

## **DYNAMIC PLOT ALLOCATION CONCEPT FOR ALLOTMENT OF RETURNABLE PLOTS TO LPS FARMERS THROUGH ONLINE LOTTERY**

### **Background:**

The concept of land pooling is adopted where people were appealed to pool their land to fulfil the land requirement to set up the people's capital in Amaravati. In return, Government of Andhra Pradesh promised to give them reconstituted plots (residential and commercial) in a proportionate ratio of land pooled by them as per the predefined guidelines.

Against above backdrop, APCRDA has been entrusted with the activity of implementation of land pooling scheme and is empowered for allotment of reconstituted plots to LPS farmers through online lottery by virtue of enactment of law, orders from government and resolutions of the authority as detailed below:

- Chapter VIII (Development Schemes)—Section 48 (5) (c)(Reconstitution of Plots) of APCRDA Act'2014—To allot the reconstituted plot / land by draw of lots.
- Resolution# 36/2016 of 2nd Authority Meeting of APCRDA, dated: 26-04-2016—Approval for the Plot Allotment Policy of Amaravati Land Pooling Scheme for returnable plots and authorization to Commissioner—APCRDA to implement the policy.
- G.O.Ms.No#1, dated: 01-01-2015 & G.O.Ms.No#207, dated: 08-08-2016 of Municipal Administration & Urban Development (CRDA.2) Department—Notification of “Andhra Pradesh Capital City Land Pooling Scheme (Formulation and Implementation) Rules, 2015”.

Accordingly, to make the process of allotment of reconstituted plots completely transparent and unbiased, APCRDA has engaged M/s. APOnline Limited (Joint Venture of GoAP (APTS) and TCS) to develop an online solution for dynamic allocation of plot(s) through lottery system.

The concept is to allocate pre-determined size of plots to farmers under two types i.e., Residential and Commercial, category wise taking the revenue village as a unit. The residential plots are divided into 494 sub categories with plot sizes ranging from 120 sq.yds to 25000 sq.yds. Similarly, commercial plots are divided into 497 sub categories with plot sizes ranging from 30 sq.yds to 25000 sq.yds.

### **Pre-requisites, Guidelines and Process for allocation of plots through online lottery:**

In pursuance to the provisions issued under sub-section (5) of section 43 of the Act, the Competent Authority issues a 'Declaration of Intention' notice in Form 9.1 mentioning the survey number and extent of land declaring the intention to undertake Land Pooling Scheme in the Capital City area and inviting participation of landowners in the land pooling scheme by receiving consent applications in Form 9.3. The ownership of farmers shall be finalized in Form 9.10 and after ownership

finalization, agreement shall be entered between farmers and competent authority in Form 9.14, after which farmers shall select the plot options based on the sub-categories available (residential—494 no's, commercial—497 no's) for allotment of returnable plots.

Under rule 5(2)(A) (as amended from time to time) of LPS, the authority guaranteed return of reconstituted residential / commercial plots to the landowners for the original lands surrendered under Land Pooling Scheme.

The first step is to prepare the list of eligible farmers who will participate in the lottery at a given instance. The Competent Authority (CA) is responsible for preparing the final list of eligible farmers for a specific lottery. The sanctity of this farmer's list lies with Competent Authority alone. This list of plot options selected by the farmers in Form 9.18 shall be sent to Planning Department of APCRDA. Farmer has the option to make change in his pre-indicated choice of plot size. However, he/she must submit this before finalizing the farmer master list.

Planning Department, based on this list of pre-indicated choice of plot size opted by farmers, calculates the total area and number of plots of various sub categories to be made available for lottery. Accordingly, the planning department identifies the suitable land parcel and will prepare the layout based on the plot options selected by farmers and by following General Planning principles. The planning principles based on which the layouts are prepared shall ensure certain basic features to almost every plot which comes out as a natural advantage like the open spaces, road network, sizes of roads, avoiding road hit plots etc. Further, unique plot code shall be allocated for all the plots planned under residential and commercial category (Format of Plot Code: Township-Colony-Block-Plot Number-Sub Category). The layouts wherein the plots be allocated through the lottery system shall be prepared following general planning principles and the details of lottery system shall be made available to all the concerned before the lottery for their understanding and to maintain transparency. The final list of farmer master and plot master shall be sent to IT Department of APCRDA for conduct of online lottery for allocation of returnable plots to LPS farmers.

IT Department, taking the Plot Master Data (Sub-Category, Plot Code etc.) and Farmer Master Data (Aadhaar Number, Name of the Farmer, Sub-Category, Quantity etc.) finalized by Lands and Planning departments as input, shall conduct the online lottery for allocation of returnable plots to LPS farmers.

The Farmer Master & Plot Master will be ported into the database maintained for online lottery system and the online system designed for lottery validates the matching/tally of number of farmers vs number of plots mentioned in the masters.

After validation, the online system arranges the farmer data and plot data in the ascending order of Plot Subcategory and sets the ground for allotment of returnable plots through lottery.

### For Understanding:

The system shall pick the first set of minimum number of opted plots under each subcategory in ascending order (A1 – 1). Further, it will pick the list of farmers who have opted for same subcategory (A1 – 1) of plots and allocates the plot(s) to farmers on random basis. Whosoever is allocated with the plot shall be removed from the lottery automatically and the same process repeats till all the identified farmers are allocated with plots opting for such subcategory set (A1 – 1). Likewise, the process will continue till the complete plot allocation in that subcategory is completed i.e., (A1 – 1), (A1 – 2), (A1 – 3) etc.

(A1 – 1) means A1 is subcategory and 1 plot opted by farmers in that subcategory, (A1 – 2) means A1 is subcategory and 2 plots opted by farmers in that subcategory, (A1 – 3) means A1 is subcategory and 3 plots opted by farmers in that subcategory and so on. After completion of plot allocation for a particular subcategory, the subsequent subcategories will be selected and the same process will be repeated till the full process of lottery is completed.

### Example:

If there are 70 farmers in A1 subcategory, out of which 50 farmers have opted for single plot and 20 farmers have opted for 2 plots, the application picks the single plot on random basis and selects a farmer who opted for single plot on random basis and allocates that plot to the farmer and the plot allocated farmer shall be removed from the loop and like this, the application allocates 50 plots to all the 50 farmers on random basis who opted for single plots. Further, the loop continues for two marked plots as well. The application picks two plots on random basis and selects a farmer who opted for two plots on random basis and allocates those plots in contiguous (to the extent possible) or scattered manner and the plot allocated farmer shall be removed from the loop and like this, the application allocates 20 plots to all the 20 farmers who opted for two plots.

This whole process of allocation of plots shall be conducted with enough number of trials before proceeding with final run as per the majority choice of public participating in the program and every trial and final run conducted should have the server date and time stamp along with respective watermark on the plot allocation form. There should be at least one trail run before a final run. The plot allotment is made based on the list generated after the Final run. No allotment is allowed after final run. A provisional certificate containing the QR code is immediately issued to each allocates based on the outcome of final run.

The representation of process flow of this online lottery in the form of flow chart is as below:

# ALLOCATION OF LPS PLOTS THROUGH E-LOTTERY—FLOW CHART

## Lands

9.1—LPS Notification with Survey Number & Extent of Land

9.3—Farmers Consent

9.10—Ownership Finalization

9.14—Agreement with Farmers

9.18—Selection of Plot options by Farmers based on Sub-categories available (Residential-494 No's, Commercial-497 No's)

## Planning

9.18 Data provided by Lands Department will be taken as Input

Identification of Suitable Parcels & Preparation of Layout based on Plot options selected by Farmers & by following General Planning Principles (Revenue Village will be treated as a UNIT)

Allocation of unique Plot Code for all the Plots planned under Residential & Commercial category  
Format: Township-Colony-Block-Plot Number-SubCategory

## Software

Plot Master Data (Sub-Category, Plot Code) and Farmer Master Data (Aadhaar Number, Name of the Farmer, SubCategory, Quantity) provided by Lands & Planning Departments will be taken as input

The online system designed for the lottery validates the matching of number of farmers vs number of plots. In case of any discrepancy, the same will be corrected after obtaining inputs/corrections from Lands/Planning department

Once the masters are ready, online system prepares list of farmers Sub Category wise for allocation of plots on random basis based on the plots available under that respective sub-category

**Commencement of Lottery:** System will prepare the list of farmers who have opted for same set of category (A1 – 1) of plots in ascending order and allocates the plot to the farmer on random basis based on the plot master available under that respective sub-category. Whosoever is allocated with the plot will be removed from the lottery automatically. The same process repeats till all the identified sets are allocated to farmers opting for such set (A1 – 1) and then proceeds to next set under that sub-category i.e., (A1 – 2) and continues to allocate plots through this concept until all the sub-categories are completed.

(A1 – 1) means A1 is subcategory and 1 plot opted by farmers. (A1 – 2) means A1 is subcategory and 2 plots opted by farmers. To the extent possible, it marks the same number of plots opted by a single farmer side by side under any sub-category

Prior to conduct of Final lottery, trail runs (minimum 1 trail run and maximum 10 trail runs) will be conducted in front of the landowners based on their choice

After Final run of the lottery, plots will be allocated to Farmers and subsequently, SMS will be triggered to respective farmers immediately after allocation of plots through final run of lottery. Provisional certificates will be distributed to the land owners immediately

Certain critical guidelines / framework for allocation of returnable plots to LPS farmers through dynamic plot allocation concept are portrayed below:

- The Competent Authority issues a notification of scheduling the lottery in a specific village.
- Notice of conduct of lottery shall be issued by the Competent Authority at least three (3) days prior to the date of conduct of lottery.
- The landowners shall be informed as far as possible in person / by SMS / press note / by beat of tom in the village etc.
- Revenue village is the UNIT for draw of plots.
- If the same land owner opts for more than one plot in a particular subcategory, he/she shall be allotted with contiguous plots to the extent possible.
- Lottery will be drawn within each subcategory of plots.
- The plot allotment shall be done separately for residential and commercial categories and within them for dry land plots and jareebu plots distinctly. Further, in each category, farmers shall choose subcategories from total 494 subcategories available in residential category and 497 subcategories available in commercial category.
- There is no such rule/restriction that same plot should not be allocated for a beneficiary in trial and final run, since the “Dynamic Allocation of Plots through Lottery System” is purely based on Dynamic and Random selection.
- The percentage of instances where, ‘some of the trials might match with the reals’, is inversely proportion to the ‘number of farmers who have chosen that subcategory’; i.e., the lesser the number of farmers, the more is the percentage of matching of some trials with the reals.
- Though a particular farmer might win the same plot in some of the trials and the corresponding final run, the pattern of same plot appearing across the various trials and corresponding final run for farmers will not be uniform. This varying pattern will ensure that no specific farmer be prefixed with a particular plot in the lottery software.
- A Plot Allotment Committee under the chairmanship of Joint Collector and Ex-Officio Additional Commissioner, APCRDA, Director of Lands, Director of IT, Director of Planning, Competent Authority of the respective unit shall supervise the transparency in draw of plots.
- Immediately after final allotment, SMS with the details of individual, allotment is sent to each farmer.
- List of final allocation is immediately uploaded on APCRDA website.

If the total eligibility of a farmer doesn't confirm to any pre-defined subcategory, the nearest plot size just below his/her total eligibility is considered. Regarding the

difference of his/her eligibility and nearest available plot size, farmer has three options:

- To opt for a TDR Bond backed by APCRDA for this remaining area (default option in case of no selection by the farmer).
- To join hands with other such farmer(s) and opt for a joint ownership of pre-defined sub category of plot size.
- CRDA pools all such remaining size of plots and auction the same. The amount generated by this auction is distributed among these farmers in proportionate ratio.

In case if any farmer has not indicated any choice of plot size, he/she is considered for a single plot of the size of his/her total eligibility. Regarding the remaining area beyond the pre-defined sub category, he/she will be considered for TDR Bond only.

### **Salient Features of e-Lottery:**

- “New ID” Concept of Microsoft SQL Server Database is used to pick a farmer and plot from the list, which creates a unique row number of each run and hence the process of picking up farmer from the “Farmer Master” and plot from the “Plot Master” for plot assignment during lottery is purely random and dynamic.
- This whole process of dynamic allocation of plots is reviewed at code and functionality level and is approved by STQC (Standardization Testing and Quality Certification), MeitY, Govt of India.
- QR Code (With parameters like Allocated plot code, Aadhaar Number, farmer name, village).
- The final list of allocation is digitally signed through a 64Bit Secured Encryption Key (Digital Key).
- In order to ensure transparency and non-tamper environment, the “Dynamic Allocation of Plots through Lottery System” application is designed in such a way that, it will not store the result run data in any manner. It will dynamically display the result in the front end as a PDF document in secured manner with respective watermark, date and time stamp of server.