

Virtual Pipeline Experience

Application of LNG Solutions to Expand LDC Service

NECPUC Conference

June 5, 2017



Founded in 1882, UGI Corporation (NYSE: UGI) is a Fortune 500 company with over \$10 billion in assets and \$7 billion in revenues. We are a distributor and marketer of energy products and services including natural gas, propane, and electricity.

UGI Corporation (NYSE: UGI)

Domestic Propane

AmeriGas (NYSE: APU) distributes propane in 50 states and is the largest US retail propane marketer

MLP: UGI is General Partner and owns 24% of LP
~2MM customers
~1.4B gallons/year



UGI International

3 subsidiaries market propane and natural gas in 16 European countries

Major propane supplier in western and eastern Europe
~700MM gallons/year



UGI Utilities

PA's largest natural gas utility serving over 600,000 gas customers and 60,000 electric customers



UGI Energy Services

LNG, energy marketing, power generation and numerous midstream gas assets



UGI Energy Services has been marketing energy for over 20 years.

Marketing

Natural Gas

- ~ 240 Bcf per year (retail & wholesale)
- > 38,000 customer locations
- 36 LDCs

Power

- > 5,000 locations
- 19 EDCs

Midstream

Peaking & LNG

- Temple LNG liquefaction, storage and vaporization
- 6 Propane Air Plants

Storage

- 15 Bcf, North Central PA

Pipelines

- Auburn I & II
- PennEast
- Sunbury

Generation

Generation

- Hunlock: 130 MWs combined cycle
- Conemaugh: 102 MWs coal-fired
- Renewable energy: ~ 20 MWs

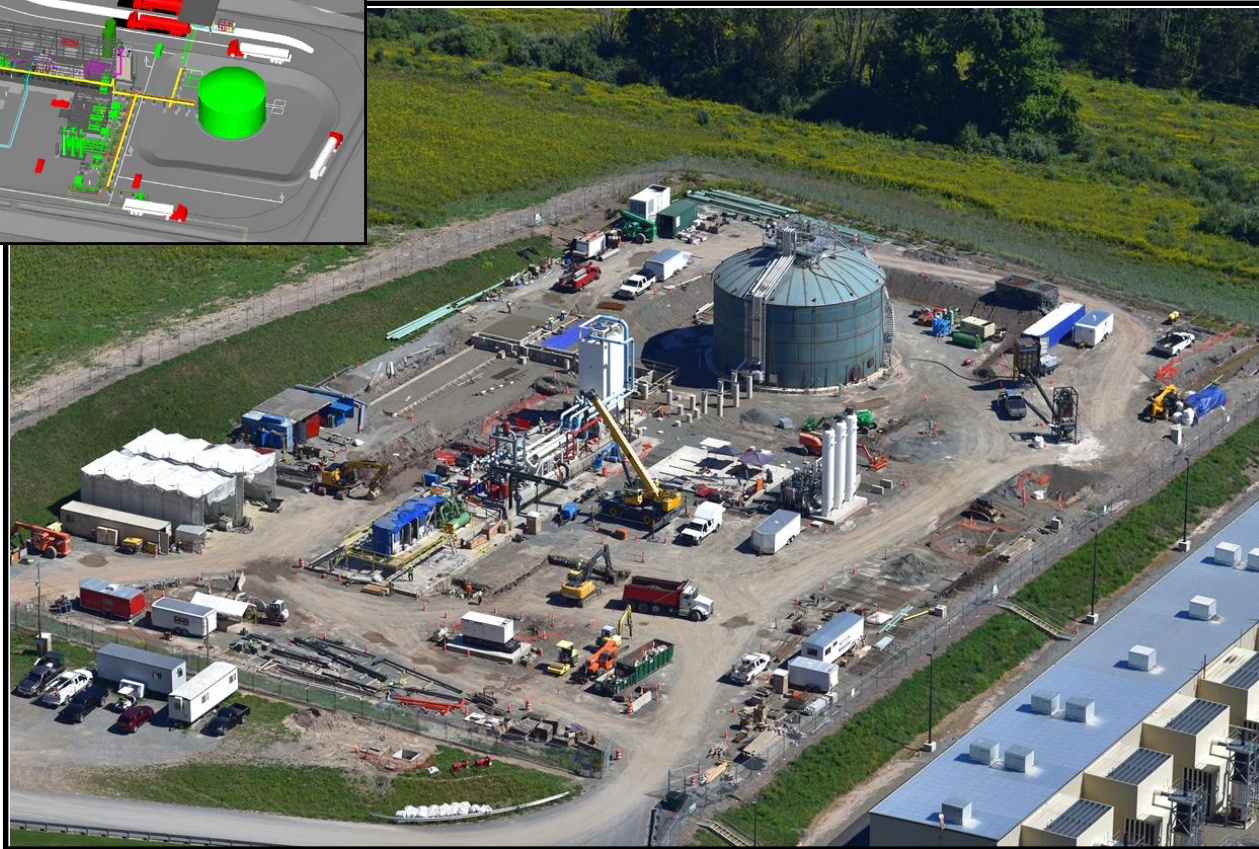
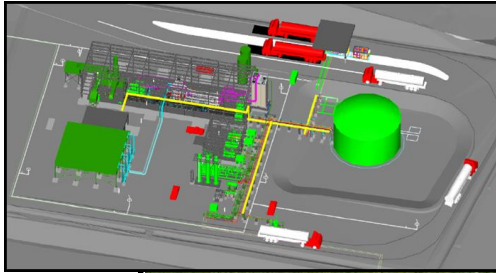
Through its subsidiary UGI LNG, Inc., UGIES owns and operates the Temple LNG facility near Reading, PA.



- Storage Capacity: 15 million gallons of LNG or about 1.25 Bcf
- Liquefaction Capacity: 10,000 Dth/day
- Vaporization Capacity: 205,000 Dth/day (capable of delivering into TETCO)
- Equipped with LNG tanker truck loading capability
- Receives natural gas via Texas Eastern Pipeline (TETCO)
- Regulated by the Federal Energy Regulatory Commission
- Owned and operated by UGI LNG, Inc.
- 100% of the capacity is contracted by UGI Energy Services

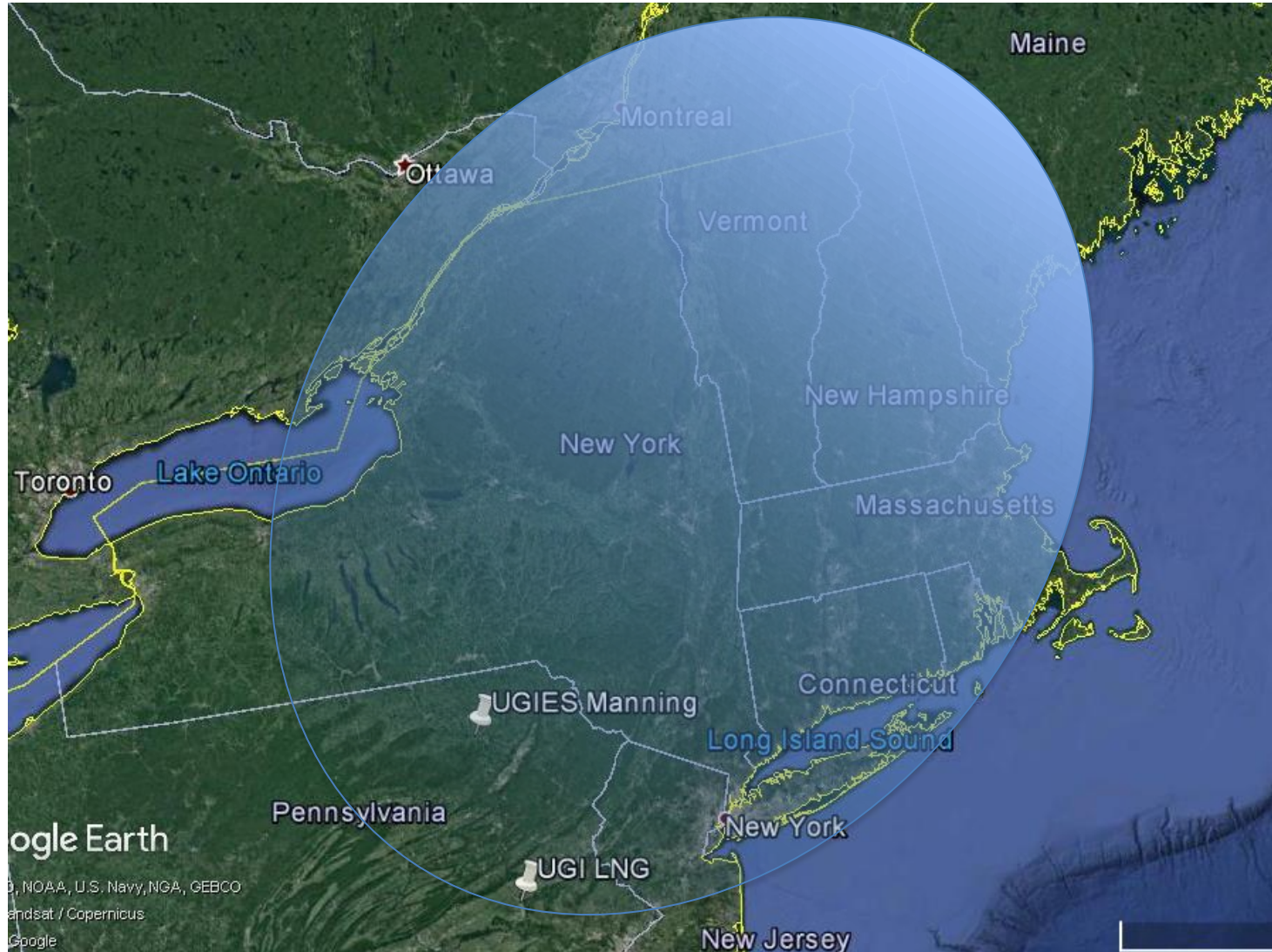


Supporting LNG Market: Manning Liquefaction Plant



- Purpose: Expand LNG capacity to serve Northeast LDCs and Non-Traditional markets
- Scope: 10,000 Dth/day nitrogen cycle with 500,000 gallon cryogenic storage tank
- Status: Target COD: 2nd Quarter 2017 – being commissioned

Traditionally Served Peaking Facilities in Northeast *LDC and non-Utility Customers*

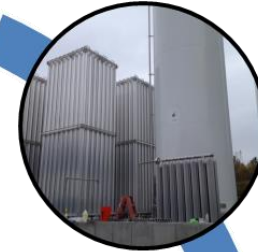


Expanded LNG Customer Base

“Virtual Pipeline”
Customers



Mining



Stationary
Industrials



Locomotive



Truck
Fleets



Marine



Drill Rigs



Permanent and Temporary Customer LNG Sites



Applying Industrial Experience to Isolated Communities

- “Beyond The Mains”
 - No access to LDC pipeline network
 - Long-standing established communities
 - New housing developments

- Desire for natural gas
 - Environmental Sensitivities
 - Alternative to fuel oils & propane

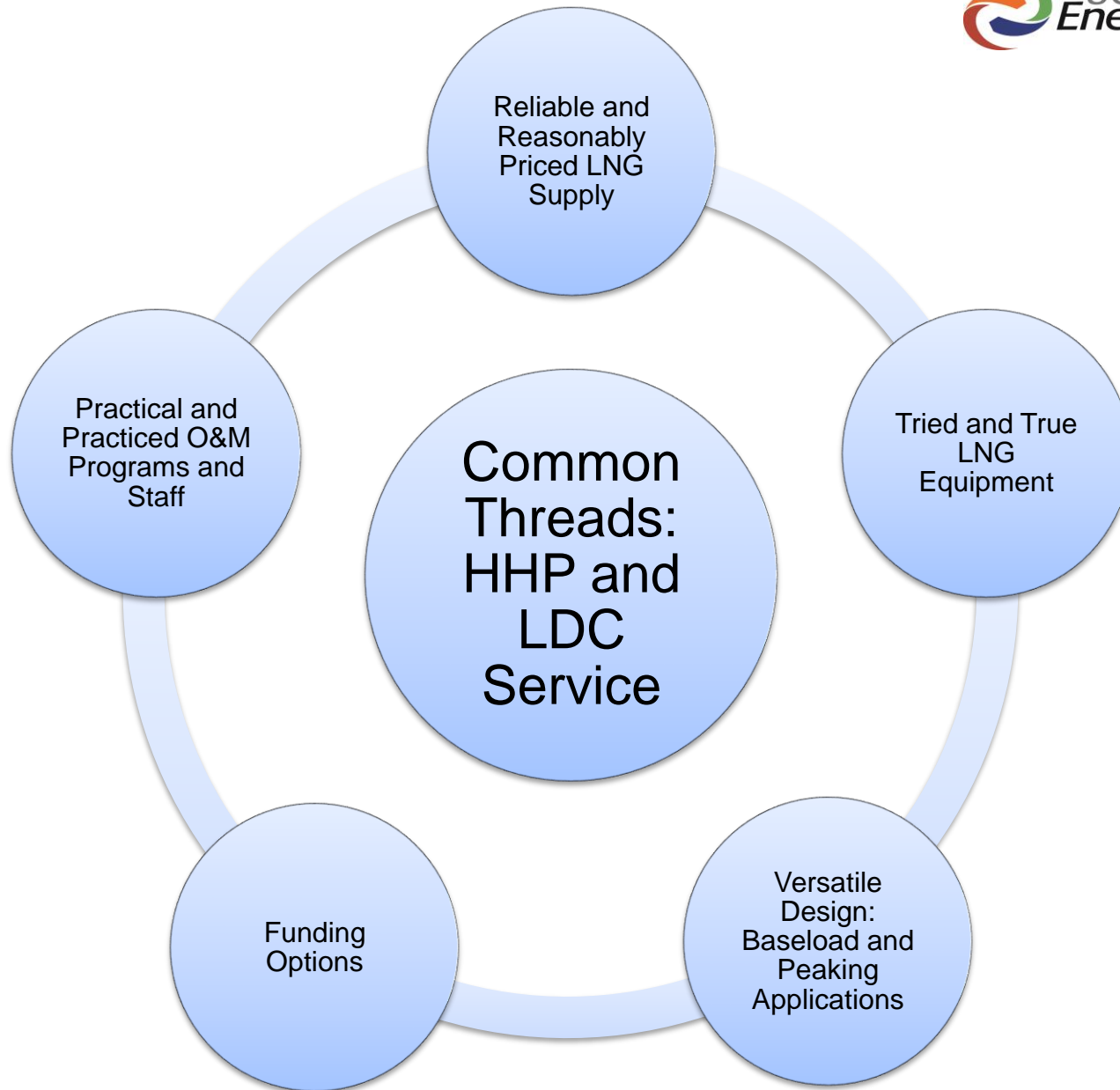
 - Economic Considerations
 - Fuel pricing expectations
 - Housing customer attitude



UGIES Experience – Isolated Community

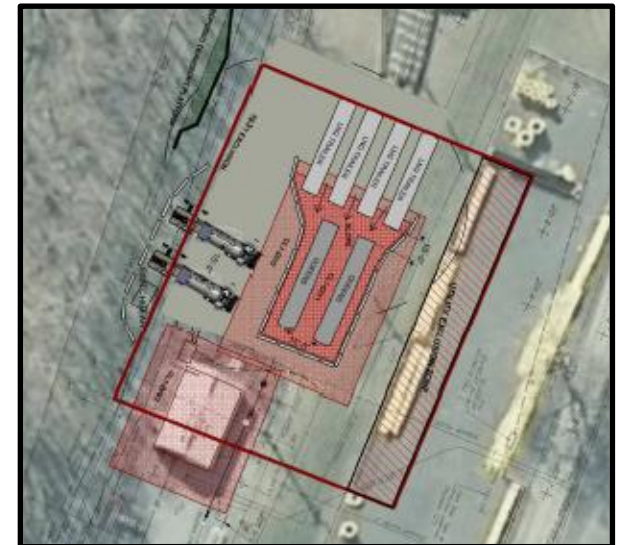
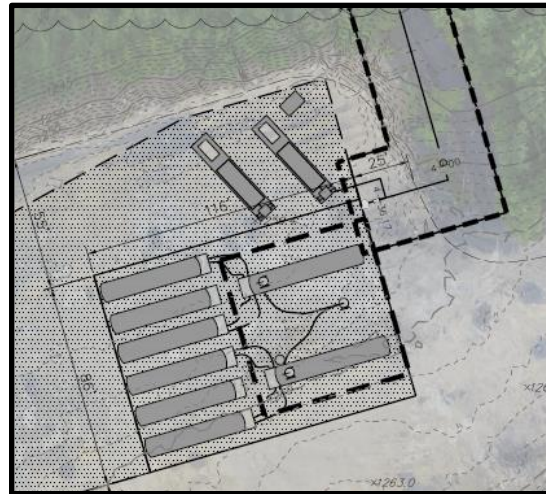
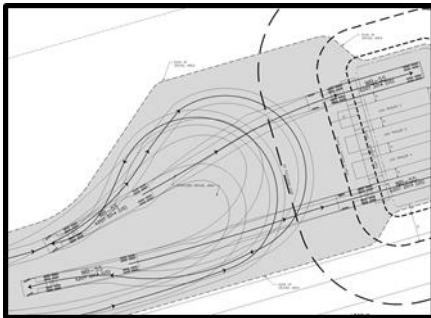
- Northcentral PA
 - Rural area - low population density
- No access to LDC P/L Network
- New development ~160 homes
- No interest in fuel oil
 - Simplified propane storage/delivery system





UGIES LDC Applications : Portable LNG Facilities

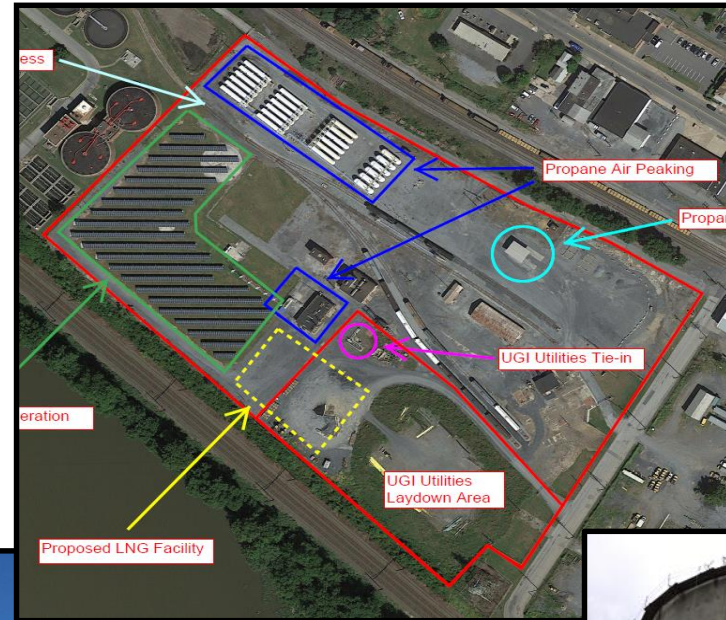
Sustained and Peak Operations



UGIES LDC Applications – Permanent LNG System Sustained and Peak Operations

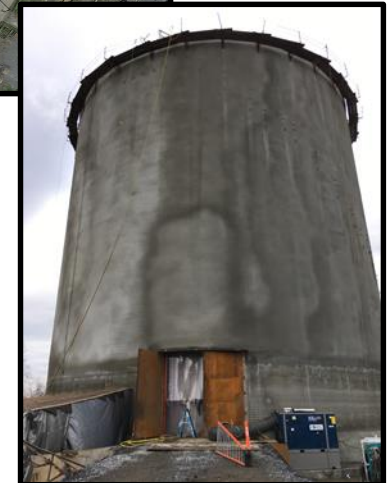
- Large-scale LNG Storage and Vaporization Facilities

- 2MM gallon Field-Erected Storage tank
- 70,000 Dth per day Vaporization Capacity
- Two Truck Off-Loading Racks
- COD: 4Q 2017



- Sites under development in MidAtlantic and New England

- Providing traditional peaking and supporting non-peaking services



UGIES Service Offering

Traditional and Non-Traditional Customers

Fuel Supply

- Reserve capacity for FIRM supply service
- Multi-year Terms
- Transparent: Commodity Price & Non-Gas Costs
- Risk Management / Price Hedging Services

Transportation Logistics

- Provide a delivered product
- Lower cost and enhanced reliability/flexibility
- Arrangements with multiple carriers

Technical Know-How

- Experienced process engineers and seasoned technical staff
- Excellent safety record and safety-focused culture

Infrastructure Development

- LNG System Design
- Land Development and Permitting
- Construction Management
- Operations and Maintenance Oversight



Thank you for your attention



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