Case study : Mobile application based New Service Connection (NSC) Process for non-RAPDRP areas in Bihar

Problem Statement:

Inspired by the Government of India's "Saubhagya Yojana" and Government of Bihar (GoB)'s "*Har Ghar Bijli Lagatar*" initiative, it was decided to extend Electricity connection to all households of State of Bihar by November 2018. A projected 70 lacs of new service connections were to be released within a time frame of 36 months.

There were challenges in the release of these large no of electricity connections in short duration including:

1. Identification of prospective consumers and connecting them with the nearest Distribution Network as per the guidelines.
2. Ensuring compliance in the timely release of the electricity connections as per regulations was a huge challenge with the existing process of NSC release; existing arrear in proposed area to be verified in the stipulated time frame so that connection can be released.
3. Bringing transparency in the release of New Service Connections as conventional methods have made it difficult to keep track of the applications released and pending.
4. Timely release of the connection, adding consumer in the correct MRU (Meter Reading Book) and consumer to be served with Energy bill on the next billing cycle.

Objective

1. To provide Electricity connection to all the un-electrified households across the state efficiently without skipping any process and within a defined timeline.
2. Make the process full-proof so that any corrupt practice can be avoided.
3. Ensuring newly added consumers would get the electricity bill.

Expected or actual benefits from implementing the solution (annual):

1. Aerial view of the survey and all the un-electrified households are identified.
2. 6.17 lakhs of new consumer added into the system through the mobile application in last 1 years and successfully getting bills.
3. Zero money transition while releasing the new connection, as SLC charges are converted to EMI.
4. Ease in commercial feasibility checking.

Repeatability of the solution (Specify how can the solution be repeated at other places facing similar challenge):

1. New Service Connection (NSC) release process can be standardised
2. The application can be customised for better tracking of the applications

Manpower required for implementing the solution:

Implementation was done by in-house employees

Solution proposed / implemented:

A. Survey & Identification of un-electrified households:

1. A specific GPS based Survey app has been developed for a door-to-door survey.
2. Survey activity is conducted for all the households (door to door) to identify the prospective connections. Support from District administration is taken for mass level implementation.
3. GPS coordinates are imposed on the Google Map to detect that the survey has been completed in all locality.
4. Block wise/District wise survey reports finalised with identification of prospective consumers.
5. Requirements for distribution network has been ascertained with the help of the mobile app post the survey, as many consumers are identified with improper network.

B. New Service Connection Application & document collection.

1. A detail New Service connection process flow map is prepared
2. NSC mobile app has been launched for smooth processing of new applications. The user has been defined at different levels; their roles & responsibility had been mapped accordingly.
3. Project Management Agency (PMA) has been appointed for tracking/ monitoring of the Applications received through Mobile Apps. However, turnkey contractor (TKC) has been appointed for installation, commissioning and release of service connection and finally JE has to verify the connections approved by PMA and then Local JE has been authorised to send meter installation report to the Billing system for generation of bills.
4. Payment terms of TKC, as well as PMA, is linked with the generation of the first bill from the consumers.

C. Application, Document Collection, Verification & Approval of Connection.

1. NSC executive would visit prospective consumer place along with the Mobile app to fill NSC form, collect document, scan them an upload in Web.
2. Once initial application along with requisite documents are received; JEE / AEE needs to verify document and accept the application. An acknowledgement would be sent to the prospective consumer.
3. JEE along local line staff needs to visit the consumer premises for technical & commercial feasibility in a time-bound manner.
4. JEE can verify application with existing consumer database/matching consumer/matching address etc.
5. Once the verification process completed Consumer number gets generated,
6. Service connection estimate is prepared to post receiving the feasibility report and same is informed to the prospective consumer as it was converted into instalment and added in the bill.

D. Meter Installation & sealing

1. Work Order is generated and forwarded to the TKC with instruction to complete the job within the stipulated time period.
2. TKC draws meter from meter reading terminal (MRT) and visits the consumer

premises with all the associated material and complete meter installation activity.

3. Post installation, commissioning and sealing of Meter Box; TKC needs to fill job completion report.

4. PMA needs to visit 100% consumer premises to verify installation status, Meter seal status any complain from consumer etc.

5. Sample verification by JEE / AEE of the concerned area

E. Consumer updates in the billing system

1. Once verification completed, JEE sends Meter installation report along with Meter details/seal details/initial reading etc. to the billing system.

2. AEE IT update the details in billing engine and ensure the consumer is placed in the particular MRU.

3. AEE-IT also ensure that consumer details get downloaded in the next month when the meter reader starts Meter reading activity.

4. PMA verify the 1st bill generation status with the consumer over the phone and complete the process.

F. Web access for periodic monitoring/ escalation & tracking mechanism.

1. A web module is defined for MIS purpose as well are monitoring/tracking of NSC status. It is compared with the survey database

2. An escalation matrix is defined to raise alarm in case of any delay at any step.

3. Top management can review the status and generate MIS reports from the web access of the module.

4. The consumer can also track the status of his application through the acknowledgement received by him over this Web service. Any complaint can also be put over this.

5. In this complete process and the commercial transition is avoided so as to free it from corruption.

6. In the meantime, the licensee has organised camps at different locations so as to collect any further left-out cases and address consumer complaints in direct supervision of Head Quarter.

Key benefits/ improvement

Applicant Satisfaction

- Transparency is ensured in the online connection process.
- Applicants will know their application status through web application/SMS at every stage such as
  - Acknowledgement of application
  - Application confirmation
  - Installation of meter
  - Bill generation

Saves time

- After implementation of this application, the cycle time between applying for new connection and allocation of actual physical connection will reduce significantly.
- Since the entire process is carried through mobile and web and is paperless, it reduces the time earlier used for traditional document processing.

Efficient Monitoring

- Single window system to take a quick decision with the help of various MIS reports
- Till date survey completed
- Till date survey verification completed
- Till date connection given
- Till date connection given to verified consumers
- Pending for verification

Note: These report will be available district wise, block wise, panchayat wise, village wise, division wise, subdivision wise, section wise etc.

Supporting evidence

Few screenshots of the mobile application