the development of an energy-efficient building stock in the future.

## 8. Conclusion and Next Steps

Standardized disclosures can address the existing gap by empowering homebuyers with clear, relevant, and comparable information. When information is shared in a standardized format, consumers are better able to compare projects and make informed purchase decisions. Such disclosures can present critical information in a clear, relatable, and easy-to-understand manner, enabling consumers to assess the long-term benefits they are likely to experience during the post-occupancy phase.

The proposed disclosure framework can help achieve the following objectives:

- Empower homebuyers
- Enhance transparency
- Improve developer accountability
- Support policy implementation
- Enable data-driven governance

In a rapidly changing urban environment, buildings constructed today will significantly influence future energy demand and resource use. Building design, construction practices, and material choices have a direct impact on human comfort, both thermal and visual. Declaring information related to critical sustainability parameters, as identified in the disclosure formats, can therefore deliver multiple long-term benefits.

Introducing standardized sustainability disclosures offers an opportunity to strengthen transparency, consumer awareness, and long-term building performance outcomes. For these disclosures to be meaningful, they should be supported by clear verification protocols and credible validation mechanisms. As outlined in Section 7, this could be operationalized through integration with existing institutional systems such as verification by empanelled third-party auditors, oversight by urban local bodies during approval and occupancy stages, and disclosure through platforms like MahaRERA. This intervention can strengthen consumer protection, and accelerate the transition toward energy-efficient and sustainable housing. By integrating these disclosures into the RERA registration process, sustainability can shift from being an optional attribute to a mainstream determinant of housing quality and value.

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# Annexures

## Annexure 1: Information to be Provided for Each of the Disclosure Component

Identified List of Essential Disclosures				
Local Building Byelaws				
Sr. No.	Disclosure of	Parameter	Description	Example of the information to be conveyed to the consumer
1	<b>General Project Information</b>	Basic details of the project	Information to establish basic identity and regulatory context of the building.	# Project name, location, plot area and built-up area # Building typology (residential/mixed use) # Details on applicable local building byelaws along with MahaRERA registration number
2	<b>Sustainability features/ measures mandated through local building byelaws</b>	Information on implementation of each measure should be provided.	Information on measures adopted to ensure compliance with local building byelaws, including proposed provisions mandated through the UDCPR and the ULB in Maharashtra, can be provided.	# EC clearance report - for projects with built up > 20000 sq.m. = Yes/no # Solar PV Capacity in kW and/or Rooftop Water heater Capacity in Litres to be used for common areas # Rainwater Harvesting system installed = Yes/No # Grey Water Recycling & Reuse system installed = Yes/No # Provision of wet waste processing = Yes/No
Proposed Mandatory Disclosures				
Sr. No.	Disclosure of	Parameter	Description	Example of the information to be conveyed to the consumer
3	<b>Building Materials and Design</b>	External Wall Construction	Details of the materials used for external wall construction, including the type of internal and external plaster and the overall wall thickness may be provided.	# <b>Wall Assembly</b> >>130 mm RCC wall - 100 mm thick RCC wall with 15mm external cement plaster and 10mm internal gypsum plaster >>230 mm thick AAC wall - 200 mm thick AAC block + 15 mm thick cement plaster on both internal and external side
		Fenestration Design (Windows and doors on external wall)	Details of glazing type, window design, external weather shades, and the total area of openings on external walls may be provided.	# <b>Glass name, code</b> - Clear Evo-Lite, ET II 150 # Window to Wall area Ratio (WWR) = ___% # Chajja projection/external weather shade = ___mm # Window Openable Area = ___% (living/ kitchen/bedroom may have varied opening sizes) # Sill Level of the window = ___mm (living/ kitchen/bedroom will have different sill heights)

Sr. No.	Disclosure of	Parameter	Description	Example of the information to be conveyed to the consumer
	<b>Building Materials and Design</b>	Roof	Roof construction materials, insulation details, and the presence of shaded areas or rooftop amenities on the topmost floor may be specified.	<b># Roof Assembly</b> 100 mm RCC + Expanded polystyrene 60 mm 100 mm RCC + Phenolic foam 75 mm <b># Roof insulation provided = Yes/No</b> <b># Shaded areas on roof/roof top amenities = Yes/No</b>
4	<b>Water Efficiency</b>	Plumbing fixtures and systems installed	Specifications of the plumbing fixtures and details of the measures adopted to ensure efficient water use may be provided.	<b># Low flow fixtures = Yes/No</b> <b># Site water meter = Yes/No</b> <b># Automatic leakage detection system installed = Yes/No</b> <b># Source of water - Municipal water supply/ Tanker/Borewell</b>
5	<b>EV Ready Parking</b>	EV charging infrastructure provided in buildings	Information on the availability and number of parking spaces with EV charging facilities may be provided.	<b># Individual &amp; Common/Visitor Parking</b> > No. of 2-wheeler parking spaces > No. of 4-wheeler parking spaces
6	<b>Energy Efficiency</b>	Efficient equipment usage for common purpose appliances	Details of the proposed artificial lighting, elevator systems, and other equipment or systems in common areas may be provided.	<b># Controlled/Deemable Luminaires in the common area = Yes/No</b> <b># Elevator Make &amp; Model</b> <b># Pump Make &amp; Model</b> <b># CPCB compliant energy efficient DG Set = Yes/No</b>

#### Proposed Voluntary Disclosures

Sr. No.	Type of Disclosure	Parameter	Description	Example of the information to be conveyed to the consumer
7	<b>Appliance Efficiency (if the developer is selling a furnished apartment)</b>	Household appliances (ex. AC, Fans, Refrigerator, Washing Machine, etc.)	Appliance efficiency rating for all the appliances provided by the developer may be provided.	<b># BEE 5 star rated appliances = Yes/No, If No specify the rating.</b>
8	<b>Indoor Environmental Quality</b>	Air quality in regularly occupied spaces	Specifications of the selected internal paints and coatings may be provided.	<b># Product code of paints and coatings (including primer) used for the interior walls and ceilings.</b>

## Annexure 2: Sample Disclosure Format that can be Adopted by the Developer

**Name of the developer**

**Project Details**

**Project Name:**

**Project Type:** Residential/Mixed use

**Location:**

**Total built-up area:**

**Green Certification Details**

Green rating achieved with validity **Example – IGBC Pre-certified Platinum (Nov. 2025-28)**

Building Envelope	Water Efficiency	Parking	Energy Efficiency
<b>External Walls</b> Wall assembly Wall thickness - - mm <b>Example -</b> <b>AAC Blocks + Cement Plaster</b> Thickness: 230 mm  <b>Daylight Without the Heat</b> Glass code: - - Glass thickness: - - mm Glass Glazing :---- Window to Wall area Ratio: - - % External shading provided - <b>Yes/No</b>  <b>Roof for Top Floor</b> Roof Insulation/SRI: <b>Yes/No</b> Shaded areas/Rooftop Amenities: <b>Yes/No</b>	<b>Water Saving</b> <b>Fixtures</b> (- - - % water saving)  <b>Water Management</b> Site water meter provided - <b>Yes/No</b>	<b>EV Ready</b> <b>Parking</b> - - two-wheeler, - - four-wheeler	<b>Energy Efficient Equipment</b> Common Area Lighting - <b>Yes/No</b> Elevator (- - compliant) <b>Example - Elevator</b> <b>(class IE 3 compliant)</b> Water Pump (- - star rated) DG Set (CPCB compliant)  <b>Solar PV</b> (capacity - kW) <b>Solar Water Heater</b> (capacity - litre and purpose)

***"Creating Climate Responsive Homes"***

As India's cities expand at an unprecedented rate, the buildings we construct today will lock in energy and water demand for decades to come. While green building certifications and energy codes have advanced, a critical gap remains: **the homebuyer**. Currently, sustainability information is often fragmented, technical, and difficult to compare. Buyers are frequently left without clear data on how a building's design will impact their long-term electricity bills, water security, or daily thermal comfort.

This report, tried to address this transparency deficit by drawing on a structured review of 58 residential projects in Pune, extensive research and stakeholder consultations. The study highlights:

- **Evidence from the Market:** A deep dive into the current state of sustainability claims, revealing a prevalence of "feature-based" marketing over "performance-based" facts.
- **A Consumer-Centric Framework:** A proposed standardized disclosure format that translates technical data from wall assembly and glazing types to EV-ready infrastructure into clear, relatable insights for buyers.
- **Institutional Pathways:** Strategic recommendations for integrating these disclosures into existing regulatory systems like **MahaRERA** and local building byelaws.

**Bridging the Information Gap** provides the blueprint for shifting building sustainability from a niche marketing tool to a fundamental pillar of housing quality and empowering consumers to make informed decisions for a more resilient future.