

Integrated Planning for Electrical Utilities



Make decisions that drive your grid strategy

Electrical utilities are facing mounting challenges and opportunities in today's complex energy landscape. With aging infrastructure, reliability targets, regulatory requirements, ESG objectives, and more to consider, making the right grid planning decisions is critical.

Integrated Planning (IP) represents a paradigm shift in how electrical transmission and distribution organizations approach the design, operation, and modernization of electric grids. The IFS Copperleaf Integrated Planning Solution utilizes a sophisticated value framework to make grid investment decisions based on the technical, regulatory, social, and environmental considerations relevant to your organization, allowing you to create executable investment plans that support efficient, sustainable, and reliable grids.

An integrated, value-based approach to grid planning

IFS Copperleaf's industry-leading Asset Investment Planning (AIP) software is a powerful tool for utility companies seeking IP solutions. IFS Copperleaf enables utilities to make data-driven decisions, ensuring that investments are directed towards projects that deliver the highest value. By evaluating the benefits, costs, and risks of various investment options, utilities can prioritize initiatives that enhance grid reliability and performance.

Traditional grid planning has long focused on centralized generation, transmission, and distribution systems designed for one-way power flow. However, the rise of Distributed Energy Resources (DERs) has highlighted significant flaws in this model. IP solutions emphasize bidirectional power flows, real-time grid interactivity, and probabilistic load

forecasting. IP requires utilities to evaluate generation, transmission, distribution, and demand-side resources as interconnected components. By integrating these elements, utilities can defer traditional infrastructure upgrades and achieve cost savings through innovative non-wires alternatives like demand response.

IFS Copperleaf's IP solution helps utilities evaluate and compare different investment scenarios, providing greater optionality to ensure that every dollar spent maximizes value. Copperleaf integrates technical grid planning and investment planning, providing comprehensive insights that optimize both financial and operational performance. This integration allows utilities to bring technical grid information into the decision-making process, ensuring that asset lifecycle management data is fully leveraged.



We piloted integrated planning on the order of about \$100 million dollars. And we've seen that with that portfolio of work, we were able to get a 20% unit cost efficiency. Those are dollars that we can reinvest right back in our system for our customers to address other needs."

Wen Tu

Senior Director of Integrated Planning
PG&E

The benefits of IFS Copperleaf Integrated Planning



Executable plans

The output of IFS Copperleaf's IP solution is executable investment plans that tell you exactly where to invest in order to realize your strategy.



Increased resilience

IP enhances the grid's ability to withstand and recover from disruptions, ensuring reliable energy supply.



Improved efficiency

By considering the entire energy system, IP helps identify and implement the most efficient solutions for grid management.



Cost savings

By optimizing investments and operations, IP can lead to better rate case approvals and reduced costs for utilities and consumers.



Enhanced sustainability

IP supports the integration of renewable energy sources, reducing the grid's environmental impact.

The IFS Copperleaf difference

Holistic Planning: Coordination between generation, transmission, and distribution is a critical component of IP and should be the overarching lens through which all other differentiators are considered. IFS Copperleaf IP supports coordinated planning between lines of business, breaking down planning silos to ensure projects executed in one line of business provide the best overall value for the organization. This holistic approach ensures that decisions made in one area drive value in others and for the business as a whole.

Work Bundling: IFS Copperleaf IP allows organizations to automatically bundle their work. Work bundling in integrated grid planning refers to the strategic grouping of related tasks or projects to optimize resources, reduce costs, and minimize disruptions. For example, utilities can bundle maintenance tasks with system upgrades or combine vegetation management with grid hardening measures. This approach minimizes the need for multiple site visits, reduces overall costs, and enhances grid reliability and resilience.

Continuous Planning: Historically, electrical utilities have made their grid plans in periodic cycles, which are long and inflexible. IFS Copperleaf IP can create actionable investment plans much faster, and investment portfolios can be efficiently re-optimized when needed. This continuous planning allows for capital plans to be quickly reforecast to accommodate unforeseen work, regulatory changes, budgetary adjustments, and other unexpected events. Scenario analysis enables utilities to explore the potential impact of various "what-if" scenarios and understand their impact on asset performance and costs.

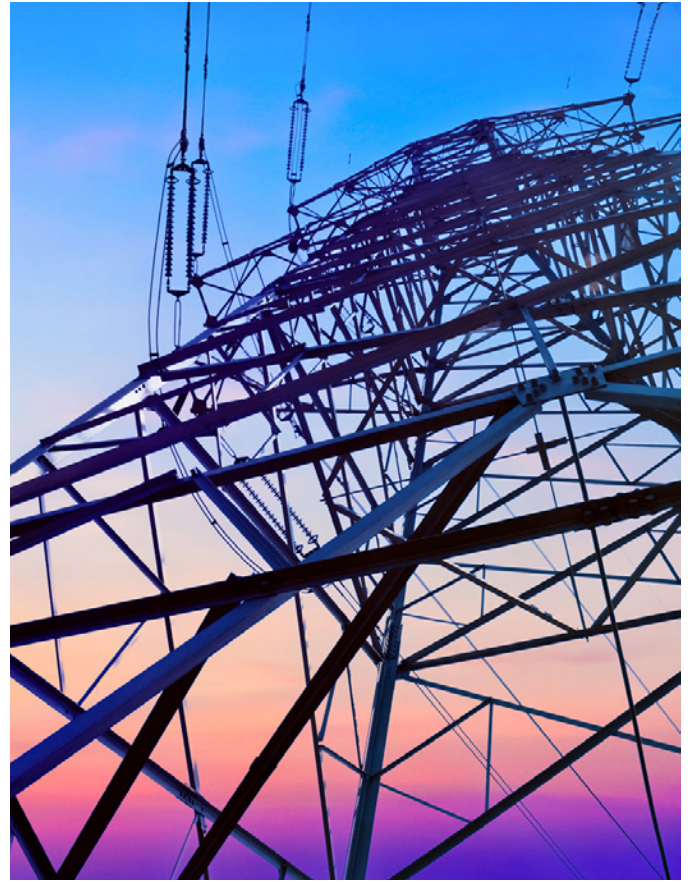
Integration with Other Systems: IFS Copperleaf IP's powerful data framework can bring together information from multiple systems, especially within the context of the IFS ecosystem. IFS Copperleaf IP and IFS can seamlessly integrate data from ERP, EAM, GIS, and other systems, allowing utilities to connect real-time operational data with financial data, manage both CAPEX and OPEX, and provide a unified view of investments throughout their entire lifecycle.

Strategic Alignment: Strategic objectives vary across different lines of business, but IFS Copperleaf IP takes disparate priorities and places them on a common economic scale using the Copperleaf Value Framework. This framework calculates a dollar value for objectives of any nature, including safety measures for workers, reliability metrics, grid resilience, ESG commitments, and more. This common economic scale provides a way to consider candidate investments based on all the strategic objectives important to the organization, allowing for a more transparent and defensible justification of the chosen investments.

IFS Copperleaf Integrated Planning solutions offer electrical utilities a comprehensive approach to optimizing their grid operations, achieving strategic goals, and driving greater overall value for their stakeholders. By addressing the critical challenges of modern grid management, IFS Copperleaf empowers utilities to build a resilient, efficient, and sustainable future.

Learn more

Contact us today to learn how we can help you realize the full potential of your grid.



IFS develops and delivers cloud enterprise software for companies around the world who manufacture and distribute goods, build and maintain assets, and manage service-focused operations. The industry expertise of our people and of our growing ecosystem, together with a commitment to deliver value at every single step, has made IFS a recognized leader and the most recommended supplier in our sector.

Learn more about how our enterprise software solutions can help your business today at ifs.com.

