MAHAVITARAN
Maharashtra State Electricity Distribution Co. Ltd.

(A Govt. Of Maharashtra Undertaking)
CIN: U40109MH2005SGC153645

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No. – CE (Planning)/GIS Mapping/ 01840   Date: - 16/01/2025

Circular

Subject: Guidelines for Infrastructures mapping through GIS with the help of PM Gati Shakti APP.

Ref: 1. CGM/IT/2320 dated: 27.01.2023
2. D.O. /Dir. (Ops.)/ 1726 Dated 25.05.2023
3. MSEDCL/GIS/IT/18899 Dated 18.06.2024

Government of India has taken initiatives to develop a Geographical Information System (GIS) platform with more than 200 layers integrating and mapping necessary infrastructures from various government departments across the country. In this regard, Government of Maharashtra has directed to all the departments to share the GIS data pertaining to their asset infrastructure to the MRSAC (Maharashtra Remote Sensing Application Centre).

The GIS data of all LT/HT electricity poles is required on PM GatiShakti portal. A mobile app on android platform is made available for GIS survey and necessary training was also imparted in January 2023 up to Janmitra level in all 0&M Zones for survey of LT/HT pole. A user manual of mobile app for pole survey, is also circulated. Accordingly, actual work of LT/HT electric pole survey started in Feb-2023 by some of the zones. The progress of the work is stagnated and needs a comprehensive boost by adding promotional incentives and managing the available resources.

Scope:

The corporate IT has developed and amended in house PM Gati Shakti APP. To plot the entire available various infrastructure assets in Gati Shakti app. Field Offices also have plotted a part of infrastructures seamlessly through this app. The MSEDCL has a huge network of Sub/stations, HT/LT lines and underground cable network. As per the recent available data we are able to map all the existing EHV and HV sub/stations entirely. The MSEDCL has a network of 4,50,637 KM of all types of HT lines and 7,19,715 KM of LT lines and 9,41,245 no of DTC. All the available assets on these lines need to be mapped up to LT end pole.

Operational procedure:-

To begin with, it is expected to map the 33 kV/22 KV lines emanating from EHV/HV sub/stn. up to the HV sub/stn. and the existing HT consumers too. In the later phase, all the 11 kV feeders emanating from respective sub/stn and the existing DTCs required to be mapped and to complete the entire mapping we need to map the entire LT network.

A systematic approach has to be developed for mapping of this infrastructure. In the first phase, the entire network in major towns is to be completed. In Parallel in the rural areas this activity has to be continued without hampering the day today activities.

Presently, it is observed that all these assets is being mapped by the departmental employees. As the pace of mapping is limited by the number and the interest of the employees, it is decided to engage to other resources to map the assets on priority. To promote this activity, it is decided to offer some promotional incentive to the stake holders as in listed below.

Sr. No	Type of Employee	Incentive Structure
1	ITI Apprentice	Rs. 10 per asset
2	PM Kaushalya Vikas	Rs. 10 per asset
3	Degree Apprentice	Rs. 2000/ Month
4	Diploma Apprentice	Rs. 1500/ Month
5	Outsource Agency	Rs. 10 per asset
6	Departmental Employee	Rs. 2 per asset

Assets mean LT/HT poles, DTC, RMU, Feeder pillar and segment of U/G cable.

As mentioned about the IT apprentice/ the recruitees under PM Koushalya Vikas and outsourced employees will be paid rupees 10 per asset. In case of outsourced employees, no personal remuneration is allowed. These outsourced employees are to be engaged as per requirement through approved agencies. The outsource employees will be paid as per the actual work done in the field through the respective agencies. In addition to this, Mahila Bachat Gats can also be engaged for the above works at the approved rate on Rupees 10 for per assets.

Login to the app – To avoid the mistakes in mapping and to identify the default making user/area the credential will be made available BU wise. The IT department will make this available to the field users. The departmental employee will continue to work with his given login and password. The outsourced/ apprentice/ Mahila Bachat Gat employees will be given a unique login ID so as to identify the specific work carried out by him and to effect the payment accordingly. Login ID provision will be made available in web console.

It is expected that the work related to substation, right from 33/22 KV incomer, 11 KV outgoing feeders and the LT network is to be completed as a compressive unique activity.

The asset mapping work will be identified and certified, after forming beneficial section in the field. The beneficial section will be defined as:

Beneficial Section:-

o   For 33 kV feeders: Line from EHV Sub/stn. to the 33/11 KV Sub/st./Switching station or HT consumer.
o   For 22KV Feeders: Line from EHV Sub/stn to all 22/11 KV Sub/stn. /Switching station, DTC or to the HT Consumers.
o   For 11 KV feeders: Line from EHV/HV Sub/stn to all DTC or to the HT consumer.
o   For LT Network: Line from DTC to the end consumers (At least one complete LT circuit needs to be plotted).
    This beneficial section will primarily be verified by degree / diploma apprentice (if available) and finally will be certified by the concerned sectional officer / feeder manager.

Training:-

o   Training to use Gati-Shakti App will be given to these apprentices and outsource persons by local IT personnel at the nearest Small Training Centres (STC's) before commencing of works in the field.
o   The concerned SE O&M will be responsive authority to co-ordinate training and execution.
o   IT Department will provide technical support and training for GIS software and tools. Maintain the central database and ensure data security.

Data Entry:

o   The data entry should be correct such as type of pole, type of conductor, whether cut point, end pole etc.
o   All the data surveyed will be collected centrally and local IT will provide additional support.
o   GIS mapping of asset created in RDSS and Infra scheme should be done by the respective agency.

Budget and Payment Mechanism:

o   The necessary budget will be made available, on request of the concerned SE O&M.
o   The concerned Executive Engineer (O&M) will arrange to disburse the promotional benefits to the beneficiaries, following the financial administration and IT procedure.

Effect:

The promotional incentive plan will have prospective effect only. No retrospective promotional benefits are allowed.

Available information collected through Gati-Shakti App will be used to plot the digital network in Arc-GIS software at corporate office. After validating the above data, this digital network will be migrated to the CYM-DIST software and Network Analysis tool for future planning and Demand-Side management on daily basis. The same data will be made available on a common dashboard for the field officers for their day-to-day monitoring, analysis and planning purposes.

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