



# Asset Condition Assessment of New Brunswick Power's Key Transmission System Assets

## Case Study



**Project Title: Asset Condition  
Assessment Of Key Transmission  
System Assets**

Customer Name:  
New Brunswick Power

Service: Asset Management  
Location: New Brunswick, Canada

### PROJECT OBJECTIVE

New Brunswick Power is a vertically integrated utility responsible for the generation, transmission and distribution of electricity to about 390,000 of residential and industrial customers in the Province of New Brunswick, Canada. The utility is committed to strategic and prudent investment planning for achieving the best possible reliability of supply while maintaining minimizing impact on customers' electricity rates.

Kinectrics was contracted to perform Asset Condition Assessment (ACA) for key transmission system assets to determine and justify long-term needs for sustaining the existing asset base.

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### SCOPE OF WORK

Kinectrics performed ACA for all major transformer station assets as well as for overhead transmission lines using available data and information, such as test and inspection results, corrective maintenance records, reliability performance, criticality, loading and input from the utility's field and technical staff.

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### TESTING PERFORMED

The work involved the following activities:

- Utilizing Kinectrics' methodologies and formulae customized for New Brunswick Power's processes and work practices to determine condition of assets using Health Indexing
- Employing risk based approach for developing a long-term plan that identified units that required attention and possible action
- Providing assessment of data quality and data gaps

Upon the project's completion Kinectrics provided New Brunswick with the following information for each of the asset categories, i.e. transformers, breakers, transmission lines etc.:

- Age distribution
- Health Index distribution
- Data availability assessment
- Condition based 10-year flagged-for-action plan
- Prioritized list of assets that require attention

In addition, Kinectrics provided general observation, and for improving the accuracy of ACA, such as collecting removal from service records, collecting additional data and refining inspection forms.



## RESULTS AND VALUE ADDED

New Brunswick Power realized a number of benefits from this project, specifically:

- Improved investment planning based on the risk-based flagged-for-action plan: directing investments towards areas that provide the biggest “bang for the buck”
- More planned replacement thus reducing per unit replacement cost
- Documented process of establishing investment requirements that could be replicated and modified if required
- Better understanding of data and information sources and their format
- Longer-term planning support identification of the HR requirements
- Improved data and information collection practices

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