Presentation Overview

- ENSTAR Overview
- Distribution vs. Transmission Pipelines
- Cook Inlet Transmission Pipelines
- Transmission System Capacity
- Transmission System Reliability
- Gas Storage
- Imported Gas
Established – 1961
Number of Meters – 134,000+
Number of Alaskans Served* – 361,800
Miles of Distribution Mains – 3,200+
Transmission Mains Miles – 400+
Number of ENSTAR Employees – 190

* 134,000 Meters x 2.7 Alaskan Consumers per Meter
ENSTAR’s Distribution System

- **Pressure Regulation Station**
  Reduces transmission pressure to distribution pressure, SCADA monitored, relief valve protects distribution system from over pressurization.

- **Distribution Pipelines**
  60 PSI MAOP

- **Mains**
  2”-8" HDPE, typically in road right-of-ways, 36-48" deep, have locate wire.
ENSTAR Transmission System

All Our Energy Goes Into Our Customers
Cook Inlet Pipeline System
2013/14 - 350 MMscfd CI Demand and Production 100% On-line

West side production and demand

30 Steelhead

CIGGS West

Stonehead

Granite Pt Junction

CIGGS Dual

1 Aurora

Aurora & misc.

30 CEA

30 MLP

20

Beluga River Unit

Pretty Creek & misc. West Side

74 BRU

12 PC

Flow 0

Flow 31

Flow 87

Flow 82

Flow 194

Flow 42

30 MLP

165 Anch

45 CEA

All numeric values are approximate MMscfd.

Hilcorp

ENSTAR pipelines

ConocoPhillips

All Our Energy Goes Into Our Customers
ENSTAR Pipeline Integrity

• **Pipelines**
  - Use Modern High Quality Manufactured Pipe
  - Low Stress/Minimal Cyclic Fatigue
  - Absence of Internal Corrosion Due To High Gas Quality
  - Very Dry Gas, < 4 lb/mmscf H2O
  - No Stress Corrosion Cracking
  - Good Soil Conditions and Cathodic Protection System
  - Single Rupture Failure: Susitna River Washout in 1993

• **Preventative**
  - 811 “Call Before You Dig”
  - On-site Excavation Representative From ENSTAR
  - Aerial/ROW Patrol
  - Modern SCADA System
  - Pipeline Integrity Management Program (IMP)
  - Horizontal Directional Drill Relocation of Susitna River Crossings

*All Our Energy Goes Into Our Customers*
- Currently allows storage of 11 BCF.
- Allows for purchase and storage of gas during summer for use during winter peak demands.
- Designed to meet more than 30% of monthly average peak demand during the 2012/2013 winter.
- Helps alleviate need for winter peak well capacity to meet peak daily utility demand.
- Available for storage of possible imported LNG or CNG.

Source: Robin Barry, ENSTAR
Pipeline-Storage-Imports
Regulatory Impacts

- Transmission upgrades affect rates.
  - 80% of transmission plant was allocated to gas sales customers in 2008 Cost of Service Study.

- ENSTAR has used a measured approach to transmission upgrades to ensure that its traditional customers get the benefits they are paying for.

- ENSTAR’s tariff provides that an expansion of service cannot cause an unreasonable cost burden to be borne by existing customers.
  - “Cost causer, cost payer”
Future Pipeline Planning

- Continue to upgrade ENSTAR Kenai to Anchorage pipelines by line replacement and additional compression.

- Examine additional compression to move gas East to West on CIGGS.

- CINGSA expansion to occur as needed

- Examine gas imports and re-gas to be installed if needed.

- System modifications dependent largely on gas sources.