

# Emerging Technologies - Research & Development



- Electric Utility with 130+ years in service
- 13,000+ Employees
- 14 Million+ Customers

Business Need	Challenge	Solution & Results
<ul style="list-style-type: none"> <li>• System integration &amp; advanced research project</li> <li>• Integrate Distributed Control Architecture</li> <li>• Implement Distribution System Operator (DSO)</li> <li>• Implement Distributed Energy Resource Management System (DERMS)</li> <li>• Integrate systems with Utility Integration Bus (UIB)</li> <li>• Integrate with a third-party aggregator</li> <li>• Enhance Utility interconnection process</li> <li>• Field pilot with customer-owned resources</li> </ul>	<ul style="list-style-type: none"> <li>• Research &amp; development project</li> <li>• Emerging technologies with multiple vendors and national lab</li> <li>• Evolving regulations and standards (e.g., Rule 21, IEEE 2030.5)</li> <li>• Emerging business model (e.g., DSO)</li> <li>• Customer engagement</li> <li>• Multiple funding sources</li> <li>• Reporting and documentation requirements at the federal and state levels</li> </ul>	<ul style="list-style-type: none"> <li>• Developed a strong understanding of business requirements and use cases</li> <li>• Identified source systems and necessary data to satisfy use cases</li> <li>• Developed strong vendor and client relationships</li> <li>• Developed functional and data requirements based on use cases</li> <li>• Identified data extraction methods and tools</li> </ul>