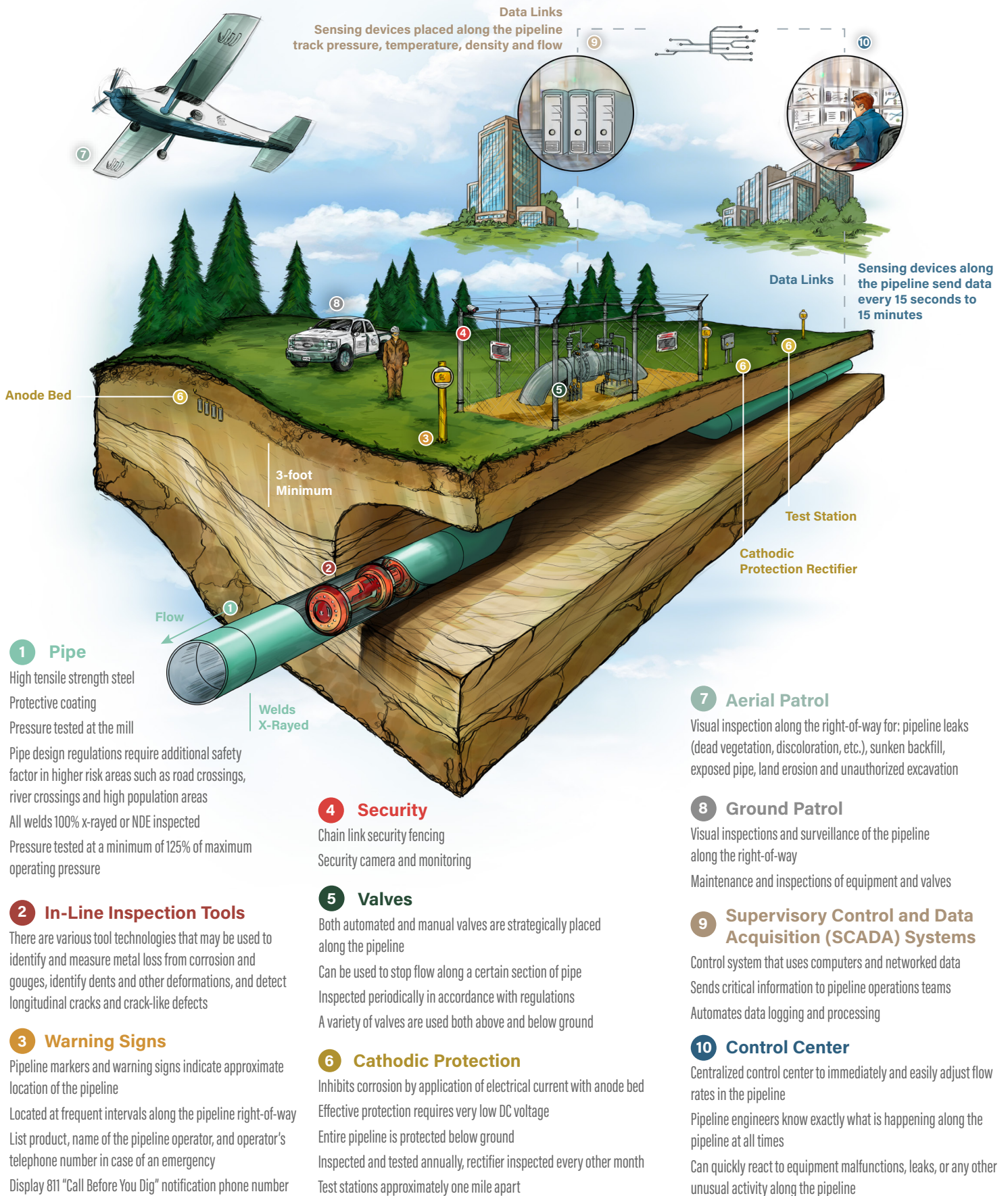


Energy Transfer has a comprehensive pipeline integrity program that enables us to monitor our assets 24 hours a day, 7 days a week, 365 days a year.

Pipeline operations personnel are trained and qualified in accordance with pipeline safety regulations. Qualifications cover all aspects of operations and maintenance and are periodically reassessed as required.



1 Pipe

High tensile strength steel
Protective coating
Pressure tested at the mill

Pipe design regulations require additional safety factor in higher risk areas such as road crossings, river crossings and high population areas

All welds 100% x-rayed or NDE inspected

Pressure tested at a minimum of 125% of maximum operating pressure

Welds
X-Rayed

2 In-Line Inspection Tools

There are various tool technologies that may be used to identify and measure metal loss from corrosion and gouges, identify dents and other deformations, and detect longitudinal cracks and crack-like defects

3 Warning Signs

Pipeline markers and warning signs indicate approximate location of the pipeline

Located at frequent intervals along the pipeline right-of-way

List product, name of the pipeline operator, and operator's telephone number in case of an emergency

Display 811 "Call Before You Dig" notification phone number

4 Security

Chain link security fencing

Security camera and monitoring

5 Valves

Both automated and manual valves are strategically placed along the pipeline

Can be used to stop flow along a certain section of pipe

Inspected periodically in accordance with regulations

A variety of valves are used both above and below ground

6 Cathodic Protection

Inhibits corrosion by application of electrical current with anode bed

Effective protection requires very low DC voltage

Entire pipeline is protected below ground

Inspected and tested annually, rectifier inspected every other month

Test stations approximately one mile apart

7 Aerial Patrol

Visual inspection along the right-of-way for: pipeline leaks (dead vegetation, discoloration, etc.), sunken backfill, exposed pipe, land erosion and unauthorized excavation

8 Ground Patrol

Visual inspections and surveillance of the pipeline along the right-of-way

Maintenance and inspections of equipment and valves

9 Supervisory Control and Data Acquisition (SCADA) Systems

Control system that uses computers and networked data

Sends critical information to pipeline operations teams

Automates data logging and processing

10 Control Center

Centralized control center to immediately and easily adjust flow rates in the pipeline

Pipeline engineers know exactly what is happening along the pipeline at all times

Can quickly react to equipment malfunctions, leaks, or any other unusual activity along the pipeline

Data Links
Sensing devices placed along the pipeline track pressure, temperature, density and flow

Data Links

Sensing devices along the pipeline send data every 15 seconds to 15 minutes