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WHO SAYS YES?

Simulating How Rooftop Solar Decisions Are Taken in an Indian Housing Society

Mumbai Climate Week | February 2026

A Gaming Workshop Report

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Barriers to Rooftop Solar Adoption: Identifying Interventions that Matter

Rooftop solar is widely recognised as an important pathway for expanding renewable energy in Indian cities. Government incentives, subsidies, and supportive policy frameworks have made rooftop solar increasingly accessible to households. However, in many Indian cities, rooftop solar adoption depends on collective decisions within housing societies. Even where financial incentives and policy support exist, adoption often stalls due to social dynamics, trust gaps, and behavioural frictions.

This suggests that technical feasibility alone does not guarantee adoption. Social acceptance and collective decision-making are equally critical. Understanding how people think, feel, and negotiate decisions is therefore essential.

Questions that shape outcomes

- Do we fully trust the technology?
- What about the financial risks?
- Who all believes the decision will benefit the entire community?
- Who is willing to take responsibility for adopting something new?

Understanding these dynamics is critical for designing effective rooftop solar campaigns. To explore these questions, we conducted a hands-on gaming workshop to identify behavioural and communication interventions to advance the uptake of rooftop solar in Indian households during Mumbai Climate Week.

Workshop Overview

ABOUT THE WORKSHOP

On 16 February 2026, as a community events partner for Mumbai Climate Week, we conducted a gaming workshop that used a simulated residential society meeting to help participants navigate common myths, doubts, and real-world barriers to rooftop solar adoption.

The workshop brought together participants from diverse professional backgrounds and invited them to step into the role of residents within a fictional housing society in Mumbai,

considering rooftop solar installation. Participants were assigned structured personas representing different psychological orientations toward energy, technology, risk, and collective action. Each participant represented a household owner with voting rights in the society's decision.

Throughout the exercise, participants negotiated with one another, debated the risks and benefits of rooftop solar, and attempted to persuade other residents to support the installation.

The goal of the simulation was not to reach consensus quickly, but to surface the behavioural frictions that influence adoption decisions, particularly those that do not appear in financial models or policy briefs — and to co-design interventions that support positive decisions.

Methodology

The workshop used a behavioural simulation approach designed to approximate the decision-making environment of urban housing societies.

Participants were assigned personas that reflected different motivations, concerns, and values related to energy systems. These personas were informed by research conducted by Ek Kutumb in Maharashtra, based on a sample of over 6,000 individuals. The research combines qualitative insights with quantitative analysis to identify value-based audience segments.

This approach moves beyond simple demographic segmentation by identifying underlying values, motivations, and worldviews that shape how people engage with climate and energy issues.

Participants were divided into groups of five. Each participant represented a different persona within the housing society. A sixth participant in each group played the role of a committee member, whose task was to facilitate discussion and persuade residents to move toward a "yes" vote.

Three Stages of Decision-Making

- Awareness — Participants discussed what rooftop solar is and what it might mean for their society.
- Contemplation — Participants raised concerns, asked questions, and debated potential risks and benefits.

- Decision — Participants attempted to persuade others and move toward a collective vote.

Each stage was timed in order to maintain the pace of the exercise and introduce elements of gamification. Facilitators observed interactions, arguments, emotional responses, and negotiation strategies during the simulation.

The exercise was not intended to produce statistically representative findings. Instead, it served as an exploratory tool to surface the psychological and social dynamics that influence rooftop solar decisions in real-world settings.

Twenty-one participants entered the exercise with different levels of familiarity with rooftop solar. Some had experience with rooftop solar, while others were only broadly aware of the technology. Participants also came from a wide range of professional and social backgrounds.




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How Creating Relatable Personas Helps Conversations

Purely rational calculations rarely shape collective decisions. People approach infrastructure decisions through different emotional, social, and psychological lenses. Personas provide a structured way to simulate these differences. They allow researchers to observe how individuals with different motivations interact within a shared decision-making environment.

The personas used in this simulation were informed by psychographic research conducted by Ek Kutumb across Maharashtra, which analysed the values, beliefs, and worldviews of 6,160 individuals. The study represents one of the largest sub-national values segmentation exercises conducted in India.

Rather than segmenting people purely by demographic characteristics such as age, income, or geography, Ek Kutumb's research identifies audience segments based on underlying values and worldviews.

Persona Deep Dive

Persona	Core Orientation
Riddhi — Stability-Seeking Provider	Financial security and predictability
Amit — Proud Young Observer	Identity, pride, and participation
Anne — Nature-Connected Idealist	Environmental values
Meera — Critical Change-Maker	Accountability and systemic scrutiny
Shivin — Grounded Steward	Practical reliability and autonomy

Riddhi

The Stability-Seeking Provider

35-year-old software engineer

Primary Barrier

Perceived financial risk and uncertainty around rooftop solar investment

Primary Lever

Financial predictability and institutional assurance

Amit

The Proud Young Observer

24-year-old marketing professional

Primary Barrier

Sense that energy transitions feel distant, technical, or externally imposed

Primary Lever

Framing rooftop solar in a way that activates pride and a sense of belonging

Anne

The Nature-Connected Idealist

52-year-old teacher

Primary Barrier

Decision paralysis caused by technical complexity

Primary Lever

Simple and clear explanations, and emotional reassurance

Meera

The Critical Change-Maker

29-year-old journalist

Primary Barrier

Distrust of institutional narratives and lack of transparency

Primary Lever

Transparency and participatory governance

Shivin

The Grounded Steward

60-year-old small business owner

Primary Barrier

Low trust in unfamiliar technologies and external actors

Primary Lever

Local proof and trusted intermediaries

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What the Simulation Revealed

The simulation highlighted several behavioural dynamics that influence rooftop solar decisions in housing societies.

1

Financial risk dominates early conversations

Many discussions quickly shifted toward financial uncertainty. Even participants sympathetic to renewable energy expressed concern about potential financial losses or unclear payback periods. For many households, rooftop solar is perceived not primarily as an environmental action but as a financial investment.

2

Trust in people matters more than trust in institutions

Participants frequently expressed scepticism toward government programmes or corporate claims. However, trust increased significantly when information came from local actors such as neighbours, community members, or trusted intermediaries.

3

Visibility shapes perceived feasibility

Participants were far more receptive to rooftop solar when they could imagine it operating successfully in nearby buildings or communities. Visible examples help transform rooftop solar from an abstract idea into a tangible reality.

4

Collective decisions create coordination challenges

Even when individual participants supported rooftop solar, discussions revealed hesitation around taking responsibility for initiating the change. In housing societies, adoption depends not only on individual willingness but also on social dynamics such as consensus-building and leadership.

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Behavioural Interventions

The simulation revealed that rooftop solar adoption in housing societies is influenced by a range of psychological, financial, and social dynamics. Based on the behavioural barriers surfaced through the exercise, we identified a set of communication and engagement strategies that could help address these frictions.

These interventions focus on reducing perceived risks, building trust, simplifying complex information, and creating visible social signals that encourage collective adoption. The interventions below remain exploratory and are intended as a menu of potential approaches for policymakers, communication practitioners, and programme designers.

Goal	Behavioural Insight	Interventions	Implementation Examples	Personas
Goal 1: Reducing Financial Uncertainty	Many households perceive rooftop solar primarily through the lens of financial risk.	Provide personalised financial pathways Create personalised advisory services Use long-term investment visualisations	Financial projections and payback period charts Toll-free consultation services Stock-market style investment charts Collaborations with financial influencers	Riddhi, Amit, Meera
Goal 2: Demystifying Technology	Participants often struggled to understand how rooftop solar systems function beyond the visible panels.	Explain how rooftop solar systems work beyond the panels Create physical demonstration installations	Visual guides for energy flow through the system Demonstration installations in metro stations Solar exhibits in science museums	Anne, Meera
Goal 3: Identity-Based Narratives	Some participants were motivated by narratives tied to identity, pride, and	Frame rooftop solar as a source of national or regional pride	Short-form storytelling videos on India's energy transition Advertisements linking rooftop solar to local development	Amit, Shivin

Goal	Behavioural Insight	Interventions	Implementation Examples	Personas
	collective progress.			
Goal 4: Building Trust Through Local Relationships	Trust in rooftop solar systems often depends on relationships with people rather than institutions.	Develop long-term relationships between vendors and communities	Trusted vendor networks — a 'kirana-store model' of trust Long-term service relationships between vendors and residents	Anne, Shivin
Goal 5: Transparency & Information	Some participants expressed scepticism about claims surrounding rooftop solar.	Provide lifecycle transparency Share transparent performance data	Digital explainers on lifecycle of rooftop solar Quarterly performance reports WhatsApp forwards of visual summaries of solar performance	Anne, Meera
Goal 6: Social Visibility	Adoption decisions are often influenced by visible social signals.	Create public dashboards showing solar adoption	Neighbourhood scoreboards showing adoption rates Displays showing emissions reductions achieved	Anne, Amit
Goal 7: Community Decision-Making	Collective infrastructure decisions require community legitimacy.	Create open community forums for rooftop solar discussions	Resident-led society meetings 'Mudde-pe-charcha' discussion formats in neighbourhood clubs, social gatherings, etc.	Riddhi, Amit, Shivin
Goal 8: Context-Specific Solutions	Households differ in housing arrangement, ownership patterns, and electricity use.	Create rooftop solar value portfolios to demonstrate how rooftop solar adoption looks for different kinds of users. Break down institutional and regulatory processes	Case studies for households with multiple flats FAQ platforms or solar chatbots Simplified explainers for solar warranties	Riddhi, Meera

Goal	Behavioural Insight	Interventions	Implementation Examples	Personas
Goal 9: Guided Experiences	Direct exposure to technology can increase confidence.	Organise field visits for potential users	Visits to solar vendors Demonstrations for interested residents	Riddhi, Shivin
Goal 10: Collective Benefit Framing	Community incentives can strengthen support for collective decisions.	Frame rooftop solar as a community win Create sustainability identity signals	Highlight reduced electricity costs for societies Sustainability scorecards Linking solar adoption with EV ownership	Anne, Meera, Shivin
Goal 11: Community Ownership	People are more invested in systems they help manage.	Enable community governance of rooftop solar systems Facilitate conversations between adopters and non-adopters	Resident committees managing solar operations Informal *'chai and samosa'* discussions Neighbourhood hackathons to imagine clean energy future for young adults	All
Goal 12: Gradual Adoption Pathways	Large infrastructure decisions can feel overwhelming.	Encourage phased adoption pathways	Introducing smaller solar solutions first Stories of communities that adopted solar gradually	Shivin
Goal 13: Cultural Visibility	People are more comfortable adopting technologies that appear normal in everyday life.	Increase the representation of rooftop solar in the media Use trusted community voices	Integrating solar into micro-dramas or social media storytelling Respected community members explain rooftop solar systems' benefits Events and gatherings where residents share their experiences	Riddhi, Shivin

Implications for Rooftop Solar Adoption

Beyond generating insights, the gaming workshop itself offers a promising engagement tool for exploring climate transitions at the community level.

By placing participants in realistic decision-making environments, simulations can help surface hidden assumptions, social dynamics, and behavioural barriers that are difficult to identify through surveys or interviews alone.

This approach can be used by:

- City governments exploring distributed renewable energy strategies
- Housing societies considering rooftop solar installation
- Civil society organisations working on citizen engagement around climate transitions
- Policymakers seeking to test communication strategies before large-scale implementation

The simulation described in this report is currently being further developed into a participatory engagement tool that can support cities and communities in navigating collective clean energy decisions.

LOOKING AHEAD

As India accelerates its transition toward renewable energy, understanding the human dimensions of infrastructure adoption will be just as important as advancing technological solutions.

Contributors

Participants in the workshop whose ideas, discussions and thoughts shaped the interventions listed in this report.

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