



# Electra

by **CGS plus**

Overhead Power Line  
Design Software



AUTODESK  
AUTOCAD CIVIL 3D  
Compatible



AUTODESK  
AUTOCAD  
Compatible



AUTODESK  
AUTOCAD MAP 3D  
Compatible



DEVELOPED FOR



BRISCAD

Version 2017



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## Overhead power line design

ELECTRA is powerful overhead power line CAD design software which combines design and documentation production workflows for electrical distribution design.

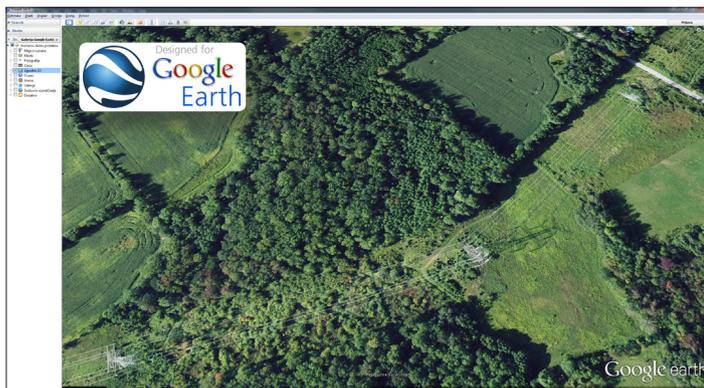
It provides sophisticated design and analyzing tools to optimize transmission network designs in plan and profile. Detailed and comprehensive documentation production is supported within Electra software solution.

## 3D terrain model design

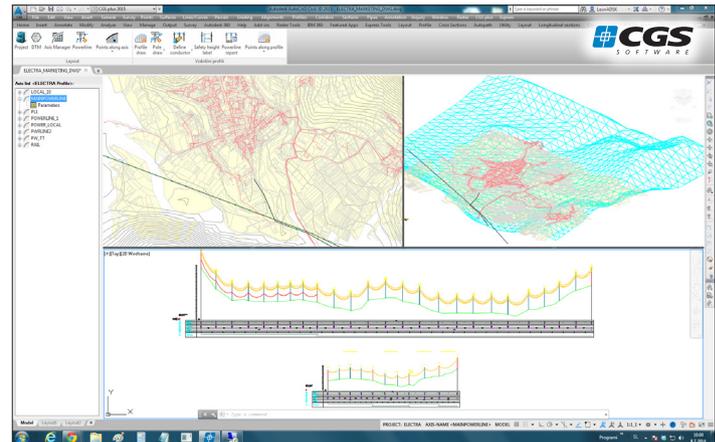
Electra support various digital terrain data from surveying instruments, Lidar technologies, photogrammetry and other data formats. Electra includes its own digital terrain creation tool to model 3D surfaces for generation of multiple plan and profile transmission lines design.

## Easy to use workflows and dynamic data changes support

With its easy to use workflows and design data analysis tools Electra provides user a comprehensive tool to manage complex design requirements in most productive way. Automatic data update of plan and profile en-



<b>Used for</b>	Overhead power line design
<b>Supported CAD platforms</b>	AutoCAD, AutoCAD Civil 3D, AutoCAD Map 3D 2016 to 2011; BricsCAD V15 to V13; 32 & 64-bit
<b>Supported languages</b>	English, Portuguese, Slovenian
<b>Supported standards</b>	EN 50423-3-21 EN 50423-1
<b>Product Internet page</b>	<a href="http://www.cgsplus.com">www.cgsplus.com</a>



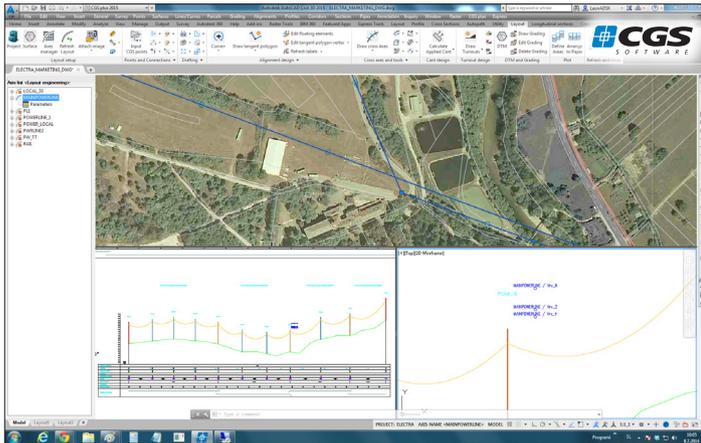
able users to easily design or edit transmission line geometry and components.

## Industry standards and calculations

Electra includes build in cables library and load parameters which can be user defined and customized. Catenary calcula-

tions and sag-tension analysis tools enable users to design, edit and optimize transmission lines accordingly. Electra complies with EN 50423-3-21 and EN 50423-1 standards.

# Electra Advantages



## Sag-tension and load parameters

Prebuild load parameters and sag-tension values enable users to produce quick designs while editing and customizing options provide reliable customer related or country specific transmission line designs.

## Design data analysis

Electra provides safety distances analysis between transmission lines and terrain, enables display of various sag calculations under different temperature conditions and tensile forces. It also supports visual safety distances checks between conductors.

## Infrastructure interoperability

Existing infrastructure analysis tools provide designers comprehensive information related to existing infrastructure that new design is related to. Other transmission lines intersection

heights, road, rail and other objects crossing information, projected objects from layout to profile information and more. Objects along transmission line data info and other information is available within Electra tools.

## Design data reports and documentation

Span, sag and tension reports are included plus detailed plan and profile layout documentation with additional drafting, labeling and other possibilities are supported within the Electra solution.

Span	Span	Span	Span	Span	Span
10	10	10	10	10	10
15	15	15	15	15	15
20	20	20	20	20	20
25	25	25	25	25	25
30	30	30	30	30	30
35	35	35	35	35	35
40	40	40	40	40	40
45	45	45	45	45	45
50	50	50	50	50	50
55	55	55	55	55	55
60	60	60	60	60	60
65	65	65	65	65	65
70	70	70	70	70	70
75	75	75	75	75	75
80	80	80	80	80	80
85	85	85	85	85	85
90	90	90	90	90	90
95	95	95	95	95	95
100	100	100	100	100	100

## Intuitive workflow

The Electra workflow consistently follows standard civil engineering design process, which intuitively leads the designer from the start to the successful finish of the project.

## Easy to learn and use

Well-structured ribbons, menus and simple dialogues enable fast learning for the first time user while the toolbox and command line options are provided for the convenience of experienced users.

## Handling of large data sets

Electra is capable of handling large projects with very long power lines within seconds.

## Support for local design standards

Electra is available in several languages and supports country specific standards and drawing layouts. Electra customers are entitled to use any country-specific version of the software in case of designing projects for foreign countries.

## Team-work Support

Projects can be very efficiently divided among multiple team members who can then work simultaneously.

## Native CAD application

Electra is fully integrated into the CAD environment. All the data are stored in one or more DWG files. The drawings can be modified with CAD commands at any design stage giving you complete flexibility in the design process.

## CAD platform choice

Electra can be installed on top of AutoCAD, AutoCAD Civil 3D, AutoCAD Map 3D or BricsCAD, where the functionality always remains the same. In the future additional CAD platforms will be supported. This CAD platform choice gives Electra customers the possibility to optimize their "Cost of ownership" without sacrificing function abilities.

## GIS data support

Integration with Autodesk MAP 3D functionality is supported within Electra in order to manage existing and new infrastructure spatial data. Export of new transmission lines data to shp files, ASCII files or other database formats is also supported.

## Drafting

Electra provides all the drafting possibilities to deliver design data in various forms and plotting delivery requirements.

## Flexibility

The program allows interactive modifications and changes of several parameters for calculating and editing of overhead power lines.

## CAD platform support

Electra operates on the AutoCAD and AutoCAD Civil 3D platforms from 2017 to 2013 version. It also operates on BricsCAD V16 to V13 version.



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