

**CYIENT**



# **CyVAR**

## **Empowering Utility Operators**

Overcoming Vegetation Challenges  
in Transmission & Distribution (T&D)



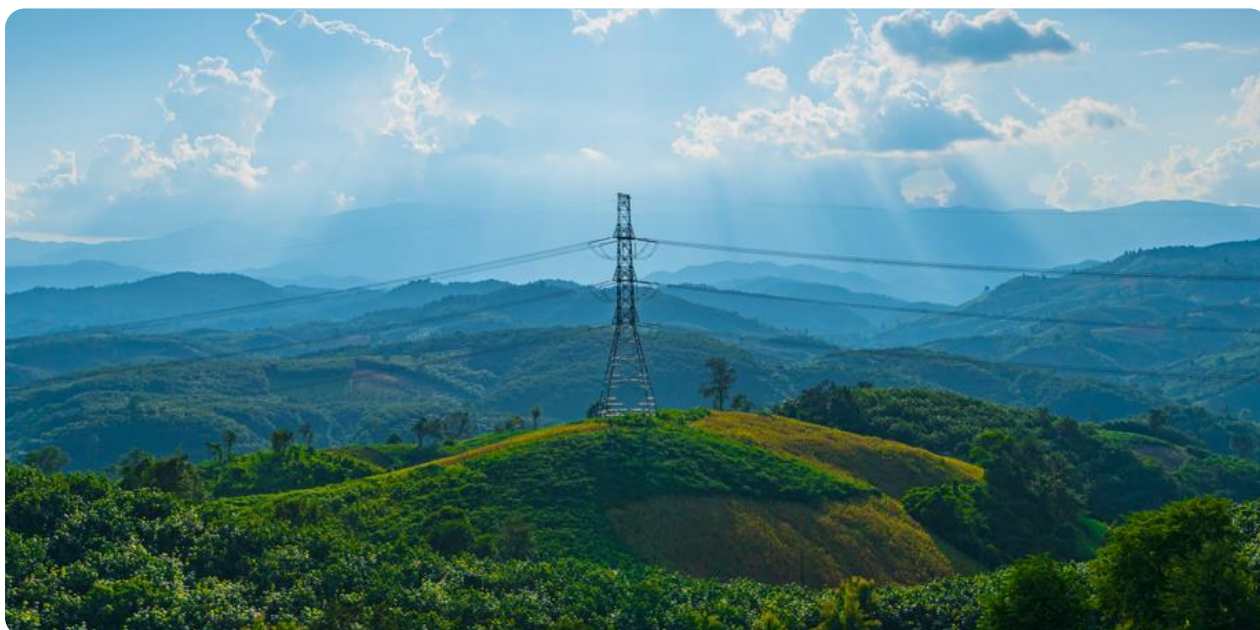
Maintaining and safeguarding utility network assets is a critical priority for transmission and distribution (T&D) operators. Tree-power line conflicts are the single largest cause of power outages, and ensuring that assets are free from encroachments from surrounding vegetation is a recurring, expensive yet essential obligation. These conflicts contribute significantly to forest fires, necessitating vegetation management for fire mitigation and safety compliance. Addressing these challenges is imperative to enhance operational efficiency and ensure public safety.

## Introducing CyVAR

- Introducing CyVAR (Cyient Vegetation Analysis and Reporting)—Cyient's cutting-edge solution is designed to revolutionize vegetation management for utility operators, using LiDAR data (aerial/drone/mobile-based) as the input source.
- CyVAR offers data-driven, predictive analytics to efficiently manage assets to ensure safety, compliance, and optimal performance in the dynamic realm of transmission and distribution.
- It provides predictive analytics on vegetation growth and performs engineering analysis with customized reports.
- CyVAR offers integration with GIS, OMS, MWM, and EAM to enhance operational efficiency.

## Benefits

- Predictive analytics for efficient asset management.
- Ensure compliance with safety regulations (e.g., NERC).
- Reduce the risk of wildfires and power outages.
- Early warnings for predictive vegetation incursion zones.
- Lower operational costs with targeted surveys and trimming.
- Environmental safety through reduced carbon emissions.
- Optimization of resource allocation and asset maintenance.





## CyVAR Solution Overview

CyVar offers a wide range of features that allow utility companies to ensure their network assets are unencumbered by vegetation.

- The solution is developed on ESRI platform.
- Easy to integrate with enterprise GIS, Asset Management solution, IT/OT platforms.
- On-premises and Cloud deployment.
- Dynamic simulation using ArcPy
- Scalable across 3D Analysis, Spatial analysis, Image Analysis etc
- Data-driven insights for predictive analytics.
- Predict growth and risk levels down to the individual tree level.



## Feature Extraction & Report Generation

- **Multiple data sources:** LiDAR point cloud acquisition from mobile, airborne, terrestrial and drone.
- **LiDAR classification:** Ground and non-ground.
- **Analytical models** for encroachment, As Surveyed, Sag, Sway, and change detection.
- **Reports:** Transmission, sub-transmission, distribution network encroachments, hazard conditions, grow-in and fall-in.

## Why Cyient



Consultancy capabilities



Collaboration with Technology and Service providers



Strong Utility & Geospatial Domain Knowledge



30+ years of global execution experience



Global presence



Leverage the power of digital technology to offer complete solution

CyVAR transforms vegetation management, ensuring safety, regulatory compliance, and resource optimization for utility operators. Leverage CyVAR service for a proactive solution to vegetation challenges in T&D.

## About Cyient

Cyient (Estd: 1991, NSE: CYIENT) is a global Engineering and Technology solutions company. We collaborate with our customers to design digital enterprises, build intelligent products and platforms and solve sustainability challenges. We are committed to designing tomorrow together with our stakeholders and being a culturally inclusive, socially responsible, and environmentally sustainable organization.

For more information, please visit [www.cyient.com](http://www.cyient.com)



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