



A Rockwell Automation Company

Vector Pipeline Vector NIPSCO Meter Stations

The Client:

Vector Pipeline is a new 344-mile pipeline for transporting natural gas from Chicago through Indiana, Michigan, and Ontario. Vector Pipeline is jointly-owned by Enbridge Inc., Westcoast Energy Inc. and MCN Energy Group Inc. The pipeline allows supply and transportation of natural gas to key markets in Ontario, Quebec, and the midwest and northeast regions of the United States.

Northern Indiana Public Service Company (NIPSCO), a subsidiary of NiSource Inc., is Indiana's largest natural gas distribution company and second largest electric distribution company.

The Requirement:

The Vector pipeline is a key link in the supply and transportation of natural gas from the United States and Western Canada to growing markets in the American Midwest, Eastern Canada and the Northeastern US. The initial capacity of the Vector Pipeline was designed to be 1 billion cubic feet per day at an operating pressure of 1,000 psi.

NIPSCO required metering buildings for delivery from the Vector Pipeline at two sites: Crown Point and LaPorte. The sites monitor the amount of natural gas flowing through the delivery points. Due to their remote locations, operations must be able to access all of the data remotely and must be capable of initiating a remote shut down in the event of a fire or pipeline leak.

The Design Solution:

Hinz was asked to perform the instrument, control, and electrical design for the two metering sites and oversee their installation in Indiana.

Hinz specified and selected all of the instrumentation and control equipment for the two metering sites. This included equipment both inside the building and on the pipeline.

Hinz developed the meter buildings layouts to house instrumentation such as the RTU, Flow Computer and HMI. The electrical, control and instrumentation of the buildings were also designed by Hinz. An Uninterruptible Power Supply (UPS) was included to ensure that sufficient power would be available to run the essential instrumentation in the event of a power outage. This backup power is essential because the sites are in remote locations where power may be unreliable. A Human Machine Interface (HMI) was implemented to allow the operators to control the process while on site.

An RTU was provided to facilitate remote access to metering data and to permit operators to shut in the site remotely. The RTU also contains all of the safety programming and calculations required on site. Hinz provided programming and complete testing for the Allen-Bradley HMI and Bristol RTU.

The two metering buildings were designed to be identical. The intention was to shorten fabrication time and ensure that if operators were familiar with one site, they would be familiar with both.

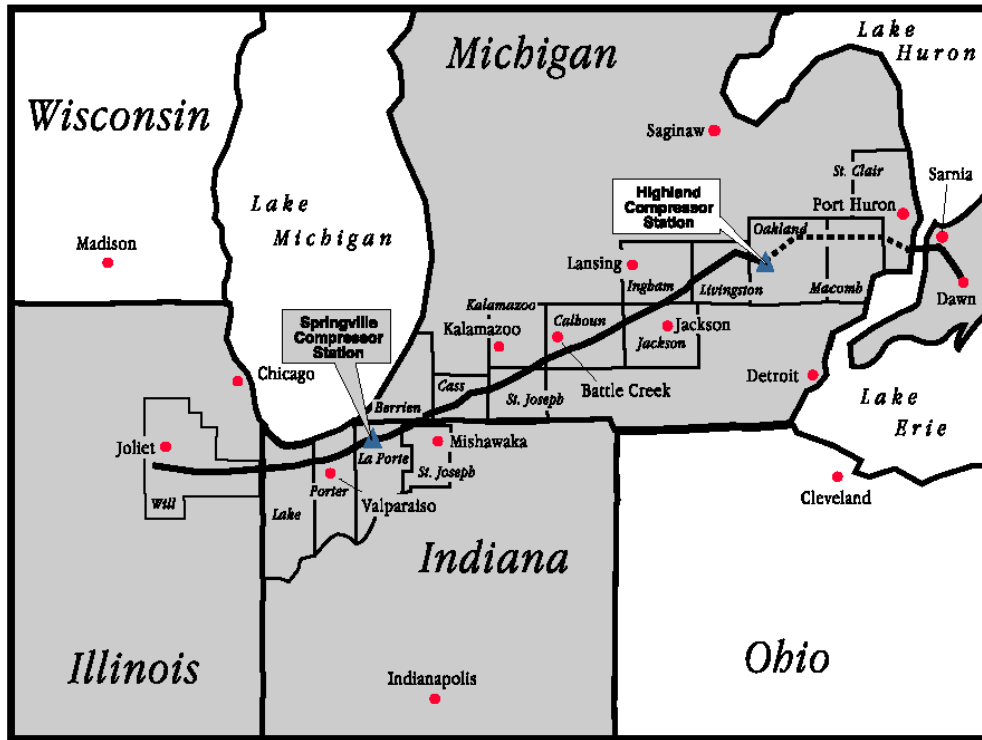
Hinz also specified all of the required hardware and software and performed testing prior to installation. RSView was chosen as the operator interface because of its ease of use and ability to connect via TCP/IP Ethernet to the Bristol Babcock RTU and Flow Computer. Hinz also provided on site commissioning for the NIPSCO metering sites in Indiana and provided all instrument/electrical documentation.



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Vector Pipeline



New Construction
 Leased Existing Pipeline
▲ **Compressor Station**

System Specifications:

- Control Equipment (per site):
 - 1 Bristol Babcock RTU
 - 1 Bristol Babcock Flow Computer
 - 1 RSVIEW32 Runtime 1500 HMI Software (Kepware OPC TCP/IP Ethernet communication driver)
 - 1 Allen-Bradley Touch Screen Computer for the HMI
- Instrumentation:
 - RTDs/Thermowells
 - Pressure Indicators/Transmitters
 - Daniel Ultrasonic Flowmeters
 - Flame Detectors
 - Combustible Gas Detectors
 - Hayley Uninterruptible Power System

For further information or to contact a Hinz office near you, please check our website at:

www.hinz.com