



# TowGeom

*Tower geometry made fast and simple*

## Business Challenge

Transmission Line Towers constitute about 28 - 42 percent of the total cost of the Transmission Lines. The increasing demand for electrical energy can be met more economical by developing different light weight configurations of transmission line towers. To achieve optimized and safer tower designs, tower designers could use a handy tool to generate 3D tower geometry easily so that multiple tower configurations can be compared for finalizing tower weight.

## The Solution

Tower geometry generation in any analysis and designing tool is complex and takes its own time based on the complexity of the geometry. Again, certain geometry modifications take the same amount of time that is consumed during creation. Adding to that, body wind load calculations are also time-consuming both in creation and modification. To achieve accurate and optimized tower design, different geometry configurations need to be analyzed. To overcome these problems, we have developed an advanced live 3D Graphics tool that generates geometry data in less than 10 minutes, creates body wind loads and tower weights, thus providing designers more time to focus on design and optimization. Currently, TowGeom supports for PLS-Tower, so geometry data is created in PLS-Tower format so that the output of TowGeom can be directly copied as inputs in PLS-Tower.

## Key Benefits

- Live Graphics viewer of entire Tower, which updates as the user provides inputs. Data of each Tower is stored in a separate Input file.
- Support for multiple Extensions and Tower combinations.
- Pattern Generator (PatGen) software to create and reuse patterns of several types. All the user created panels are stored in a Library file in the user's system. Program provides a default list of existing panels from each panel type in the library file.

- Multiple Validations while modelling the geometry.
- Generated Output files which contain geometry data of Primary Nodes, Secondary Nodes, Sections, Angle Groups and Angle Members which can be copied directly into PLS-Tower software for further design and optimization.
- Output files also contains Members info, Panel Wise weights, Body Wind Load Distribution data, Effective Wind area on both Transverse and Longitudinal faces.
- 2D and 3D output drawing files of the Tower.
- Option to check the Clearances of the Tower in Live 3D viewer.
- Easy maintenance of Project specifications, Angles Database, Bolts Database, etc.
- And many more UI features for more user-friendly usage of the software

## Conclusion

Using TowGeom the following points can be achieved

- Tower designers can generate the inputs for tower geometry, tower body wind loads and tower weight very fast and easy way.
- TowGeom enables designers to focus more on tower design and optimization.
- Comparing tower weights for different geometry configurations can be done very easily using TowGeom.
- Inputs in PLS-Tower can be generated in less than 10 minutes.

## For More Details:

- Watch this [TowGeom Video](#) for a brief demonstration of the application.
- Click [here](#) for the Latest TowGeom Update.

## Sample Tower Models created in TowGeom

