



Policy Brief | June 2026

Powering Uttar Pradesh

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The *Vidyut Sakhi* Model for
Women's Empowerment and
Discom Revenue Recovery





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A *Vidyut Sakhi* referring to the Handbook before going out for electricity payment collection on behalf of the discom, in Uttar Pradesh.

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The authors



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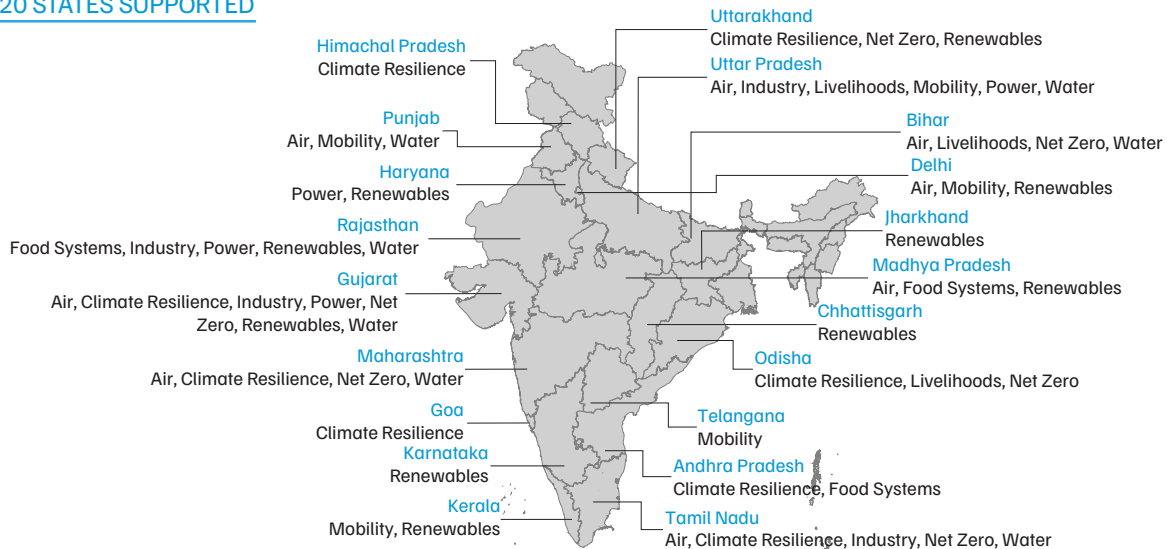
NATIONAL/INTERNATIONAL

- 2011 | National Water Resources Framework
- 2014 | 175 GW renewables target
- 2015 | International Solar Alliance
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- 2019 | Climate Vulnerability Index
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- 2024 | PM *Surya Ghar Yojana*
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- 2025 | Rajya Sabha guidelines on crop residue burning
- 2025 | National Adaptation Plan

STATE

- 2022 | Rajasthan Organic Farming Mission
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- 2022 | Uttar Pradesh *Vidyut Sakhi* programme
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- 2025 | Maharashtra Climate Action Plan 2.0
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- 2025 | Delhi Clean Air Action Plan
- 2025 | Delhi EV Policy 2.0

20 STATES SUPPORTED





A woman attending a weekly self-help group (SHG) meeting to discuss the *Vidyut Sakhi* programme, in Sultanpur district, Uttar Pradesh.

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Executive summary

Discom finances remain a critical determinant of reliable and affordable power supply. In Uttar Pradesh (UP), distribution utilities have historically faced high AT&C losses and uneven revenue recovery, particularly in rural areas (PFC, Performance of State Power Utilities 2022–23., 2024) (UPERC, 2025). While billing coverage and digital payment options have expanded in recent years, irregular payment behaviour, limited payment access, and low consumer trust continue to challenge UP discom's regular revenue realisation (Agrawal, 2020) (Balani, 2021).

It was in this context that the **Vidyut Sakhi (electricity allies) programme** was launched in 2020. By FY25, it had been expanded statewide, onboarding more than 30,000 women from self-help groups (SHGs), with half of them actively working as digitally enabled, doorstep bill collection agents across all 75 districts. Each *sakhi* earns a commission for every bill collected, creating a performance-linked income stream, while discoms benefit from deeper rural reach and a more predictable cash flow.

By embedding SHG members into last-mile electricity bill collection, the programme has strengthened revenue recovery for distribution companies (discoms) while creating dignified performance-linked livelihood opportunities for rural women.

This issue brief examines the *Vidyut Sakhi* programme as a case study in women-led, commission-based service delivery, with a particular focus on how well-curated training programmes can enable scale, productivity, and institutional trust. Drawing on programme data, field research, and a statewide mass training intervention, it offers practical lessons for policymakers designing livelihood and service-delivery programmes for women.

Highlights from the *Vidyut Sakhi* initiative

- In Financial year (FY) 2026, **electricity bill collections through *Vidyut Sakhis* had increased six-fold compared to FY 2023**, reaching approximately **INR 14.5 billion (1,451 crore) annually**.
- In FY 2024–25, collections made by active *sakhis* contributed around **15 per cent of rural domestic revenue for UP discoms**, moderating to approximately 12 per cent in FY 2025–26.
- Over **550 *Vidyut Sakhis* now earn more than INR 100,000 (1 lakh) per year**, aligning the programme with the Union government's *Lakshpati Didi* vision¹.



Image: CEEW/Emotive Lens

Kiran Vishwakarma, a *Vidyut Sakhi*, collecting an electricity bill payment from a rural consumer in Sultanpur district, Uttar Pradesh, 2025.

1. The *Lakshpati Didi* initiative under the DAY-NRLM aims to enable SHG women to earn at least INR 100,000 (1 lakh) in annual income through sustainable, performance-linked livelihood activities, strengthening their economic independence.

Training as the turning point

Even as the programme achieved scale, productivity varied widely until a statewide mass training was undertaken between December 2024 and mid-January 2025. Covering around 14,500 newly onboarded *Vidyut Sakhis*, the 45-day training was designed to address operational uncertainty, strengthen digital skills, and standardise service delivery.

Post-training assessments show a 23 percentage-point increase in average knowledge scores, alongside a sharp reduction in variation across districts. Crucially, improvements were driven by the training itself, not by district conditions, batch size, or earnings potential—demonstrating the power of standardised, practice-oriented capacity building.

Training also translated into outcomes. Activations² surged immediately after training, followed by a sustained rise in collections. Collections grew faster than the number of active *sakhis*, indicating higher productivity per agent, not scale alone. Within eight months, from January 2025, the number of *lakhpati didis* more than doubled.

Institutional and community outcomes

As performance improved, *Vidyut Sakhis* shifted from a supplementary channel to a core operational asset for the UPPCL. During the 2025 one-time settlement drive, around 15,000 *sakhis* were deployed as the primary last-mile recovery force, supported by rapid fintech upgrades and joint field coordination, contributing roughly 13 per cent to the endeavour's total collections.

At the community level, *Vidyut Sakhis* have reached over 23 lakh rural consumers, with nearly 17 per cent emerging as frequent payers. This shift from sporadic to regular payments reflects growing trust, convenience, and familiarity—outcomes that conventional enforcement or digital-only approaches have struggled to achieve.

Sustaining the momentum to unlock full potential

At full activation, with all registered *sakhis* reaching lakhpati-level incomes, the programme can potentially handle over INR 300 billion (30,000 crore) in annual collections. In practice, with varying productivity across districts, a more realistic medium-term aspiration is 4-5 times the current collections, or around INR 60–70 billion (6,000–7,000 crore) annually. Achieving this will require the *sakhis* to treat their role as a primary occupation, supported by strong institutional backing, reliable digital systems, and sustained consumer trust.

Key takeaways

The *Vidyut Sakhi* experience shows that women-led service delivery models can act as reform accelerators, not welfare add-ons—provided they are designed correctly. Four lessons stand out:

1. **Treat the last mile as core infrastructure**, not a peripheral activity.
2. **Leverage livelihood missions members as implementation partners**, not beneficiaries.
3. **Design for income certainty and real-time payments** to sustain participation.
4. **Use data and assessments to govern outcomes**, not just inputs.

This study demonstrates how **technology, training, and trust** can convert the last-mile challenges into opportunities. Moreover, this model need not be limited to electricity. We hope this study offers insights and a scalable blueprint for other public service delivery systems where trust, access, and service quality determine outcomes—and where women can play a central role in delivering them.

2. An “activated” *Vidyut Sakhi* refers to a registered *Sakhi* who has completed the required initial wallet recharge, and is operationally ready to undertake electricity bill collections through the programme's digital platform.

1. Study motivation

India has made significant progress in expanding access to public services over the past decade. Electricity connections are near-universal, digital payment platforms are widespread, and frontline delivery systems have been strengthened across sectors. Yet, despite these gains, a persistent challenge remains: gaps in last-mile service delivery—especially in rural areas (PFC, 2020) (PFC, 2024) (Agrawal, 2020) (Ganesan, Bharadwaj, Balani, & CEEW, 2019).

The rural last-mile gap: Access exists, reliability does not

In rural India, service delivery failures rarely stem from the absence of systems. Instead, they arise from irregularity, low trust, and high transaction costs. The gaps in timely revenue recovery in Uttar Pradesh's power sector is an example. Despite improvements in billing efficiency and the expansion of digital payments, rural revenue recovery remains uneven (Annexure 1). High reported collection efficiency often masks sporadic billing and lump-sum payments, rather than regular monthly compliance. This pattern is not unique to electricity. It reflects a broader last-mile challenge: systems designed for scale may struggle to deliver reliability without trusted, human interfaces.

Emergence of performance-linked delivery models

Across sectors, there is a growing interest in delivery models that move beyond welfare and volunteerism towards performance-linked, accountable service provision. National livelihood frameworks such as the National Rural Livelihood Mission (NRLM) increasingly emphasise service-based, outcome-oriented roles for women, particularly in financial services, energy access, and digital inclusion (MoRD, 2011) (MoRD, 2023).

Digital systems alone cannot ensure compliance; trusted, local intermediaries remain critical for consistent rural service delivery.

Across sectors, three design principles are gaining prominence:

- **Performance-linked service delivery models** that align incentives with measurable outcomes rather than inputs or participation (World Bank, 2018) (MoRD, 2011)
- **Women-led delivery platforms** that combine trust, institutional reach, and livelihood creation, building on SHG federations as frontline service institutions (MoRD, 2023).
- **Training as infrastructure**, where capacity building is treated as a core system input for service reliability, not a one-time project activity (NRLM, 2022).

These approaches move beyond traditional beneficiary or volunteer models. Instead, they position local actors as partners in service delivery, embedded within formal systems, financially accountable, and governed through performance metrics rather than presence alone. Evidence from rural service delivery in sectors such as electricity, banking, and digital payments suggests that such models are particularly effective in low-trust environments where system reliability depends on sustained human interfaces.

Vidyut Sakhi initiative: A response to the last-mile challenge

The *Vidyut Sakhi* programme in Uttar Pradesh emerges from this evolving landscape. Launched in 2020, the programme was conceived to address gaps in the collection of electricity bill payments in rural areas. It does so by embedding women from self-help groups as commission-based, digitally enabled last-mile service providers within the power distribution system. Rather than relying solely on digital apps, payment counters or enforcement, the model introduces a trusted human interface—one that is locally rooted, financially incentivised, and institutionally integrated.

Why this case matters now

As India scales up smart metering, digitised public services, and outcome-based funding across sectors, the question of who delivers these in the last mile—and how—is becoming increasingly important. The *Vidyut Sakhi* experience offers timely insights into how governments can:

- Embed women-led delivery models within core public services;
- Use training and incentives to convert participation into productivity; and

- Leverage institutional convergence for livelihood generation and improved public service delivery.

This issue brief examines the *Vidyut Sakhi* programme through this wider lens. It situates the model within the broader challenge of rural last-mile service delivery, analyses how training enabled it to work at scale, and draws lessons for policymakers seeking innovative, scalable, and outcome-oriented delivery models across sectors.

2. Empowering women to achieve power for all

In 2020, the *Uttar Pradesh State Rural Livelihood Mission* (UPSRLM) and the *Uttar Pradesh Power Corporation Limited* (UPPCL) jointly launched the *Vidyut Sakhi* programme, with a two-fold objective:

- **Increase revenue of the discoms** from rural Uttar Pradesh;
- **Generate livelihood opportunities for SHG women** in rural areas.

Today, over 30,000 SHG women are registered as *Vidyut Sakhis* in Uttar Pradesh, with half of them actively operating as door-to-door electricity bill collection agents for domestic consumers. They remain affiliated with their respective SHGs, but operate within a formal, digitally mediated revenue recovery framework.

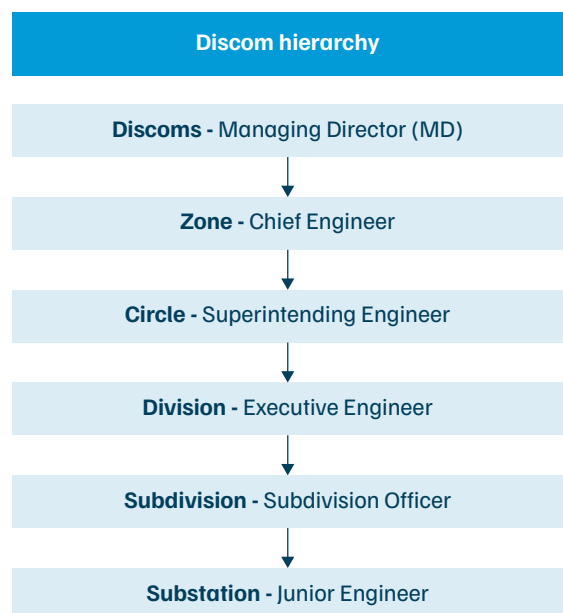
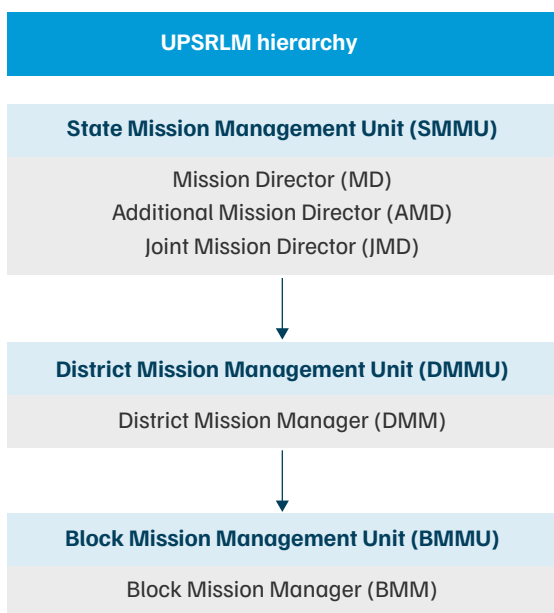
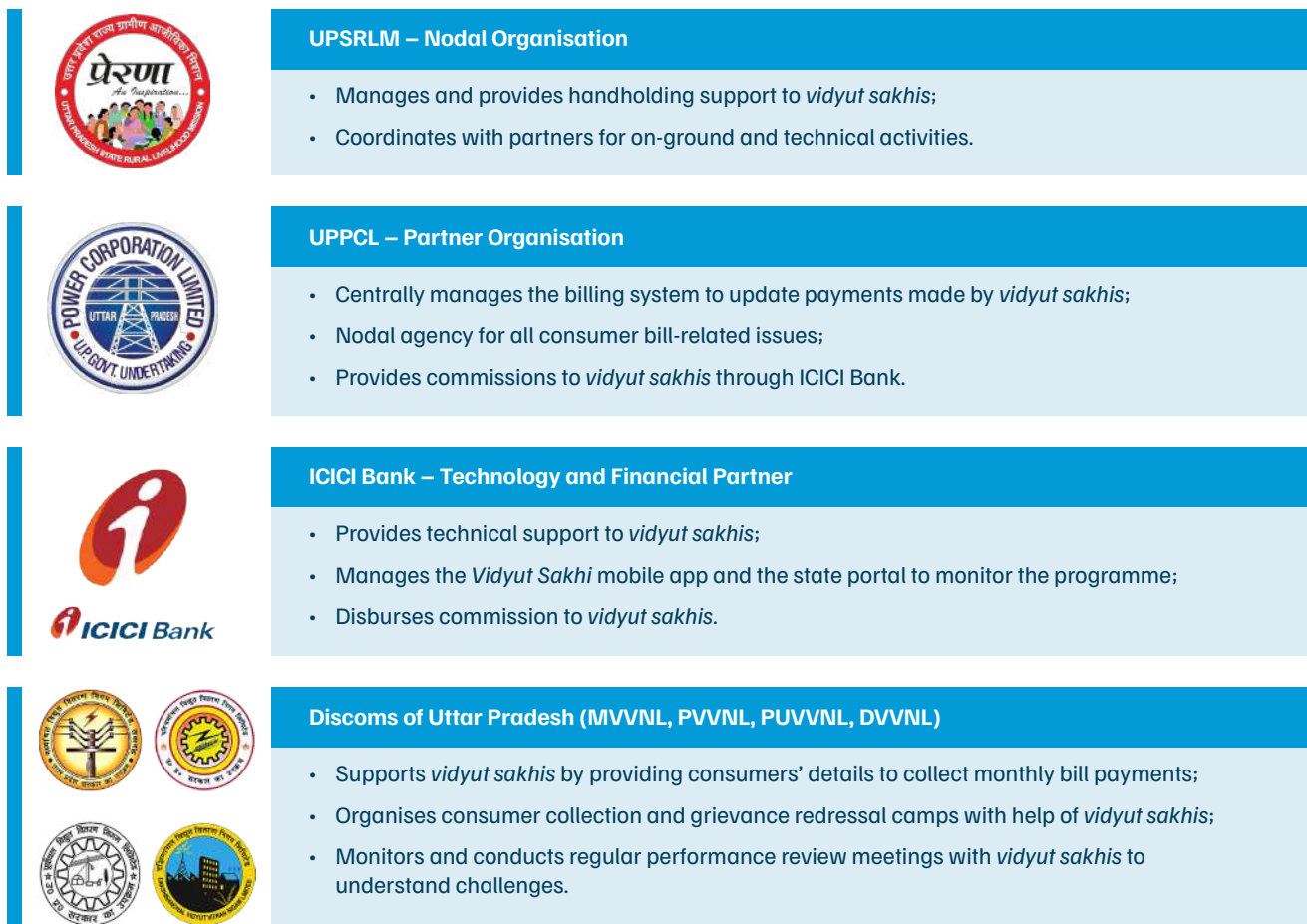
2.1 Programme design and institutional architecture

At inception, rural areas in Uttar Pradesh were organised into 15,521 clusters across 75 districts, with each cluster comprising three to four villages. The original programme

design envisaged one *Sakhi* per cluster, resulting in the onboarding of 15,521 registered women in FY 2021. In FY 2023–24, the programme was strategically expanded to improve consumer coverage, service accessibility, and collection efficiency. Under the revised structure, two *Sakhis* were deployed per cluster, effectively doubling the programme's scale.

The *Vidyut Sakhi* programme is implemented through a clearly defined multi-tier institutional architecture that links livelihood institutions with utility systems. The UPSRLM acts as the nodal agency, providing overall programme management and handholding through its state, district, and block mission management units (SMMU, DMMU, and BMMU), while the UPPCL and the four discoms oversee billing systems, consumer interfaces, and revenue integration. ICICI Bank serves as the technology and financial partner, managing the digital payment platform and commission disbursements. This structure ensures vertical coordination from state to village level, and enables seamless operational alignment between community institutions and formal utility systems (CEEW, 2024).

Figure 1. UP rural livelihood mission to discoms hierarchy supporting the *Vidyut Sakhi* programme



Source: Singh, Rashi, Nitesh Kumar, Vikrant Kumar Singh, and Shalu Agarwal. *Vidyut Sakhi Handbook: How to Become a Successful Vidyut Sakhi*. New Delhi: Council on Energy, Environment and Water, May 2025.

Table 1. *Vidyut Sakhis'* commission varies with geography and bill amount

Area	Bill amount (INR)	Rate (as of 2025)	
		Full payment	Part payment*
Rural	0 - 2,000	INR 20 per transaction	1% of the collected amount
	> 2,000 (Up to 1,99,999)	1% of the collected amount	1% of the collected amount
Urban	0 - 3,000	INR 12 per transaction	0.4% of the collected amount
	> 3,000 (Up to 1,99,999)	0.4% of the collected amount	0.4% of the collected amount

* Part payment is when the consumer pays only a portion of the total outstanding bill, with the remaining balance carried forward.

Source: *Vidyut Sakhi* programme guidelines as outlined in government order.

Note: The commission structure is higher for rural and small-value bills to align the NRLM's mandate of rural economic empowerment with the discoms' need to improve recovery in low-collection segments.

Commission structure

Vidyut Sakhis earn income through a transparent commission structure tied directly to bill collections. Commission slabs vary by consumer category and bill amount, as detailed in Table 1. This design ensures that earnings increase with effort and efficiency, enabling income growth through service delivery rather than fixed wages or subsidies.

Operationally, the programme is enabled through a fintech platform provided by ICICI Bank. Each *Vidyut Sakhi* is registered on the *Vidyut Sakhi* mobile application, and activates her virtual wallet through an initial recharge of INR 10,000, which serves as working capital for transactions.

The *sakhis* collect electricity payments in cash from consumers during door-to-door visits. The amount collected by a *sakhi* is deposited into her personal bank account, after which she recharges her virtual wallet through UPI or other digital payment modes. All payments to the discom are executed through this wallet, ensuring full traceability and real-time transaction records.

A critical institutional reform within the programme has been the transition from a delayed, multi-layered commission system—earlier routed through multiple institutional levels—to a direct digital settlement mechanism. **Today, commissions are credited to *sakhi* wallets in near real time, typically by the day after collection.**

This shift has had important system-level effects: it has improved cash-flow certainty, strengthened trust in the platform, reduced dependence on intermediaries, and significantly enhanced *sakhi* motivation and participation. In practice, this digital financial architecture has been as important as physical deployment in sustaining scale and performance.

2.2 What makes the programme work at scale?

The *Vidyut Sakhi* programme's ability to operate at scale rests on a carefully aligned combination of low entry barriers, financial incentives, and digitally enabled accountability, backed by a standardised training module.

Low entry barriers and financial incentives

In November 2024, the UPSRLM lowered the participation barriers by reducing the wallet activation requirement from INR 30,000 to INR 10,000. **This significantly expanded access and enabled faster activation, particularly for women with limited savings or credit history, as shown in Figure 6 later.**

Earnings are fully performance-linked. In FY 2025-26, over 550 *Vidyut Sakhis* were earning more than INR 100,000 (1 lakh) annually, demonstrating that the model supports income growth through service delivery rather than subsidies.

The programme also benefited from explicit policy prioritisation in commission design. While commission rates for other fintech-enabled bill collection channels used by the UPPCL, such as common service centres (CSCs), were rationalised downwards to 0.5 per cent, the commission rate for *Vidyut Sakhis* was maintained at INR 20 per bill or 1 per cent of the bill amount (whichever is higher) for full payment in rural areas. This differentiation reflected sustained coordination between the UPSRLM and the UPPCL, supported by programme evidence, to protect income viability for community-based agents.

Digital systems for transparency and accountability

The programme operates through a tripartite fintech architecture involving the UPPCL, the UPSRLM, and ICICI Bank. Each *sakhi* uses a mobile application and virtual wallet for all transactions, enabling real-time settlement and automated commission credit. This replaced an earlier delayed payment system routed through multiple institutional levels.

The shift to near real-time digital commission payments proved decisive. It improved cash-flow certainty, strengthened trust in the system, and directly enhanced *sakhi* motivation and participation. All transactions are traceable, reducing leakages and allowing discoms to monitor collections at cluster, district, and state levels.

Training as the critical performance multiplier

While the programme achieved rapid geographic scale, early years revealed wide variation in activation and productivity across districts. Structured training emerged as the key intervention that converted registration into performance.

Between December 2024 and January 2025, over 14,500 *Vidyut Sakhis* were trained through a centrally standardised residential programme. The training produced a 23 percentage-point increase in average knowledge scores and sharply reduced inter-district variability (see Section 4 for details). Statistical analysis confirms that improvements were driven by training itself rather than district characteristics, earning potential, or batch size.

2.3 Programme outcomes so far

The *Vidyut Sakhi* programme has delivered substantial financial, institutional, and livelihood outcomes since its statewide expansion.

Scale and coverage

Originally designed to assign one *sakhi* per cluster, the programme expanded in FY24 to two *sakhis* per cluster, resulting in over 30,000 registered women across all 75 districts. Approximately half are now active collectors.

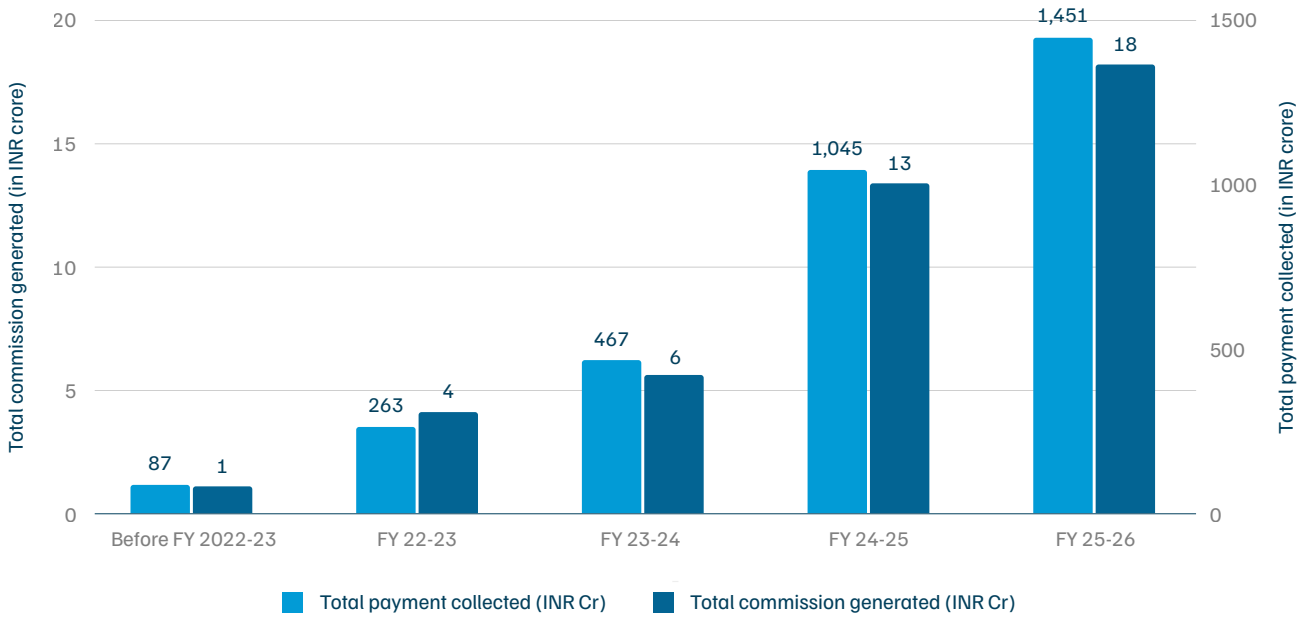
Revenue recovery

Electricity bill collections through *Vidyut Sakhis* grew six-fold between FY 2023 and FY 2026, rising from around INR 2 billion (200 crore) to approximately INR 14.5 billion (1,451 crore) annually (see Figure 2). The programme's contribution to total rural domestic revenue for UP discoms was approximately 15 per cent in FY 2024–25 and around 12 per cent in FY 2025–26.³

Low entry barriers, performance-linked incentives, real-time payments, and structured training together drive participation and productivity.

3. The estimate of *Vidyut Sakhis* contributing around 15 per cent of rural domestic revenue is based on rural domestic revenue reported in the UP Electricity Regulatory Commission (UPERC) Tariff Order FY 2024–25. The UPERC reports domestic revenue of INR 32,593 crore, of which rural categories (including rural metered and lifeline consumers) account for an estimated INR 9,000–12,000 crore. *Vidyut Sakhi* collections therefore represent approximately 12–16 per cent of rural domestic revenue, reported conservatively as around 15 per cent (UPERC 2025).

Figure 2. Six-fold rise in revenue recovered by *Vidyut Sakhis* between FY 2023 and FY 2026



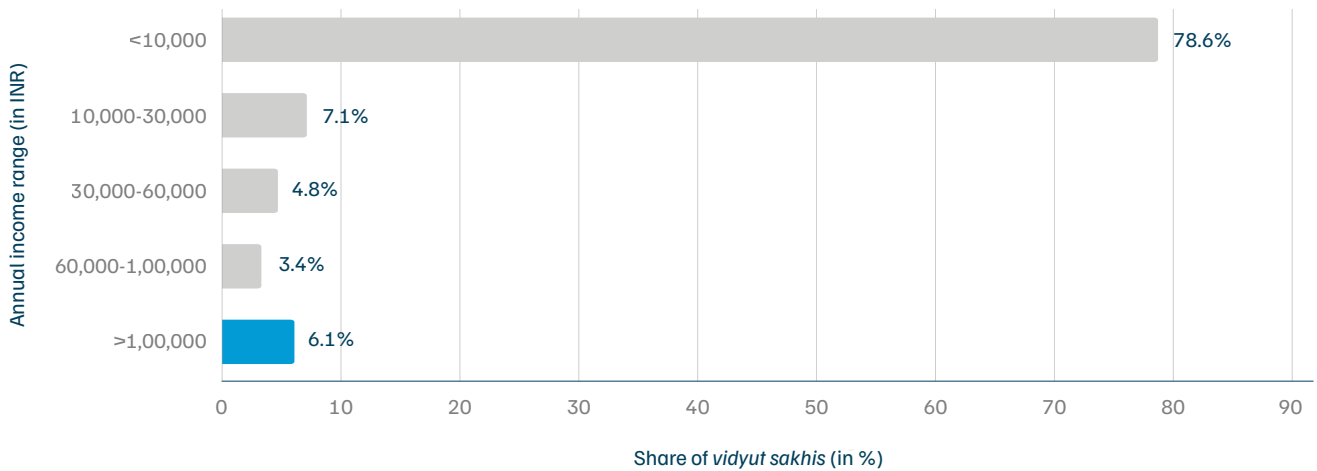
Source: Data retrieved from UPSRLM *Vidyut Sakhi* Dashboard (*Sakhi bill pay*)

Livelihood outcomes

Commission earnings increased proportionally with collections. Over 550 women now earn more than INR 100,000 (1 lakh) annually, aligning the programme with the national *Lakshpati Didi* vision. These incomes are recurring, performance-linked, and independent of welfare transfers. On average, an active *Vidyut Sakhi*

earned ~INR 2,000–3,000 per month in FY 2024–25, translating to around INR 22,000–INR 36,000 annually. However, earnings are unevenly distributed, with a small but growing share of high performers driving a rising upper tail (Figure 3).

Figure 3. More than 550 *Vidyut Sakhis* crossed the *lakshpati* income threshold in FY 2026



Source: Data obtained from UPSRLM and *Vidyut Sakhi* Dashboard (*Sakhi Bill Pay*)

Box 1. What can be an aspirational goal for the *Vidyut Sakhi* programme?

With around 30,500 registered *Vidyut Sakhis* across Uttar Pradesh, the programme has the potential to evolve into one of the largest performance-linked livelihood platforms for rural women in the state. Currently, more than 15,200 *sakhis* are active, which means they have completed the initial wallet recharge and are able to undertake collections. If all the registered *sakhis* were to become active and earn INR 100,000 (1 lakh) annually, the programme's livelihood impact and revenue contribution will expand substantially.

At a commission rate of 1 per cent (see Table 1), a *sakhi* earning INR 100,000 (1 lakh) annually will need to collect roughly INR 10 million (1 crore) in electricity bills each year. At full potential, this implies total annual collections of around INR 305 billion (30,500 crore) across the state. This is equivalent to roughly 35–40 per cent of UPPCL's approved tariff revenue for FY 2025–26 (INR 86,183 crore), highlighting the programme's potential as both a major revenue channel for discoms and a large-scale livelihood platform for rural women (UPERC, 2025).

However, achieving such income levels will require the *sakhis* to treat the role as their primary occupation, and undertake 6 - 7 hours of daily fieldwork involving travel across multiple villages within their assigned clusters, rather than the largely part-time engagement seen today. Realistically, all 30,000 *Vidyut Sakhis*, working at varying levels of productivity linked to their diverse contexts, can easily mobilise 4-5 times the current revenue collection. This will amount to collections of INR 60–70 billion (6,000–7,000 crore) per annum, comprising 60–70 per cent of total discom revenues from rural areas. The programme can pursue this as an aspiration.

Unlocking this aspiration will require strong institutional backing from the UPSRLM and discoms, along with reliable digital systems, communication channels, and consumer trust to sustain regular payments at scale.

Source: Authors' analysis



CEEW team, along with district officials of UPSRLM, participating in an SHG meeting in village Poore Pawar, Sultanpur district, Uttar Pradesh, March 2025.

3. Designing training for speed and scale

Although the *Vidyut Sakhi* programme achieved early geographic scale, productivity and activation remained uneven. Our research team supporting the *Vidyut Sakhi* programme identified training as a critical lever for transforming the registered women into confident and more productive service agents. The training strategy involved a four-step process: diagnostic analysis, content redesign, piloting and standardisation, and mass delivery.

3.1 Diagnosing the capability gap

We conducted a telephonic survey with over 4,000 inactive *Vidyut Sakhis* in 2022. It revealed four systemic bottlenecks:

- 85 per cent of the *sakhis* reported consumer trust deficit due to lack of formal identity markers.
- 40 per cent of the *sakhis* cited delayed commissions as a major demotivator
- Only 27 per cent of the *sakhis* contacted discom officials when facing issues; most depended entirely on block mission managers (BMMs), creating an indirect communication channel that slowed issue resolution.
- While 91 per cent of the *sakhis* had received basic app training, practical troubleshooting skills were weak.

These findings indicated that low productivity was not a function of motivation alone, but of uncertain institutional interfaces, limited digital confidence, and unclear escalation pathways.

3.2 Designing a handbook for *Vidyut Sakhis*

In response, we co-developed a comprehensive training module along with a *Vidyut Sakhi Handbook* as the core learning instrument. It consolidated operational procedures, app workflows, commission rules, and most importantly, field communication scripts. The training content prioritised real-world scenarios—how to explain bills, resolve disputes, handle partial payments, and reassure hesitant consumers. This differentiated the training content from previous efforts, which mainly focused on procedural familiarity.

The handbook was deliberately given a conversational format, reflecting the typical questions and concerns raised by *sakhis* during field operations. This communication-first design philosophy positioned the *sakhi* not just as a transaction agent, but as a trusted intermediary between consumers and discoms. The draft handbook was piloted during early training rounds, refined based on trainer and participant feedback, and finalised before being scaled up across all training centres.



The *Vidyut Sakhi Handbook* by CEEW serves as a practical guide empowering *Vidyut Sakhis* with the skills and knowledge needed for effective service delivery and community engagement.

3.3 Piloting, iterating, and standardising

The training module was piloted in Varanasi and Unnao with around 250 *sakhis*. These pilots tested:

- One-day vs two-day formats
- Role-play vs video instruction
- Module sequencing
- Trainer facilitation capacity

Insights from the pilots informed iterative redesign, resulting in a curriculum that was field-tested, time-efficient, and repeatable across districts. This process significantly reduced variation in delivery during state-wide rollout.

3.4 Delivering mass training

To train over 20,000 newly onboarded women, a **three-phase centralised model** was adopted:

- **Phase 1:** Training of trainers (75 DMMs and 75 nodal BMMs)
- **Phase 2:** Online training of the remaining 800+ BMMs
- **Phase 3:** Residential mass training of newly registered *Vidyut Sakhis*

3.5 Institutional roles in training delivery

The mass training programme was delivered through a joint institutional model involving the UPSRLM, the State Institute of Rural Development (SIRD), and CEEW. The UPSRLM led overall coordination and mobilisation, including participant selection, logistics, and on-ground facilitation through district and block teams. SIRD served as the core training partner, providing master trainers, training infrastructure, and standardised pedagogy aligned with state capacity-building protocols. CEEW supported curriculum design, training content, and evaluation, including the development of training handbooks, instructional videos, and learning assessments.

The programme covered 50 training centres over 45 days. Approximately 70 per cent of all the newly onboarded *Vidyut Sakhis* completed the full residential training. The remaining 30 per cent were unable to participate primarily due to personal and logistical constraints, including caregiving responsibilities, health-related issues, and limited ability to travel to distant training centres.

The training sessions comprised a mix of standardised handbooks, structured presentations, peer learning, and short instructional videos developed specifically for the programme. These videos, ranging from 5–10 minutes each, covered key operational tasks such as bill reading, app navigation, and consumer interaction, and were screened repeatedly during sessions and later shared digitally with the *sakhis* for continued reference.



A cohort of *Vidyut Sakhis* going to attend the programme training in Bulandshahr, Uttar Pradesh, December 2024.

Box 2. What limits *sakhi* participation on the ground?

Field insights from a multi-district study conducted by a CEEW team in October 2024 highlight the structural and gender-linked constraints that shape participation in the *Vidyut Sakhi* programme. The study involved shadowing high-performing *sakhis*, interviews with block and district mission staff, and focus group discussions across districts with varying performance levels.

Mobility, care work, and safety risks

Women's participation was closely tied to mobility constraints and household responsibilities. Several *sakhis* reported difficulty travelling long distances or working fixed hours due to caregiving roles and social norms. Fieldwork also exposed them to safety risks, especially while carrying large amounts of cash, with some instances of theft reported. Limited access to sanitation facilities and exposure to harsh weather conditions were also cited as factors affecting health and work continuity.

Dependence on institutional and family support

The study found that *sakhi* performance was strongly linked to three pillars of support: family, livelihood mission staff, and discom officials. Where any of these were weak, women faced greater operational and social challenges. Conversely, women who earned regular commissions reported greater influence in household financial decisions and improved social standing.

Operational and financial barriers

Despite rising incomes, some *sakhis* faced transaction costs from handling large cash volumes and lacked access to appropriate banking products, such as current or overdraft accounts. There was also demand for stronger grievance redressal systems and clearer escalation pathways to resolve field-level issues.

Implications for training design

The field study showed that many women's participation was shaped by caregiving duties, mobility constraints, safety concerns, and the difficulty of travelling long distances for training. For several *sakhis*, attending a centralised residential programme in Lucknow was not feasible. Based on these insights, the training model was decentralised across SIRD's regional and district centres, reducing travel time and making participation more practical.

The study also highlighted financial barriers in wallet activation, as women often had to use their own savings to start work—many a time without being able to borrow from male family members. The activation requirement was therefore reduced from INR 30,000 to INR 10,000, lowering entry barriers while retaining the discipline of a prepaid digital system.

Source: Authors' analysis

4. What changed after training—Evidence from the ground

Training outcomes were evaluated using *Aakalan*, a structured pre- and post-training assessment tool administered across 50 training centres to over 14,000 *Vidyut Sakhis*. The tool was designed to measure changes in operational knowledge and practical readiness of participants before and after the two-day residential training programme. Each participant completed the same multiple-choice questionnaire on Day 1 (pre-training) and again at the end of Day 2 (post-training), enabling a direct comparison of learning outcomes. Responses were matched using unique phone numbers or *sakhi* IDs to ensure accurate before-and-after analysis. The assessment focused on five core training domains:

1. Understanding of the *Vidyut Sakhi* programme and stakeholders,
2. Knowledge of commission structures,

3. Mobile application and printer handling,
4. Electricity bill reading, and
5. Consumer interaction skills.

Results were analysed using percentage scores and domain-wise comparisons to identify areas of strongest improvement and remaining gaps.

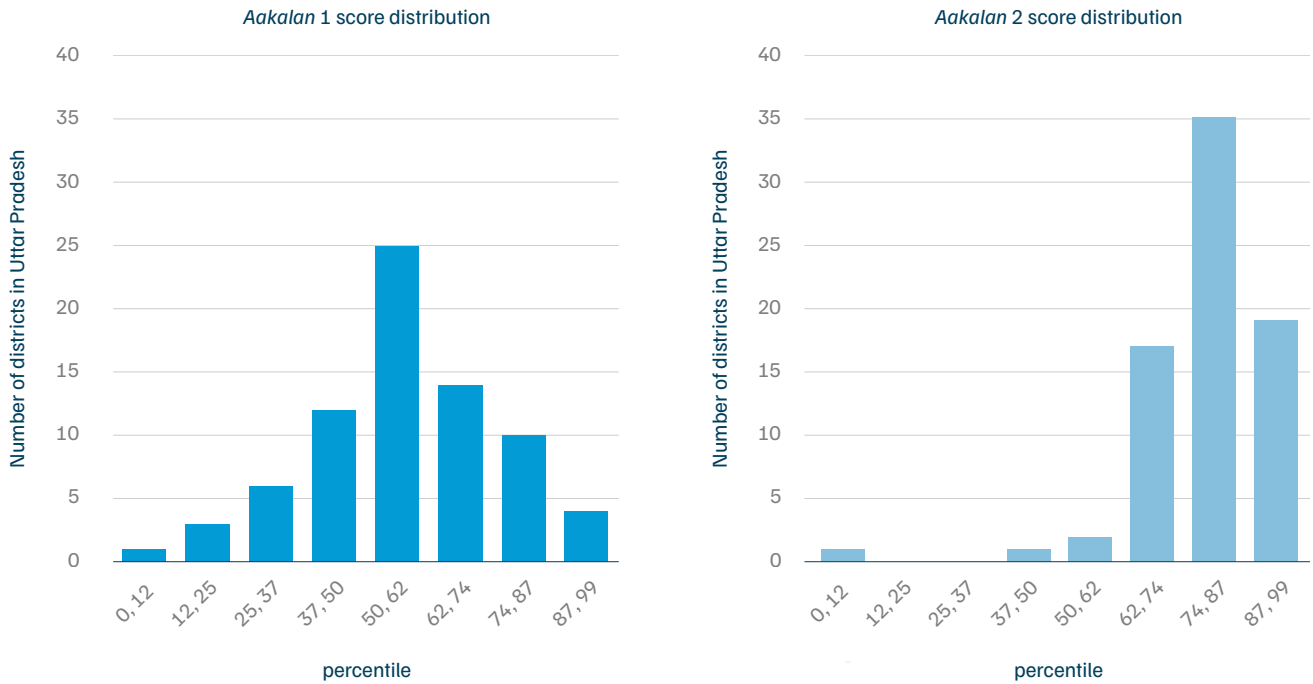
4.1 Clear learning outcomes

The average scores of *sakhis* increased from 56 per cent (pre-training) to 79 per cent (post-training), a 23 percentage-point gain. Score variability dropped from 17 per cent to 9 per cent, indicating convergence across districts. Participants with the lowest baseline scores recorded the largest improvements.



A *Vidyut Sakhi* participating in a training session in Bulandshahr, Uttar Pradesh, December 2024.

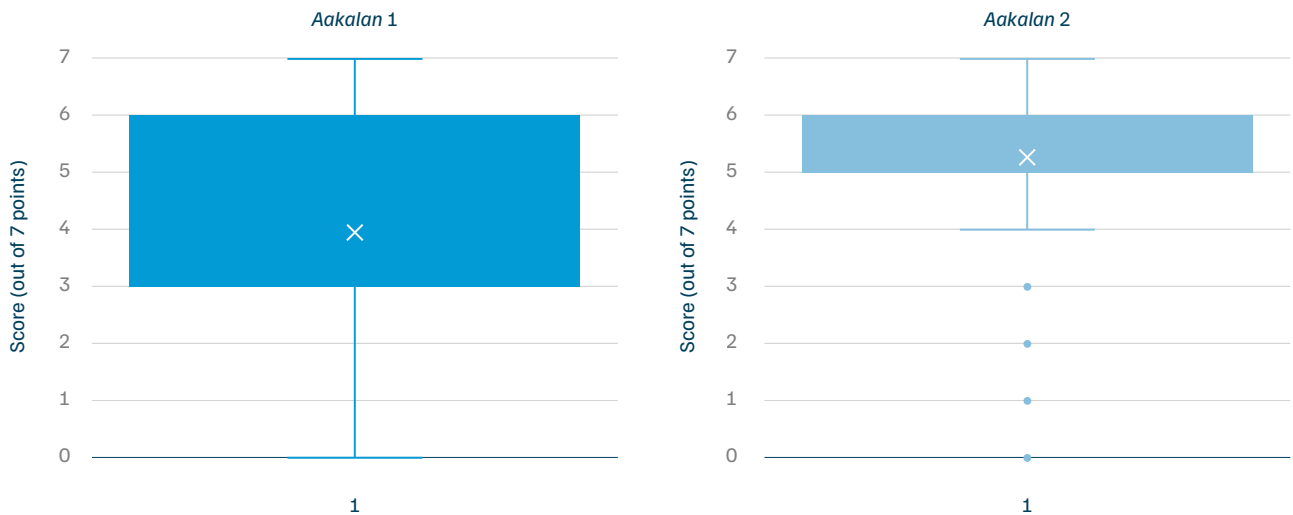
Figure 4 (i). *Aakalan* assessments show improved and more consistent scores following training



Source: Authors' compilation using responses from Aakalan 1 and Aakalan 2 assessment

Note: Aakalan is a structured pre- and post-training assessment tool.

Figure 4 (ii). Training interventions led to higher and more consistent assessment scores

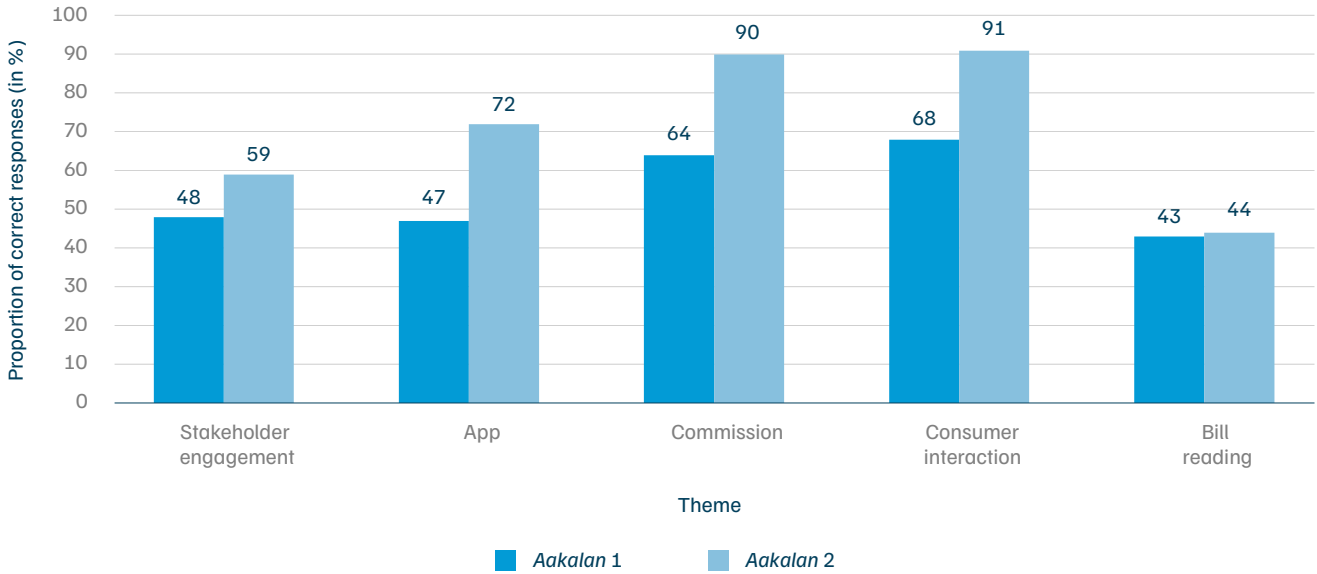


Source: Authors' compilation using Google sheet response from Aakalan 1 and Aakalan 2 assessment.

The 23 percentage-point improvement reflects the training's ability to bridge knowledge gaps effectively, especially in domains like stakeholder roles, digital app usage, commission structures, and consumer interaction.

However, one area that lagged in performance improvement was bill reading, indicating the need for strengthened focus or alternative teaching methods for this specific module (Figure 5).

Figure 5. Post-training assessments show improvement across all training modules



Source: Authors' compilation using responses from Aakalan 1 and Aakalan 2 assessment

Regression analysis shows that the training itself explained over 67 per cent of knowledge gains, while district conditions, batch size, or earning potential had negligible influence. This confirms the causal role of standardised capacity building.

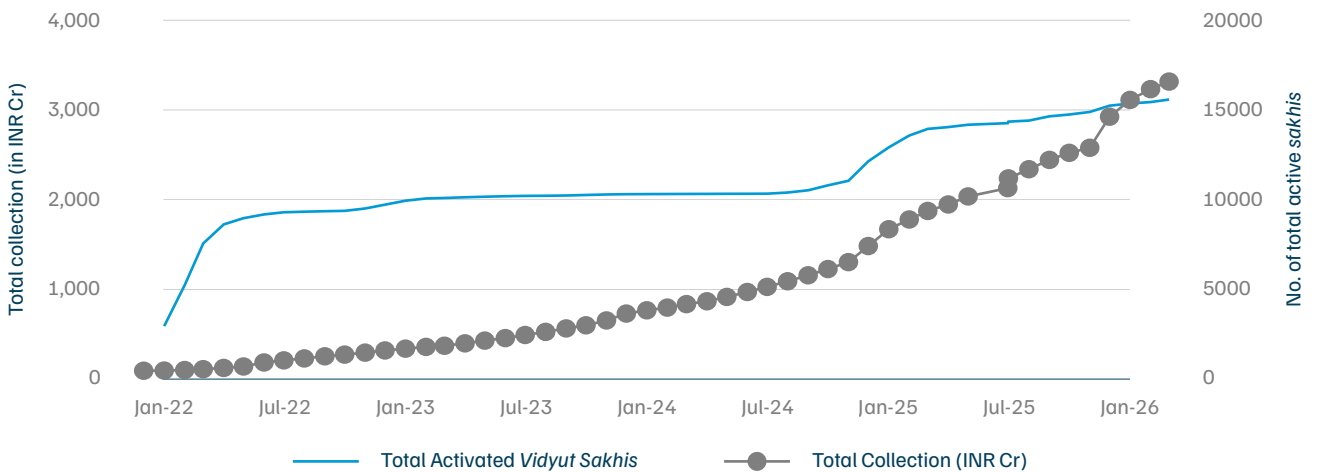
bill collections rose steeply and remained elevated over subsequent months, with the growth in collections consistently outpacing the increase in the number of active *sakhis*. This indicates that improvements were driven by higher productivity per *sakhi* rather than scale alone.

4.2 Higher productivity levels

Post-training, *sakhi* activations surged sharply, peaking in January 2025 (see Figure 6). However, the more significant shift was in performance. Total electricity

Reflecting this shift, the average number of bills collected per active *sakhi* more than doubled, increasing from around 14 in FY23 to about 31 in FY26, underscoring improved field efficiency and consumer engagement.

Figure 6. Post-training, collections outpaced *sakhi* activations, indicating productivity gains

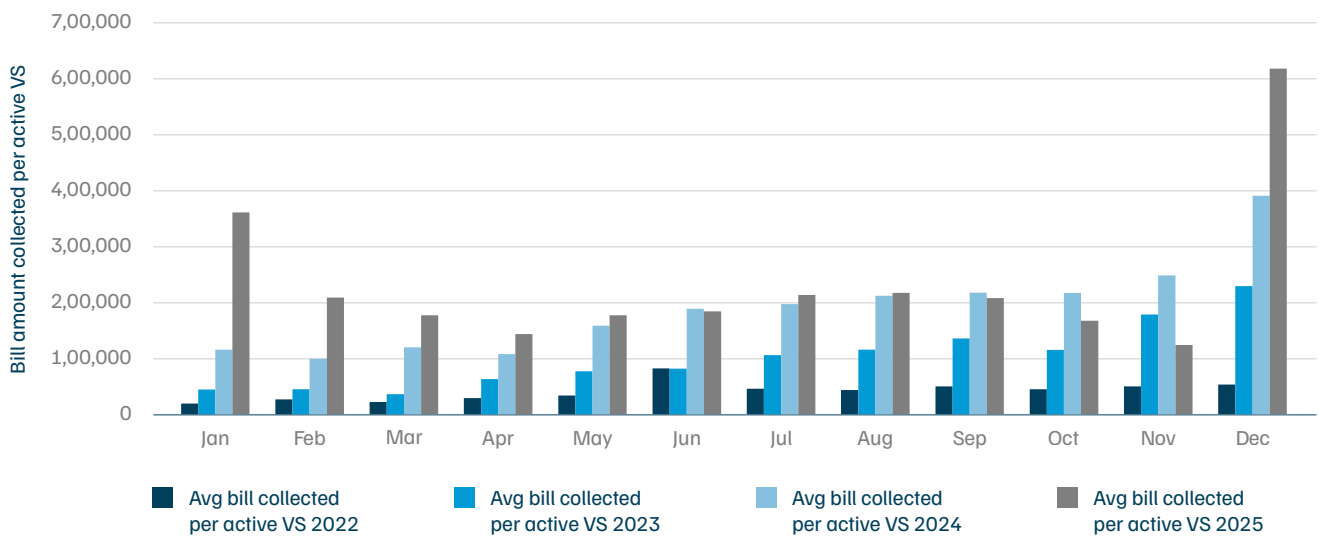


Source: Data retrieved from UPSRLM Vidyut Sakhi Dashboard (Sakhi Bill Pay)

Average collections per *Vidyut Sakhi* doubled within months of the training (see Figure 7), and the corresponding commission earnings increased accordingly. These trends suggest that the training translated into greater operational efficiency, stronger consumer engagement, and more regular collection behaviour at the field level. Over time, these productivity gains supported the emergence of a growing cohort of *lakhpati didis*. The number of *sakhis* earning over INR 1 lakh annually rose from 189 before the training to 432 within eight months, reinforcing the programme’s character as a performance-linked livelihood model rather than a participation-based intervention.

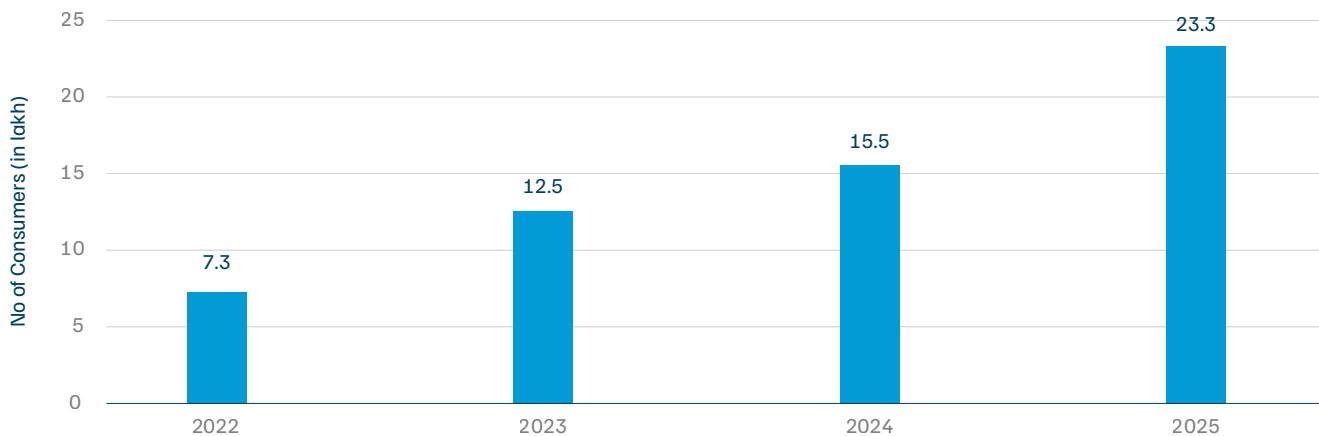
Simultaneously, the *Vidyut Sakhi* programme has significantly improved consumer access to and engagement with formal electricity payment systems. In 2025, *Vidyut Sakhis* reached over 23 lakh unique rural consumers across Uttar Pradesh (see Figure 8). Of these, more than 4 lakh consumers (around 17 per cent) emerged as frequent payers, making electricity bill payments through *Vidyut Sakhis* in four or more months during the year, indicating growing trust and repeat use of the platform.

Figure 7. Average collections per *Vidyut Sakhi* rose twofold post-training



Source: Data retrieved from UPSRLM *Vidyut Sakhi* Dashboard (*Sakhi Bill Pay*)

Figure 8. *Vidyut Sakhis*’ consumer base tripled in three years



Source: Data retrieved from UPSRLM *Vidyut Sakhi* Dashboard (*Sakhi Bill Pay*)

4.3 Enhanced institutional trust

From an institutional perspective, the post-training surge in activations and collections reflected stronger alignment between the UPSRLM state office, district staff, discoms, and banking partners. For the UPPCL, the resulting improvement in cash flow and field-level responsiveness reinforced confidence in community-based service delivery as a viable complement to infrastructure and smart metering reforms.

The trained *Vidyut Sakhis* were increasingly engaged in UPPCL-led recovery initiatives, most notably during the 2025 one-time settlement (OTS) drive. This signalled a gradual shift in their role from peripheral support to a more central position in field-level revenue recovery.

The UPPCL launched the statewide OTS scheme in December 2025 to recover long-pending dues from consumers, including those who had never made any payment. The outstanding arrears were estimated at ~INR 280 billion (28,000 crore). *Vidyut Sakhis* were formally deployed as the primary last-mile collection

workforce for the OTS drive, leveraging a network of ~15,000 women across all districts as the largest field-level collection force available to the utility, especially in rural areas where the percentage of target consumers was higher. During the three-month drive, *Vidyut Sakhis* collected over INR 656 crore in revenue, earning more than INR 6 crore in total commissions.

To support this scale-up, the UPPCL, in coordination with the UPSRLM and its fintech partner, rapidly upgraded the *Vidyut Sakhi* application to integrate end-to-end OTS functionalities, including identification and registration of consumers with long-unpaid dues, settlement workflows, and real-time transaction reporting. The OTS implementation was executed through jointly coordinated field drives led by the senior management of the UPPCL and the UPSRLM, signalling a clear shift in institutional strategy. The *Vidyut Sakhis* moved from being a supplementary channel to a core operational asset for revenue recovery, contributing around 13 per cent of the collection under the OTS drive, and reinforcing discom confidence.

5. What this means for women and communities

Beyond programme-level metrics, the *Vidyut Sakhi* initiative has generated tangible changes in women's economic agency and social positioning within rural communities. Improved operational skills, predictable income flows, and sustained engagement with both consumers and public institutions also strengthened the *sakhis'* confidence, visibility, and autonomy in public spaces.

Through three case stories, drawn from in-depth interviews (IDI), we illustrate how the *Vidyut Sakhi* programme has enabled rural women to transition from low-income, informal work to stable, performance-linked livelihoods. These journeys highlight gains in income security, skills, confidence, and social recognition at the household and community levels.



A *Vidyut Sakhi* attending training in Bulandshahr, Uttar Pradesh, December 2024.

Box 1. Anita Verma: From homemaker to *lakhpati didi*, Sultanpur district



Anita Verma—a trained B.Ed. graduate—had withdrawn from paid work after the COVID-19 pandemic due to increased household responsibilities and caregiving needs. With limited mobility and no independent income, she remained a full-time homemaker until early 2025.

Anita learned about the *Vidyut Sakhi* programme through her SHG, and was drawn by the flexibility of the role. Training equipped her with practical skills in bill explanation, digital payments, and consumer interaction, building her confidence to operate independently in her village.

Activated as a *Vidyut Sakhi* in January 2025, Anita earned INR 163,244 (1.63 lakh) in commissions within a year, becoming a *lakhpati didi* by January 2026. This income strengthened her financial autonomy, enabled regular savings, and improved her household's economic security.

Her social standing has also shifted. Villagers now rely on her for electricity-related support, and new *sakhis* seek her guidance. At the community level, her work has improved payment discipline, with most households in her ward now paying electricity bills regularly through her doorstep service.

In Anita's own words...

Proudest moment

“Buying two LIC policies for my child. Once, my child's school fees were due and there was no money at home. But my commission got credited the same day. That's when I realised I can actively secure my child's future.”

Social impact

“People now depend on me for guidance. My phone keeps ringing for bill-related help, even from new *Vidyut Sakhis*.”

Community impact

“Earlier, people did not understand the consequences of not paying bills. Now, almost every household in my ward pays regularly.”

Source: Authors' field interviews with *Vidyut Sakhis*

Box 2. Mohini: Finding her financial independence, Rampur district



Before joining the *Vidyut Sakhi* programme, Mohini devoted most of her time to caring for her household and supporting her family. Like many women in her village, her responsibilities centred around domestic work, and she had limited opportunities to take up paid employment or participate in activities outside the home. Her earnings, when they came, were occasional, through small seasonal work or family support, and she had little exposure to financial or digital systems.

In 2022, Mohini learned about the *Vidyut Sakhi* programme when a UPSRLM team visited her village. With encouragement from her family, she decided to enrol. Through the programme's structured training in December 2024, she acquired new skills in digital payments, customer interaction, and problem-solving, and became comfortable using smartphones, payment apps, and basic printing for bill collection.

Today, Mohini earns a stable monthly income as a *Vidyut Sakhi*. Her earnings have allowed her to purchase her own plot of land and a two-wheeler, giving her greater financial confidence and mobility. She has also grown in confidence, moving from being hesitant to speak to now actively leading discussions in SHG meetings and interacting with consumers and officials.

Her work has had positive effects in her community as well. Local households find it easier to pay their electricity bills through her, and many prefer the clarity and support she provides, contributing to more regular and timely payments. Mohini now travels across nearby villages as part of her work, balancing her household responsibilities with a meaningful public-facing role.

In Mohini's own words...

Proudest moment

“Buying my own plot and scooter with my earnings. It proved to me that I can rebuild my life independently.”

Social impact

“Before, I wasn't allowed to travel freely. Now I move independently across villages and speak without hesitation with community members and in my SHG meetings.”

Community impact

“More households pay on time now because they have someone reliable nearby to support them. Many users say they prefer coming to me because I explain clearly and without hesitation.”

Her advice to other women

“Don't hesitate. This programme gives you skills, confidence, and a steady income—things every woman deserves.”

Box 3. Gayatri Devi: A woman with a disability becomes an energy service entrepreneur, Amroha district



Gayatri Devi's livelihood options before becoming *Vidyut Sakhi* were defined by constraint. As an anganwadi worker and a woman with a physical disability, she earned about INR 2,000–2,800 per month, barely enough to support her household. Limited mobility, few income options, and social hesitations around her disability kept her financially dependent and professionally invisible.

In 2022, Gayatri was introduced to the *Vidyut Sakhi* programme through the district SRLM office (DMM). Despite initial hesitation, she enrolled after encouragement from her SHG and family. She credits the ensuing training with transforming her ability to engage with technology and customers. She learned to use smartphones, from accessing the *Vidyut Sakhi* app and YouTube tutorials, to digital payments, and even basic printing for receipts.

Today, Gayatri earns INR 30,000–40,000 per month as a *Vidyut Sakhi*, more than ten times her earlier income. She manages household finances, contributes to major family decisions such as her son's marriage, and has helped build her family's home.

Her social standing has also shifted. She rarely stepped outside before, but now travels freely with the help of her son, interacts with officials and consumers, and is trusted by villagers for financial transactions. Electricity bill payment regularity in her village has improved because residents now have a reliable, local woman they trust.

In Gayatri Devi's own words...

Proudest moment

“Contributing financially for my son's wedding and helping build our house.”

Social impact

“I feel more confident in meetings; people listen to me now. People trust women with financial transactions because of my work.”

Community impact

“Electricity bill payments in my village have become more regular because people find it easier to pay through me.”

Challenges remain

“Initial acceptance and outreach were tough, and accessibility issues due to my disability still exist.”

Anita's, Gayatri Devi's, and Mohini's journeys demonstrate how community-anchored digital service delivery can transform low-paid welfare work into a livelihood opportunity, thereby expanding both economic independence and social participation for rural women.

6. Lessons from the *Vidyut Sakhi* model

6.1 Strengthening the next phase

The *Vidyut Sakhi* programme demonstrates that women-led, community-based service delivery can significantly improve rural revenue recovery while generating dignified, performance-linked livelihoods. Its rapid scale-up across all Uttar Pradesh districts and its growing contribution to discom revenues reflect a strong institutional foundation.

To unlock the full potential of the programme, where *sakhis* can help mobilise 60-70 per cent of the discoms' rural revenues, three sets of improvements are proposed:

First, the UPSRLM should strengthen field-level workforce management and communication.

District teams currently have limited flexibility to manage the *sakhi* workforce, and communication between the state and districts officials, and the *sakhis* remains fragmented. Establishing direct digital communication channels, periodic refresher trainings, and simple district-level performance dashboards will improve responsiveness, reduce attrition, and enable more active workforce management.

Second, discoms should deepen service integration and strengthen grievance redressal.

While the *sakhis* play a frontline role in collections, institutional support for bill corrections and consumer complaints remains uneven. Time-bound grievance protocols, formal integration of *sakhis* into complaint systems, and functional digital identities will strengthen their credibility and improve consumer trust.

Third, the UPSRLM and the UPPCL should strengthen incentives, data systems, and long-term programme architecture.

Clear district-wise targets, better analytics on inactive *sakhis* and low-compliance consumer segments, and closer alignment with reforms such as smart metering and digital payments will help institutionalise the programme as a core component of the state's revenue and livelihood strategy.

Overall, the *Vidyut Sakhi* model is already delivering strong outcomes, and has the potential to evolve into a permanent, system-level reform tool. To sustain this momentum, several operational risks will need to be managed as the programme is scaled up.

- **Uneven income distribution:** A small but growing group of high earners drives the upper end of earnings, highlighting the need for a viable income floor across districts.
- **Evolving role with digitalisation:** As smart meters and digital payments expand, the *sakhis'* roles may need to shift towards consumer education, digital facilitation, and grievance support.
- **Operational constraints in the field:** Mobility barriers, safety risks on account of cash handling, and limited access to appropriate financial products continue to affect participation.
- **Need for sustained institutional support:** Stronger grievance systems, safer transaction mechanisms, and financial literacy for *sakhis* will be essential to maintain livelihoods and preserve the *sakhis'* role as a trusted last-mile interface.

Recognising and planning for these risks will be essential to sustain the programme's livelihood outcomes while preserving its role as a trusted last-mile interface in an increasingly digital electricity system.

Sustaining scale requires stronger grievance systems, safer transactions, and continuous institutional support for frontline workers.

6.2 What policymakers can learn from the *Vidyut Sakhi* model

The *Vidyut Sakhi* experience offers a set of transferable lessons for policymakers seeking to strengthen last-mile service delivery while simultaneously advancing women-led livelihoods. The programme demonstrates that community-based delivery models can improve institutional performance when they are embedded within core systems, governed through data, and supported by credible income pathways.

Institutionalise community-based last-mile delivery:

In sectors such as electricity, where citizen behaviour directly shapes system outcomes, human interfaces remain essential even in highly digitised environments. Embedding community agents within formal operational structures enables states to improve trust, access, and compliance in ways that purely technological or enforcement-based approaches often cannot.

Leverage livelihood missions as reform partners:

Livelihood missions and SHG federations can function as strategic partners for public utilities. Their existing institutional networks offer scale, local legitimacy, and accountability mechanisms that state agencies alone struggle to replicate. Rather than positioning livelihood institutions as beneficiaries, governments can leverage them as co-producers of public services.

Design for income certainty and cash-flow

predictability: Stable commission structures and near real-time digital payments are critical for sustaining participation, reducing attrition, and incentivising effort. Where earnings are predictable and transparent, community agents are more likely to invest time, build consumer relationships, and internalise service standards.

Use data to move from input tracking to outcome

governance: Simple diagnostic tools, periodic assessments, and performance dashboards enable managers to identify bottlenecks, target support, and adapt programme design in real time. This shift from input compliance to outcome management is essential for scaling up service quality.

Treat women-led service models as reform

accelerators: When women are positioned as accountable service providers—supported by training, digital tools, and institutional legitimacy—they can strengthen state capacity while expanding economic participation.

Uttar Pradesh's *Vidyut Sakhi* programme demonstrates how embedding women-led service delivery within core public systems can help strengthen institutional performance while expanding economic participation and livelihood creation. We hope that lessons from this programme will inspire more sectors and public programmes to leverage technology, training and trust-building as measures for enhanced last-mile service delivery.

Livelihood missions can act as implementation partners, not beneficiaries, in delivering public services at scale.

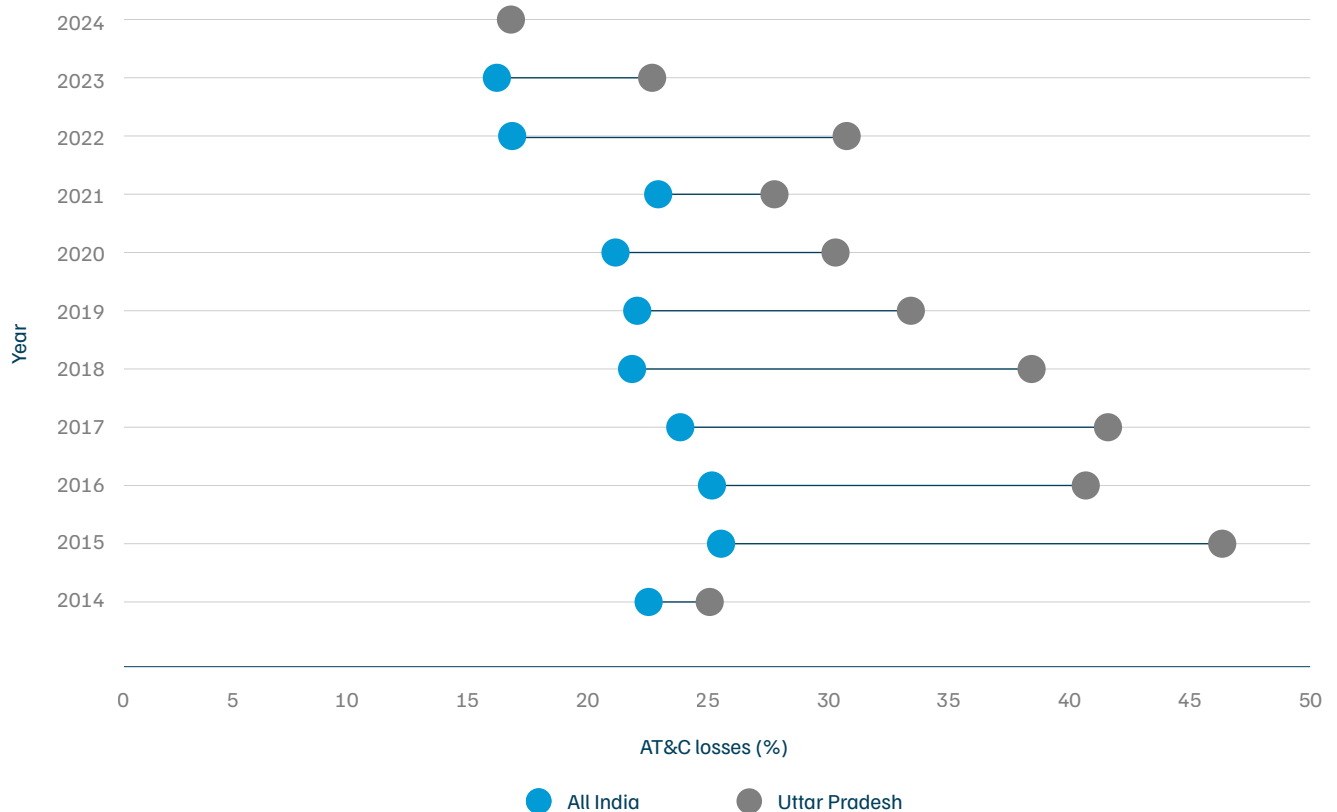
Annexures

Annexure 1. The Rural revenue challenge in Uttar Pradesh's power sector

Uttar Pradesh's distribution companies (discoms) have historically faced significant financial stress, driven largely by high commercial losses and uneven revenue recovery, particularly in rural areas. Aggregate technical and commercial (AT&C) losses in the state have consistently exceeded the national average, highlighting persistent structural inefficiencies in the distribution system.

In FY22, Uttar Pradesh's discoms recorded AT&C losses of 31.02 per cent, nearly double the all-India average of 16.47 per cent. Although losses declined to 22.3 per cent in FY23 and further to 16.39 per cent in FY24, they remain high relative to peer states and continue to constrain utility cash flows (PFC, 2020–2024).

Figure 9. Uttar Pradesh discoms have struggled with high Aggregate Technical & Commercial (AT&C) losses as compared to the national average



Source: Authors' analysis using Power Finance Corporation (PFC) (2020–2024), Performance of State Power Utilities (various years). New Delhi: PFC.

A major persistent bottleneck identified in CEEW's research is last-mile bill collection in the rural domestic segment. Delays and irregularities in revenue realisation weaken liquidity, limit the ability of discoms to meet power procurement obligations, and undermine long-term investments in grid modernisation and smart metering.

Rural revenue realisation remains one of the weakest links in Uttar Pradesh's electricity value chain. Distant payment counters, uneven compliance, and trust deficits in traditional collection systems continue to constrain cash flow, even as real-time billing and digital payment platforms expand.

CEEW's research shows that rural consumers' payment behaviour in Uttar Pradesh is shaped by three key factors:

- **Distrust in electricity bills** and lack of clarity on charge components.
- **Limited access to convenient payment modes**—61 per cent of rural consumers across surveyed states⁴ still visit discom offices to pay bills, while 57 per cent find online modes unsuitable (Agrawal, 2020).

- **Post-COVID bill distrust**, which has deepened non-payment tendencies.

As a result, high reported collection efficiency coexists with sporadic payment behaviour, where consumers often clear dues during recovery drives or settlement schemes rather than through regular monthly payments (Balani K. B., 2025) (Ganesan, Bharadwaj, Balani, & CEEW, 2019) (Burlig, 2025). This pattern illustrates a broader last-mile challenge: while systems for billing and payment exist, reliability depends on trusted human interfaces. Digital platforms alone are insufficient to ensure sustained compliance in low-trust environments (Balani & Ganesan, 2020); (Vrhovac, 2023).

The *Vidyut Sakhi* model directly responds to this gap by deploying local women as trusted, door-to-door collection agents, improving payment discipline, reducing transaction costs, and easing the burden on formal infrastructure. Each successful collection cycle strengthens community trust, stabilises cash flow, and supports better power procurement planning and long-term market participation.

Annexure 2. *Aakalan*—training assessment tool

Purpose

Aakalan was developed as a simple diagnostic tool to systematically evaluate the effectiveness of large-scale capacity building under the *Vidyut Sakhi* programme. The objective was to move beyond attendance metrics and generate quantitative evidence on learning outcomes.

Design

- **Format:** 7 multiple-choice questions
- **Mode:** Google Forms (QR/link shared at training centres)
- **Administration:**
 - » ***Aakalan 1***—pre-training (Day 1)
 - » ***Aakalan 2***—post-training (Day 2)

- **Matching:** Responses linked using phone numbers/*sakhi* IDs

Key knowledge domains covered

1. **Programme awareness:** Roles of UPSRLM, UPPCL, banks, and *sakhis*
2. **Commission rules:** Full vs part payment, rural slabs, and app navigation
3. **Digital operations:** App workflow, receipt generation, printer usage
4. **Bill reading:** Understanding bill components and charges
5. **Consumer engagement:** Handling disputes, explaining bills, escalation pathways

4. The survey referenced in Agrawal (2020) covered rural consumers in six states: Uttar Pradesh, Bihar, Jharkhand, Madhya Pradesh, Rajasthan, and Odisha.

Sample question themes

- What commission is earned on part-payment in rural areas?
- Which step comes first while generating a digital receipt?
- Whom should you contact in case of a billing discrepancy?

Sample size and data cleaning

- **Total trained:** 14,223 *sakhis*
- **Completed both rounds:** 10,650
- **Valid matched responses after cleaning:** 9,192

Key results (summary)

- Average score increased from 56% to 79%

- Lowest baseline performers showed the highest improvement
- Score variability reduced from 17% to 9%, indicating convergence across districts

Methodological limitations

- Same questionnaire used in both rounds (possible recall bias)
- Classroom setting may allow peer sharing
- Short-term learning measured; long-term behaviour changes not directly captured

Despite these limitations, *Aakalan* provided directionally strong evidence of training impact and informed further refinement of content, especially for weaker domains such as bill reading.



Image: CEEW/Emotive Lens

A Batch of *Vidyut Sakhis* with CEEW, SIRD, and UPSRLM teams after a training workshop in Bulandshahr, Uttar Pradesh, December 2024.

Acronyms

AT&C	aggregate technical and commercial	NRLM	<i>National Rural Livelihood Mission</i>
BMM	block mission manager	OTS	one-time settlement
CLF	cluster-level federation	PFC	Power Finance Corporation
DAY-NRLM	<i>Deendayal Antyodaya Yojana–National Rural Livelihood Mission</i>	SHG	self-help group
DISCOM	distribution company	SIRD	State Institute of Rural Development
DMM	district mission manager	UPERC	Uttar Pradesh Electricity Regulatory Commission
FY	financial year	UPPCL	Uttar Pradesh Power Corporation Limited
GoUP	Government of Uttar Pradesh	UPSRLM	<i>Uttar Pradesh State Rural Livelihood Mission</i>
INR	Indian Rupee	VS	<i>Vidyut Sakhi</i>

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