

# CASE STUDY

IREA Overcomes Difficult Key Site  
Relocation While Reducing  
Operating Cost



## PROFESSIONAL SERVICES

With more than 160,000 customers over a 5,000 square-mile service territory, IREA is the largest electric distribution cooperative in Colorado.



*"The team at Castle Rock Microwave are all very knowledgeable, committed and hardworking people that go the extra mile to ensure their clients are well served." - Evan Roberts, Facility and Fleet Director at IREA*

## EXECUTIVE SUMMARY

IREA's objective was to move a critical tower in a remote location with poor access and do it quickly before the winter season. The relocation of the site presented several challenges with timing, coordinating with multiple tower users, lack of redundancy, and FCC coordination. With limited resources to pull off this complex move, IREA turned to Castle Rock Microwave to manage the project and handle the microwave portion of the project. IREA was able to achieve:

- Saving money on lease rates
- Delivery of the project within their budget and on time
- Managing a complex project without hiring additional employees
- Improved accessibility to a new site, potentially reducing downtime and costly repairs

## CHALLENGES

For years, IREA had operated microwave radios on the Riley Peak Tower to carry critical SCADA information for usage and subsequent rate information as well as enterprise data traffic throughout its service area. With the winter season looming and an expiring tower land lease, IREA had a short timeframe to relocate the tower site. Relocating to a new tower presented serious challenges.

*“Castle Rock Microwave can always be counted on providing us with honest answers to our questions and problems.”*  
- Evan Roberts, Facility and Fleet Director at IREA

- Since the tower was a key pathway connecting 25 sites in the IREA service area, the cooperative’s management knew it needed to move its facilities quickly off the Riley Peak tower and demolish the tower before it became inaccessible in several weeks from winter weather in the high country.
- The Riley Peak tower hosted equipment from the Jefferson County and Douglas County Sheriff’s departments, three fire districts, and the State of Colorado, all of whom were subletting from IREA. Each organization had specific needs for frequency coordination, paths and antennae height creating a tangled mess of requirements. In addition, there were several vendors whose work need to be coordinated in the relocation as well.
- Riley Peak was a critical site for each party with little or no redundancy. The new system would need to be ‘hot cut’ from the old system since outages would be too long with moving existing equipment.
- There was tremendous pressure in terms of the window to get FCC coordination completed and equipment delivered. However, the main challenge was coordinating this many paths in the same place with the FCC, while keeping frequencies up during the move.

## SOLUTION

With limited in-house resources to manage the project, IREA selected Castle Rock Microwave for their Project Management and Microwave expertise. After leading a stakeholder meeting with 10+ organizations, Castle Rock Microwave efficiently captured each stakeholder’s needs and a list of action items, including structural analysis and tower loading, frequency planning issues, PIM and other operational issues.

The project plan included:

- Complete site surveys.
- Locate new tower with available space that met the stakeholder’s requirements.
- Weekly stakeholder meetings and resolution coordination of action items with organizations and vendors.
- Coordinating FCC licenses for microwave and land mobile radio equipment.
- Buying new redundant equipment and building links to other sites.
- Training for the installation crews and customers.

After completing site surveys and investigating all available solutions, Castle Rock Microwave selected the Conifer Mountain tower site and developed a coordinated relocation plan to migrate the facilities from Riley Peak to Conifer which met the short timeframe and stakeholder needs. Castle Rock Microwave selected [Cambium](#) 6GHz and 23GHz microwave radios because of their availability, cost effectiveness and reliability.

## RESULTS

- IREA was able to relocate this tower site quickly before winter and saved money with much lower tower lease rates.
- The project highlighted Castle Rock Microwave’s level of expertise, agility, project management capabilities, and creativity in its ability to coordinate paths and locate equipment in the supply chain.
- Turnaround time on microwave equipment was half that of most suppliers.
- The project was completed at budget and on time.
- The new tower site provided much better accessibility during all seasons, potentially reducing downtime and costly repairs during winter.

