Secretariat Room A & B
Monday

A2

Workforce Development Race

Moderator:
Hon. Michael Bange, New Jersey

Participants:

Natalie Chesko, President, Aqua New Jersey

Mike Makarski, Operating Engineers 825

Frank Troy, Vice President, Walker

Sai Yerrapathruni, President, Carr & Duff

Lunch Then Learn
Crystal Ballroom
3rd Floor

B2
A New Planning Paradigm

Integrating Across the Gas and Electric Sectors

Moderator:
Hon. Steve DeFrank, Pennsylvania

Participants:
Hon. Larry Friedeman, Ohio

Brian Fitzpatrick, Principal Fuel Supply Strategist, PJM

Jim Kerr, Chairman, President & CEO, Southern Gas

Marji Phillips, Sr. VP, Wholesale Market Policy, LS Power

Edgar Trillo, Director, Nominations and Scheduling, TC Energy

PJM Informational Slides

MACRUC

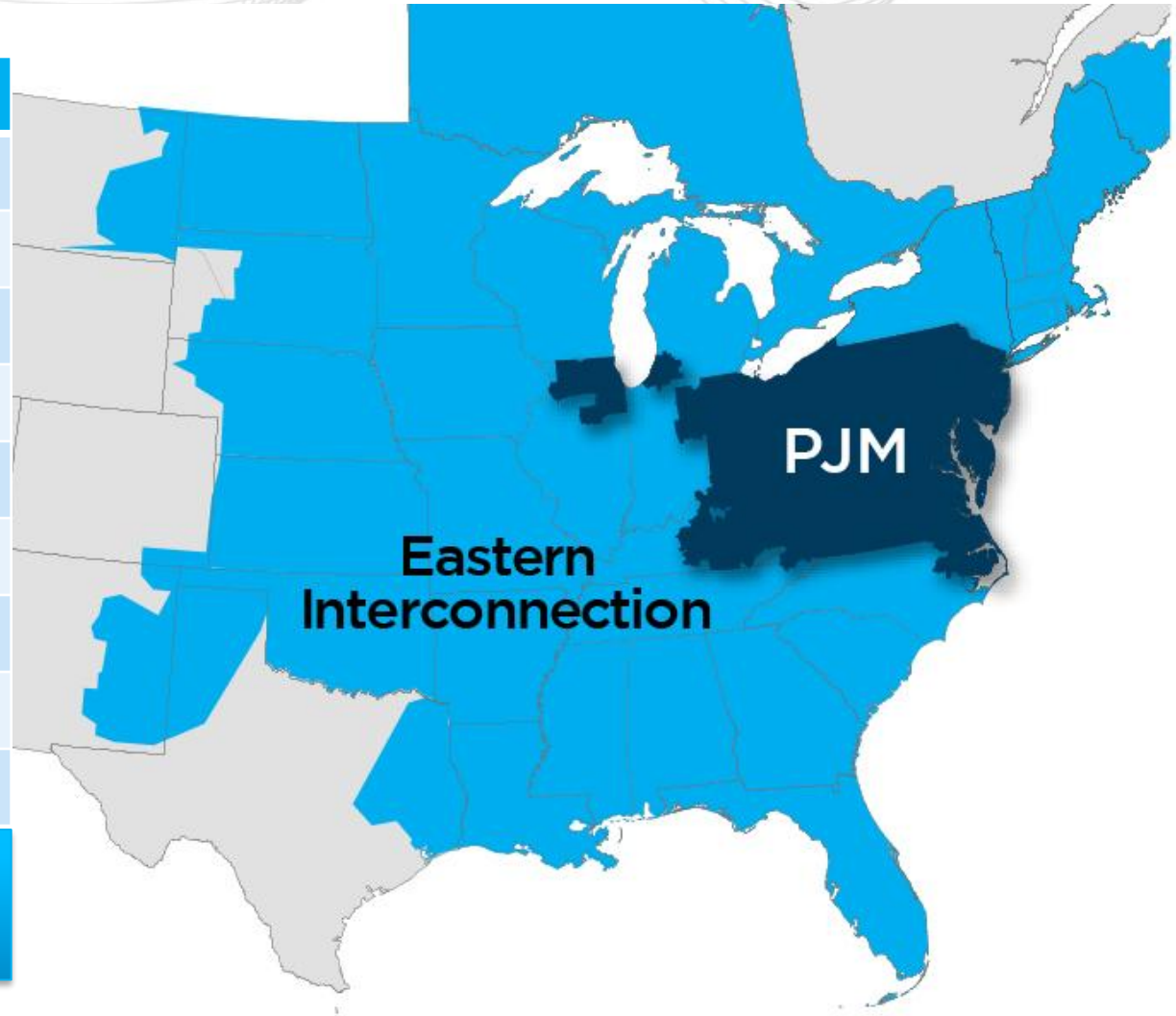
June 23, 2025

Brian Fitzpatrick, PJM

PJM as Part of the Eastern Interconnection

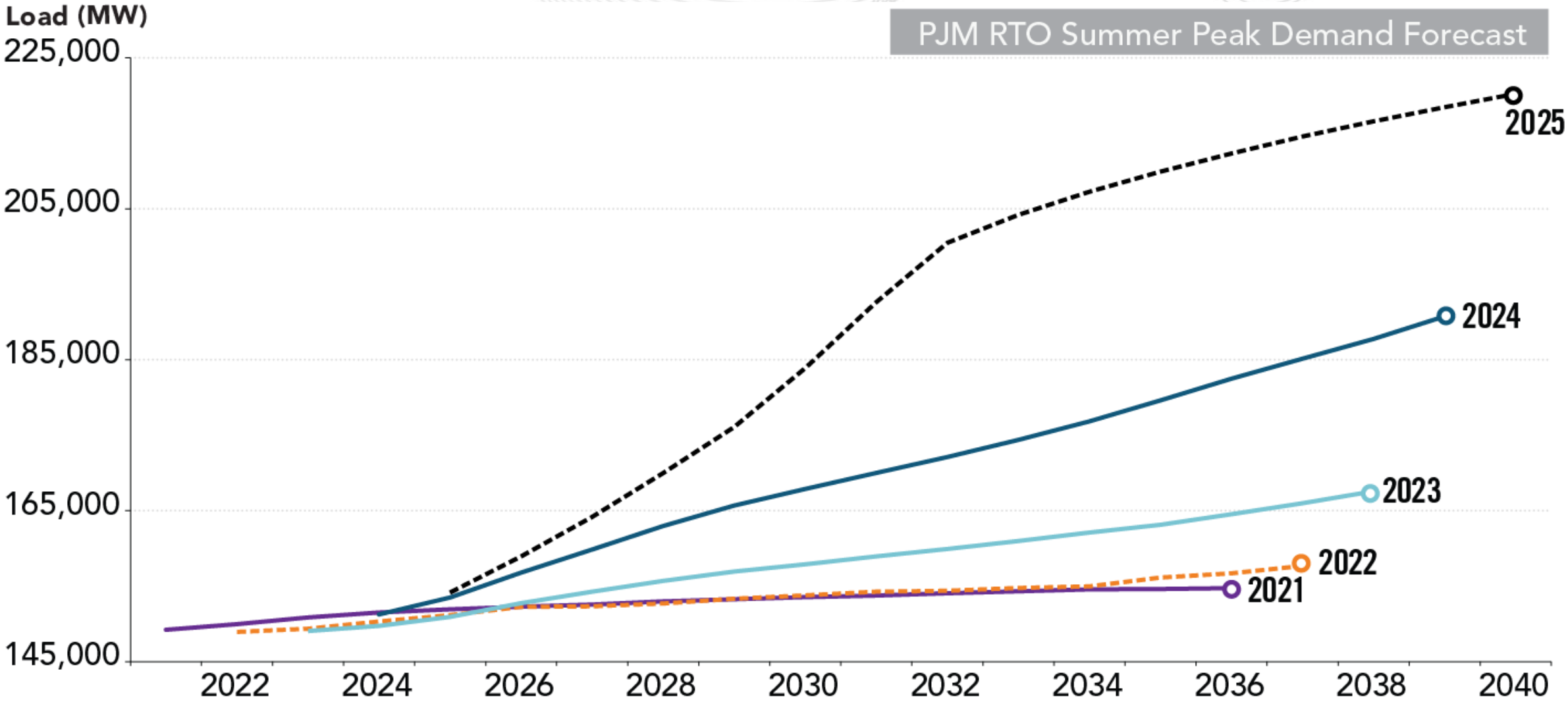
Key Statistics	
Member companies	1,110
Millions of people served	67+
Peak load in megawatts	165,563
Megawatts of generating capacity	182,036
Miles of transmission lines (BES)	88,333
Gigawatt hours of annual energy	800,004
Generation sources	1,486
Square miles of territory	369,054
States served	13 + DC

- 27% of generation in Eastern Interconnection
- 24% of load in Eastern Interconnection



As of 2/2025

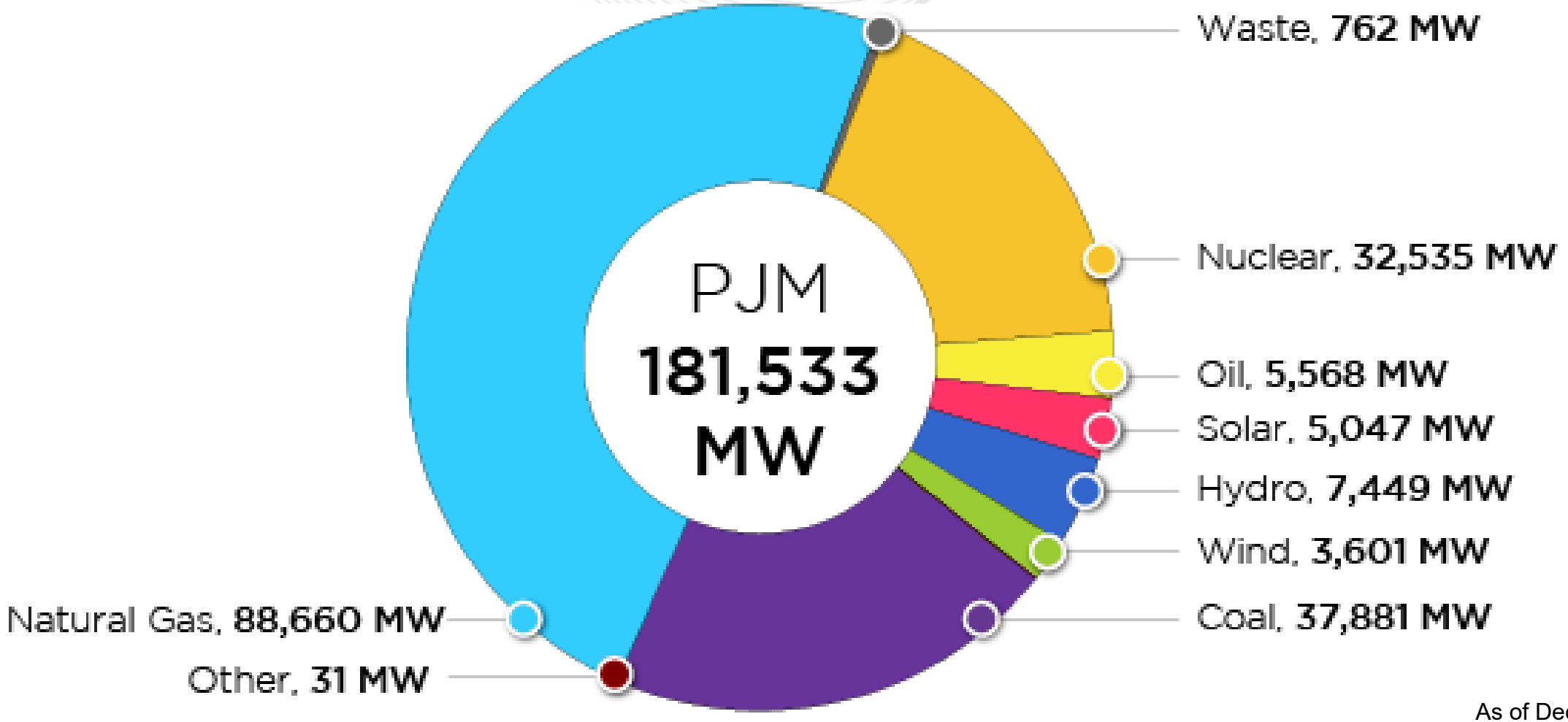
Electricity Demand Growth (2021-2025)



APPENDIX

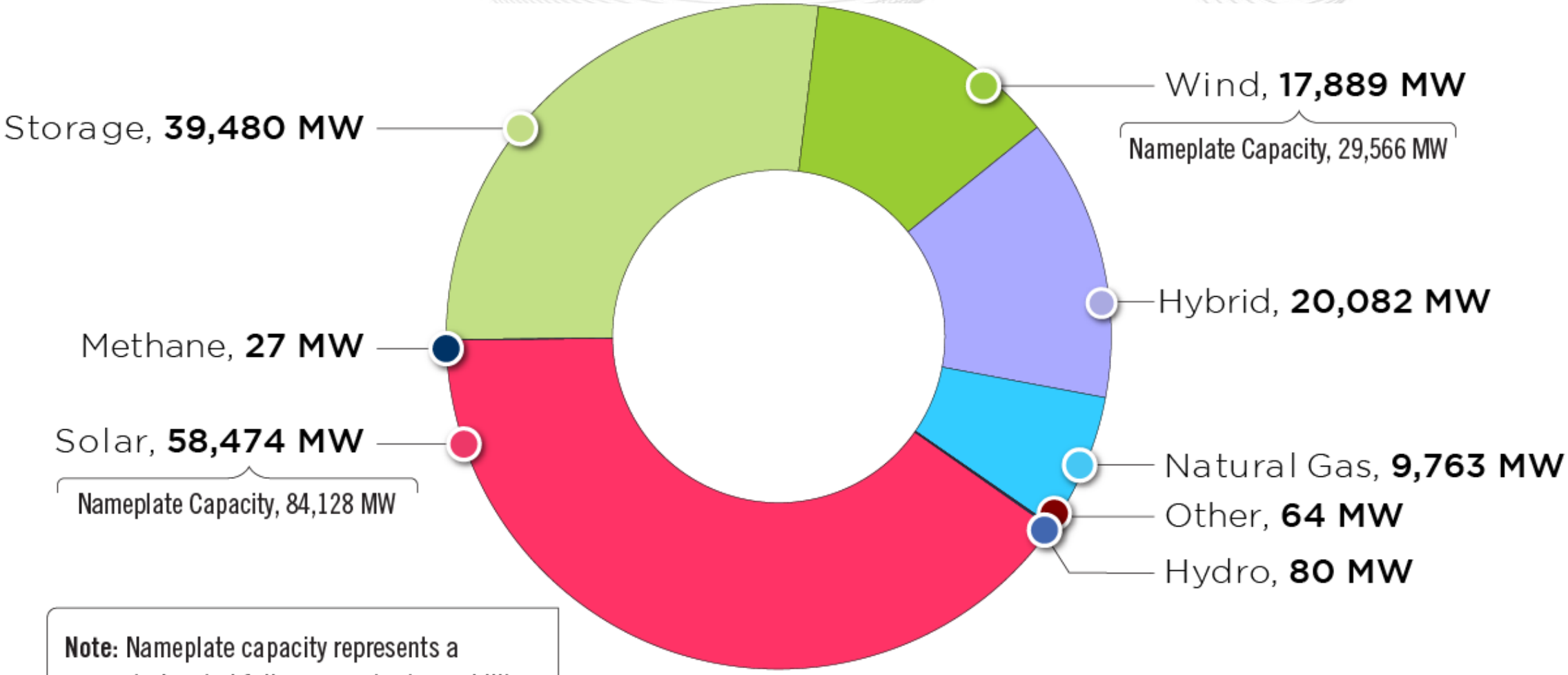
PJM Existing Installed Capacity Mix

(Capacity Interconnection Rights)



As of Dec 31, 2024

Queued Generation Fuel Mix – Requested Capacity Interconnection Rights

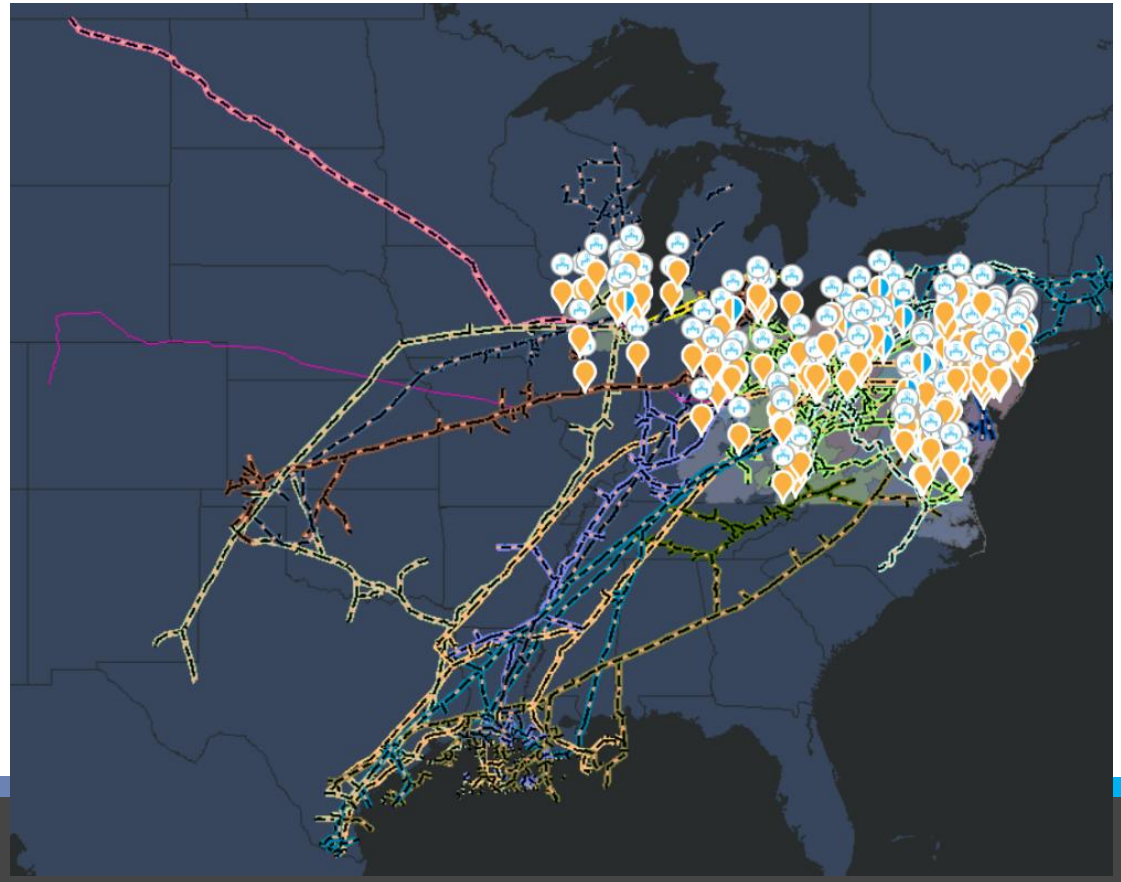


Note: Nameplate capacity represents a generator's rated full power output capability.

As of Dec. 31, 2024

PJM Gas Generation Delivery Sources

~ 88 GW of installed gas generation	80% served directly by interstate pipelines	19.8% served by local distribution companies	0.2% served via gas gathering systems	29% dual fuel	51% firm delivery – gas only



25

interstate pipelines serving the PJM system

32

local distribution companies across the footprint

Derby Brew Coffee &
Dessert Break
Bluegrass Room
Followed by General
Session at 3:15

Secretariat Room C & D
Tuesday

C2 Emerging Trends in Protecting Regulated Entities

Moderator:
Hon. Dennis Deters, Ohio

Participants:
Matt Dale, Cybersecurity Advisor, VA Corporation Commission

Colin Glover, Dept. of Homeland Security

Kurt John, VP & Chief Information Security Officer, Consolidated Edison Company of New York

Steve McElwee, Chief Security Officer, PJM

Derby Brew Coffee Break
In Bluegrass Room
Next session in this room
at 12:00 is
Concurrent D2
To Replace or Repair?

D2
To Replace or Repair?
Safe and Cost-Effective Solutions for Leak Prone Pipe Mitigation

Moderator:
Hon. Radina Valova, New York

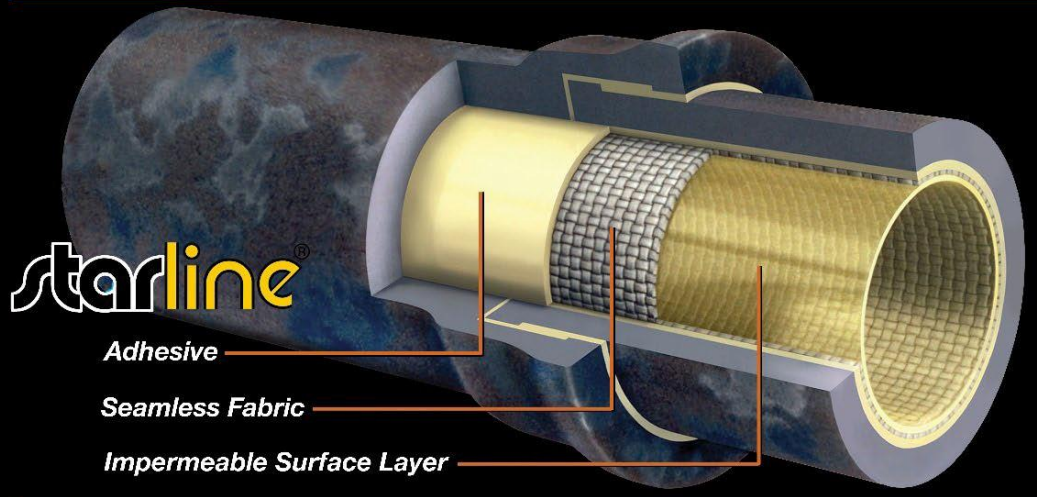
Participants:
Hon. John Williams, Ohio

Ryan McGowan, VP, Operations, ULC Technologies

David Wickersham, CEO, Progressive Pipeline Management

PPM PROGRESSIVE PIPELINE MANAGEMENT

THE INFRASTRUCTURE RENEWAL SPECIALISTS



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INNOVATIONS in Pipeline Safety

CURED-IN-PLACE LINING (CIPL)

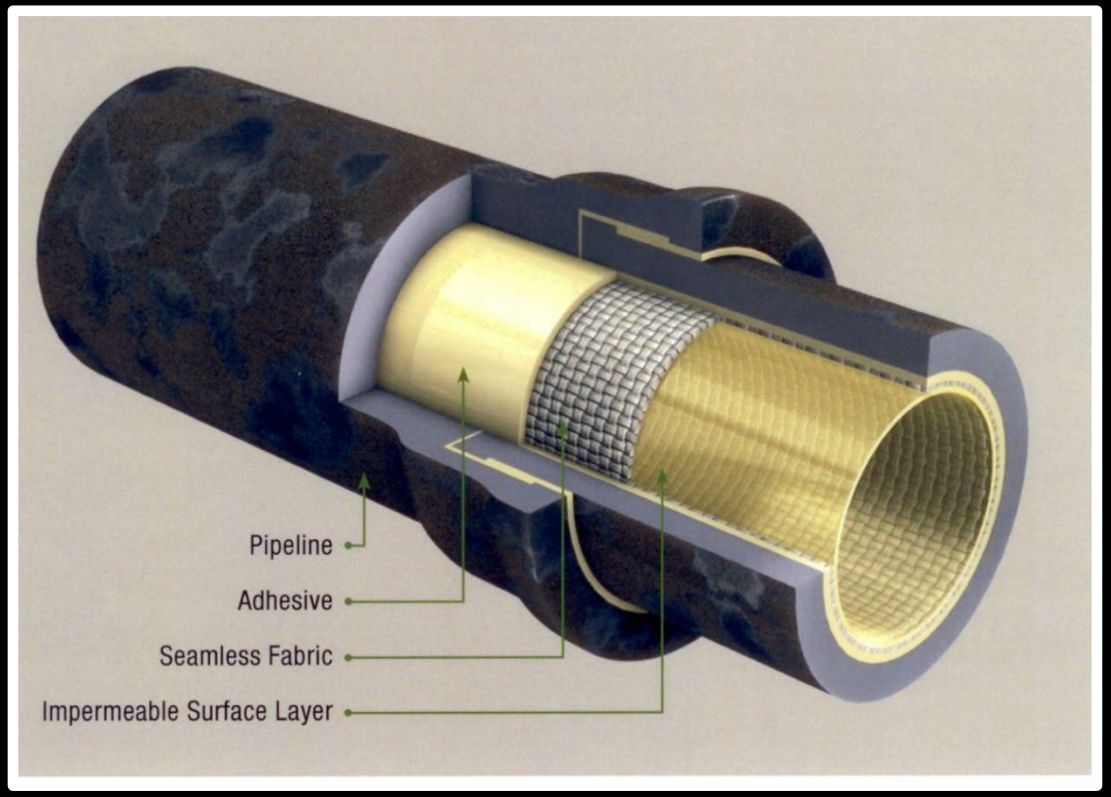
TRENCHLESS RENEWAL OF

NATURAL GAS & PIPELINES

MACRUC 30th Annual Education Conference
June 22 – 25, 2025 Louisville, Kentucky

WHAT IS STARLINE CIPL ?

PPM PROGRESSIVE PIPELINE MANAGEMENT
THE INFRASTRUCTURE RENEWAL SPECIALISTS

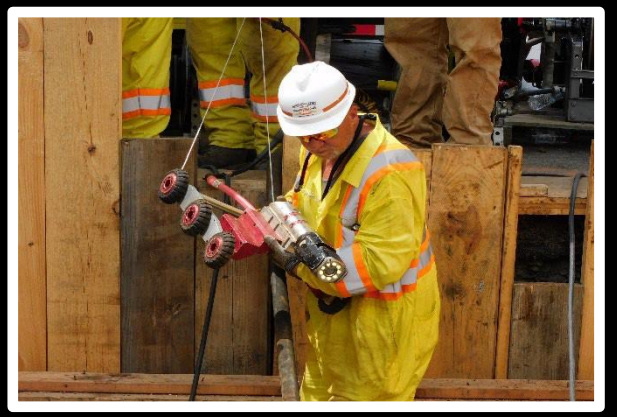


- CIPL versus CIPP (Bonding is the Key!)
- Seamless Polyester Woven Fabric Hose
- Fused On PU/PE Impermeable Coating
- Solvent Free 2-part Epoxy
- Collectively = “Composite Pipeline”

STARLINE CAPABILITIES

PPM PROGRESSIVE PIPELINE MANAGEMENT
THE INFRASTRUCTURE RENEWAL SPECIALISTS

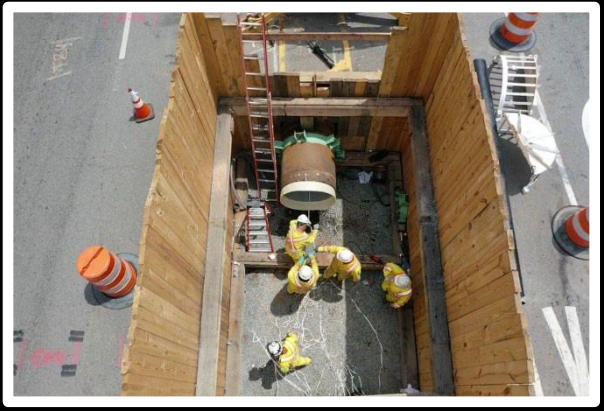
- Metallic Natural Gas Pipelines from 2” to 42” Diameter and MAOP of up to 300psi
- End to End Process - Can Liner over 1,000’ of Pipe within 3 Days
- Can Negotiate Multiple Bends, Open Valves, Tap Holes & Laterals
- Two Access Excavations for up to 1,200 Feet of Pipe
- Reinforces Cast Iron & Steel Pipe - Holds Pressure Even if Host Pipe Breaks or Cracks
- Can Robotically Open Existing Service Taps Post Lining



STARLINE CIPL BENEFITS

PPM PROGRESSIVE PIPELINE MANAGEMENT
THE INFRASTRUCTURE RENEWAL SPECIALISTS

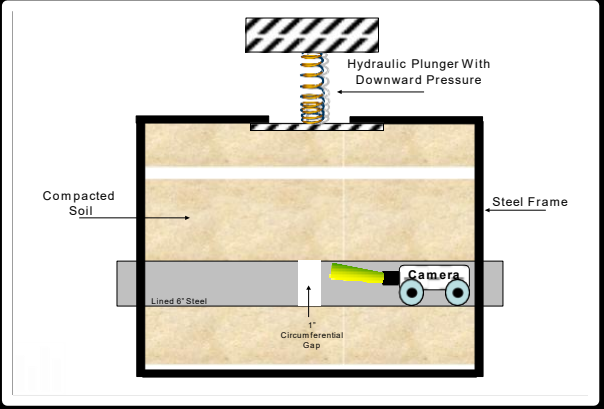
- Adds 100+ Years of NEW Service Life at 50% of the Cost of New Installations
- Seals ALL Existing Leaks (End to End) & Prevents Future Leaks
- Minimizes Excavations, Traffic Congestion, Paving & Restoration
- Eliminates Internal Corrosion & Retards External Corrosion
- *Green* Technology: Eliminates Methane Emissions & PCBs from the Pipeline
- Reinforces Existing Pipeline for added Strength and Safety



STARLINE CIPL TESTING

PROGRESSIVE PIPELINE MANAGEMENT
THE INFRASTRUCTURE RENEWAL SPECIALISTS

- $15M Invested In Testing for Safety, Longevity & Performance
- 2025: NEW – Structural Safety Testing (Lined vs Un-Lined Pipe)
- 2017: DOT / PHMSA Longevity Testing the “100 Year Test”
  https://primis.phmsa.dot.gov/matrix/PrjHome.rdm?prj=502
- 2010: Worse Case Corrosion Testing for Bare Steel Pipelines
- 2004: NYS Cast Iron Undermine Testing
- 2002: ASTM Testing for F2207-02 and 2006 for F2207-06 to 300psi



STRUCTURAL SAFETY TESTING

PROGRESSIVE PIPELINE MANAGEMENT
THE INFRASTRUCTURE RENEWAL SPECIALISTS

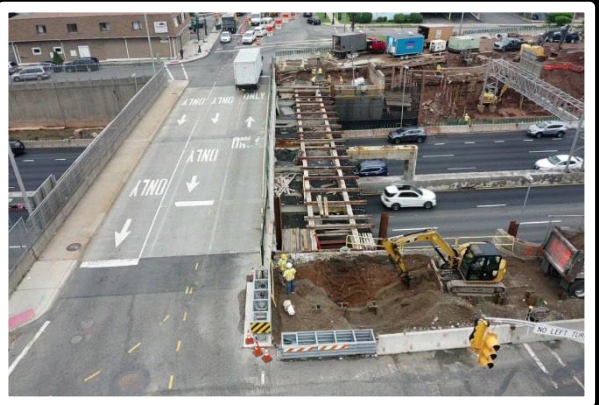
- TEST BOTH LINED & UN-LINED PIPE (CAST IRON & STEEL)
- DETERMINE WORSE CASES FORCES TO “CRUSH” PIPE
- MEASURE DIFFERENCES IN PIPE DEFORMATION / DESTRUCTION
- PERFORM TESTING WITH PIPE UNDER PRESSURE
- DEMONSTRATES STARLINE CIPL REINFORCES EXSTING PIPELINE




SITE SELECTION

PPM PROGRESSIVE PIPELINE MANAGEMENT
THE INFRASTRUCTURE RENEWAL SPECIALISTS

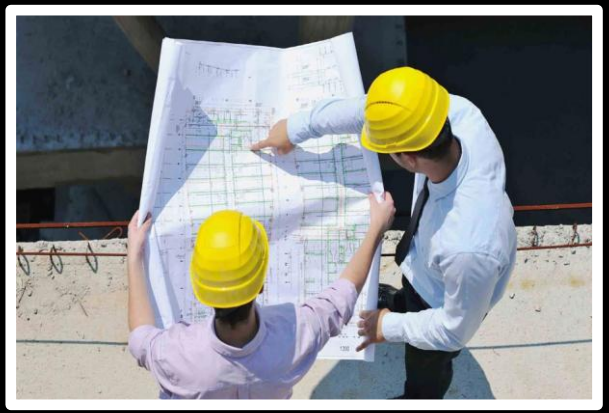
- Leak Prone Pipe (LPP) With History of Methane Emissions
- Crossings (Bridges, Railroads, Rivers, Highways, Intersections)
- Large Diameter Pipe & Pipe Where Throughput Cannot be Reduced
- Urban Centers & Areas of High Concern (Schools, Churches, Hospitals)
- High $ Restoration Areas (Curb to Curb Paving, Stringent & Costly Stips)
- Complex Pipe-Geometry and Change in Diameter / Size



STARLINE PROCESS - SOP

PPM PROGRESSIVE PIPELINE MANAGEMENT
THE INFRASTRUCTURE RENEWAL SPECIALISTS

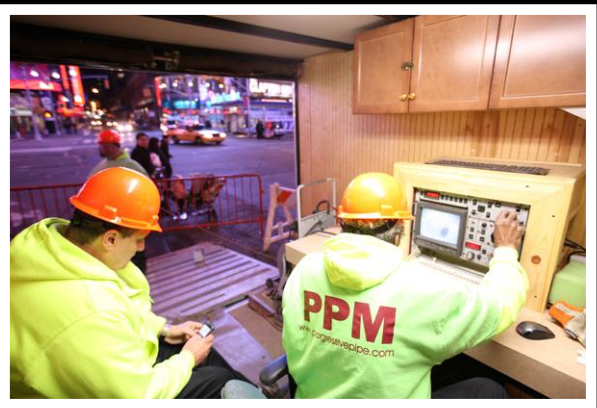
- Site Selection, Layout & Project Engineering
- Pre-Lining Site and Safety Preparation
- CCTV Inspection & Pipeline Cleaning
- Liner Wet-Out and Liner Inversion
- Liner Curing (Under Pressure) with 5G “Real Time” Monitoring
- Post Lining Inspection, Pressure Test & Tie-In



STARLINE PEDIGREE

PROGRESSIVE PIPELINE MANAGEMENT
THE INFRASTRUCTURE RENEWAL SPECIALISTS

- 2025 Over 1.5M Feet of Gas Pipe in 22 States RENEWED with Starline
- 2024 BGE 42” Cast Iron Renewal (2025 NASTT POY Applicant)
- 2023 Awarded DOT R&D Grant for “Reduced Customer Outage”
- 2021 Complex 36” Cast Iron Lining (NASTT Project of the Year Winner)
- 2018 1,500’ of 36” Cast Iron (NASTT Project of the Year Winner)
- 2011 Structural Reinforcement Sleeve (NASTT Project of the Year Winner)



PPM PROGRESSIVE PIPELINE MANAGEMENT

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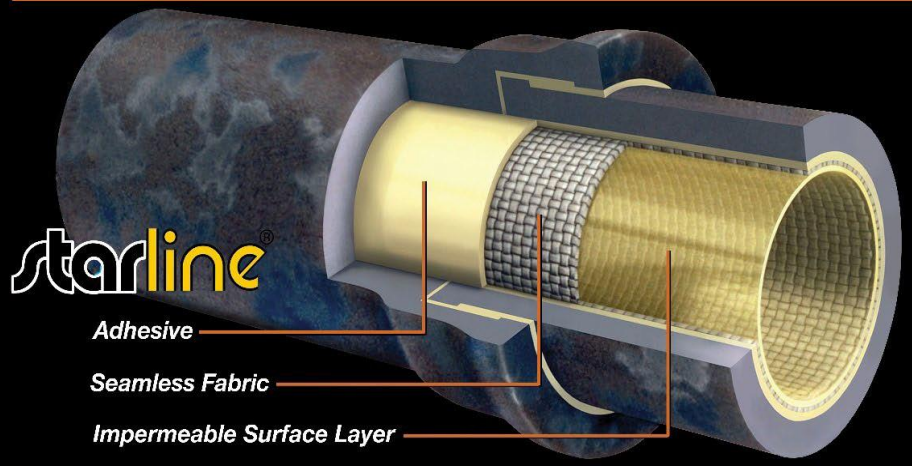

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Q&A

Thank You for your Time & Interest

David Wickersham
dlw@progressivepipe.com

D2
To Replace or Repair?
Safe and Cost-Effective Solutions for Leak Prone Pipe Mitigation

Moderator:
Hon. Radina Valova, New York

Participants:
Hon. John Williams, Ohio

Ryan McGowan, VP, Operations, ULC Technologies

David Wickersham, CEO, Progressive Pipeline Management

PIPELINE ROBOTICS

ROBOTIC CAST IRON JOINT SEALING IN LIVE NATURAL GAS MAINS

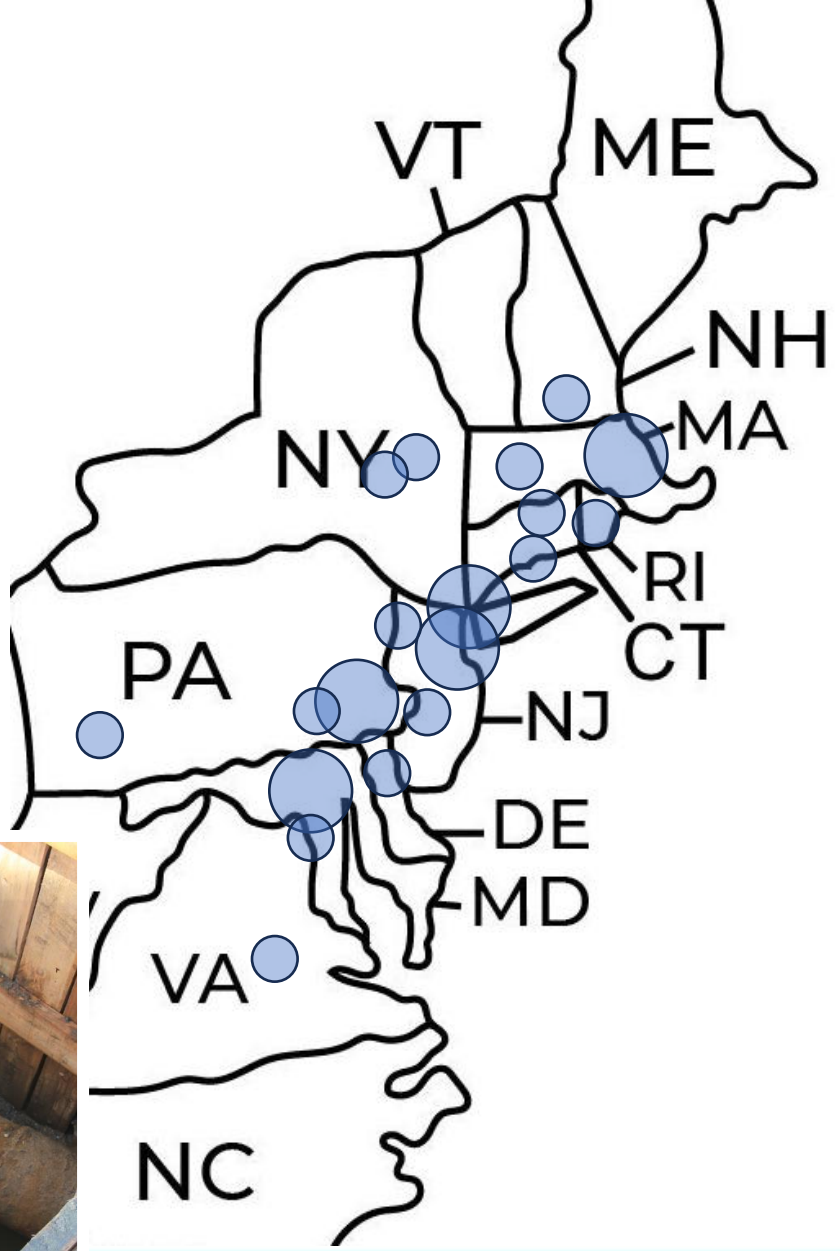
MACRUC 30TH ANNUAL EDUCATIONAL CONFERENCE
JUNE 24, 2025 | GAS SESSION: REPAIR OR REPLACE LEAKING GAS PIPES

RYAN MCGOWAN, VP OPERATIONS, ULC TECHNOLOGIES
RYAN.MCGOWAN@SPX.COM

ULC TECHNOLOGIES

BACKGROUND ON CAST IRON JOINTS

- Medium/Large diameter cast iron gas mains are prevalent in the Northeast US and Mid-Atlantic region; over 2,500 miles of 12”-48”
- Barrel of medium/large diameter pipe has a substantial wall thickness and is generally in very good condition
- Jute or gasket material has dried out over the years leaving joints as most leak-prone component within the main
- Two key joint types: Bell and Spigot / Mechanical (12ft joint spacing)
- High cost for single joint repairs and challenging/costly to replace it all



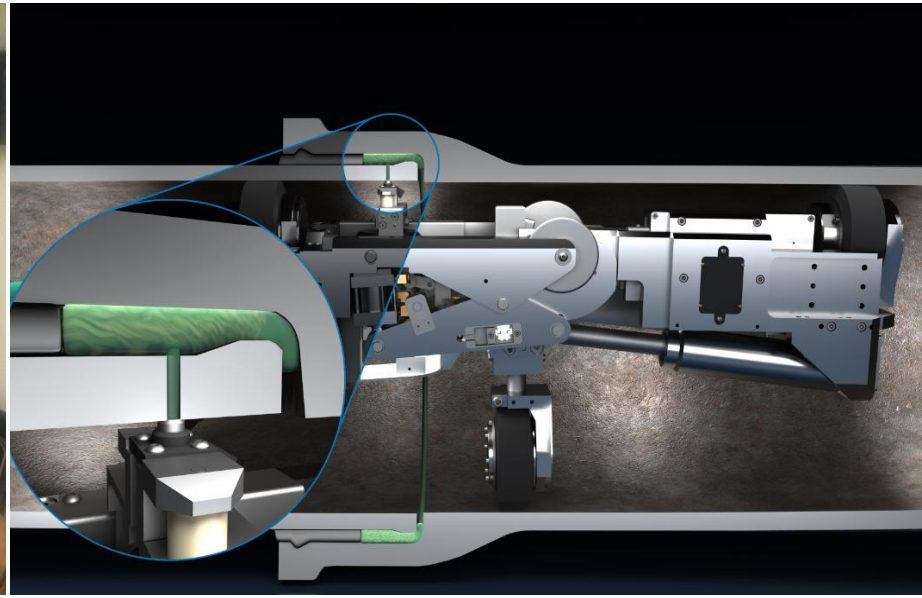
ULC TECHNOLOGIES

WHAT IS CISBOT?

CISBOT enters live gas mains through a very small opening in the street to repair existing joint leaks and proactively protect against future leaks

Traveling underground, CISBOT can repair up to 130 joints (1600ft) from one small excavation.

Robot enables repair by internally injecting an industry-trusted sealant directly into the existing joint packing material; Creates a new seal



More than 142 miles of large diameter cast iron (66,000 joints) sealed since 2010

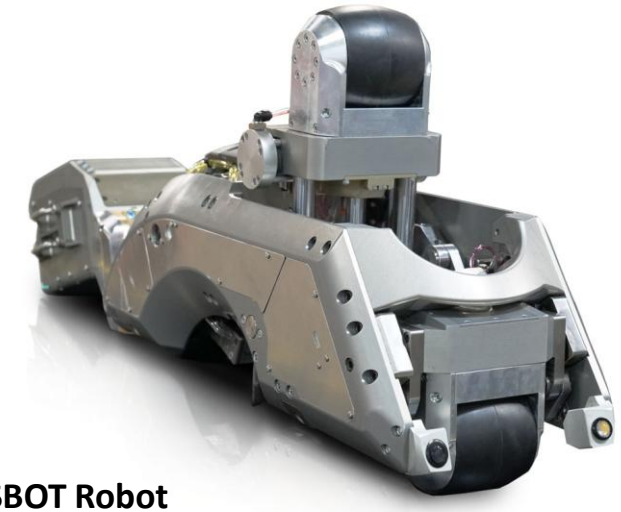
ULC TECHNOLOGIES

CISBOT SPECIFICATIONS

- **Pipeline/Diameter Range:** 12” to 48” Cast Iron Gas Distribution Mains
- **Tether Length:** 800ft (1600ft total from one excavation)
- **Joint Types:** Bell/Spigot and Mechanical
- **Excavation: (1)** Small 6ft x 6ft excavation
- **Main pressure: up to** 25psig (60psig in the future)
- **Longevity of repair:** Sealant proven to extend the life of the joint
- **Easy Site Setup:** Requires just (1) small excavation, fitting, valve and 12” tap
- **Gas Service:** All work performed live; No disruption of gas to customers

PSE&G ELIZABETHTOWN GAS nationalgrid conEdison EVERSOURCE

16-48” CISBOT Robot

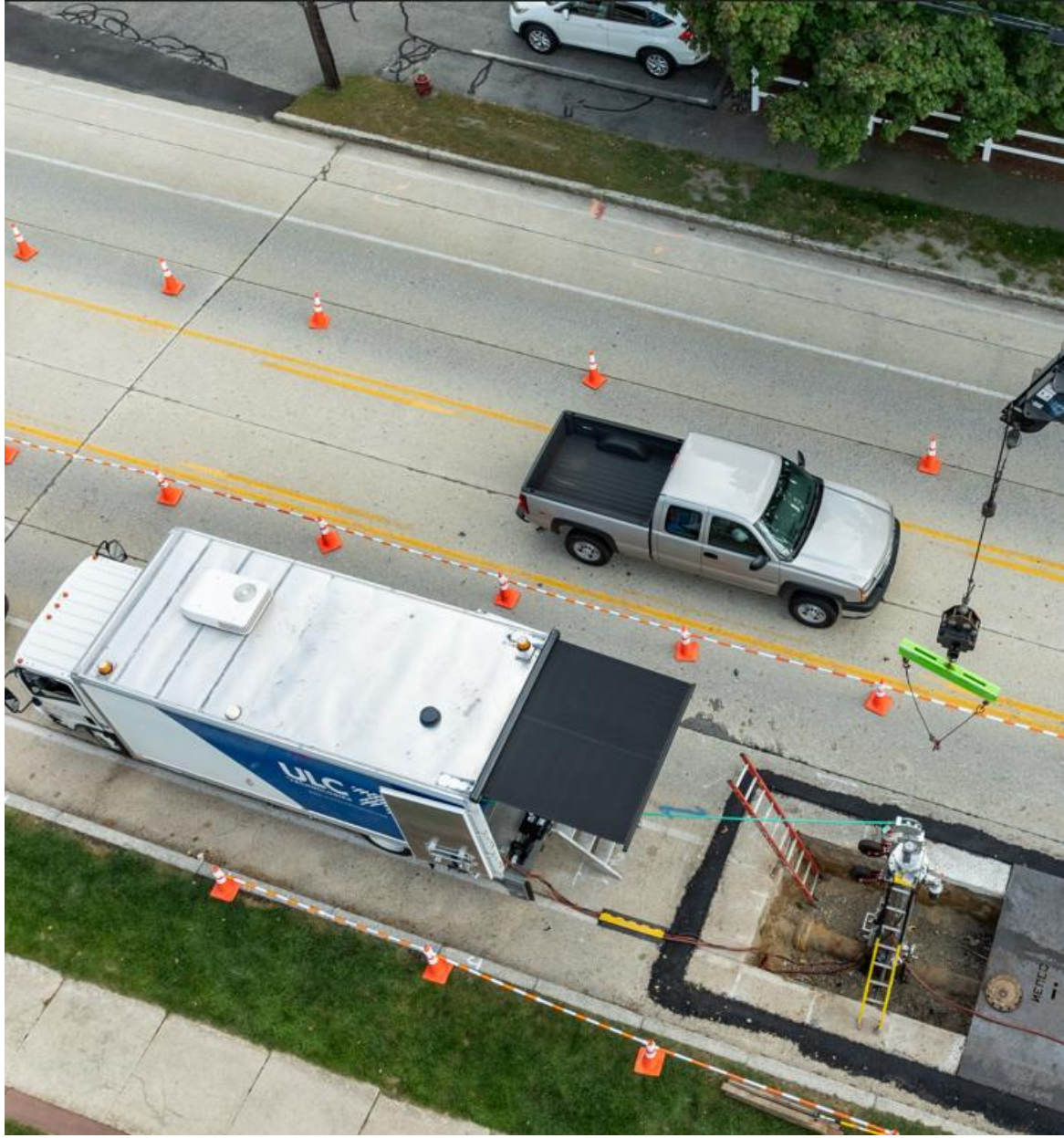


12” CISBOT Robot

ULC TECHNOLOGIES

PUTTING CUSTOMERS FIRST: SOCIAL BENEFITS

- **Small Site Footprint:**
  - Reduced disruption to traffic and communities
  - Minimal vehicles and crews on site
  - Low noise; Ability to perform night work
- **All Work Performed Live:**
  - No disruption or outage of gas service; no relights
  - Ideal for mains with high quantity of customers/taps
  - Ability to seal joints during peak demand season
- **Greatly reduces costs;** Savings passed on to ratepayers
  - Reduce impact of infrastructure upgrades on rates
- **Environmental:** Reduce risk of future leaks; fixing existing leaks



ULC TECHNOLOGIES

UTILITY BENEFITS SUMMARY

- Cost Savings:
  - Support improved service delivery by integrating reactive and proactive repairs for enhanced leak management
  - Potential to shift funding from O&M to capital due to proactive nature of work
- Pipeline Safety
  - Improved leak management: Reduce risk profile of assets
  - Improve routine leak repair by sealing multiple leaks from one excavation; strategic pit placement
- O&M Activity
  - Detailed mapping of the gas main and all features provided in reporting
  - Proactive joint repair avoids future impact on O&M expenses for emergency leak repairs

ULC TECHNOLOGIES

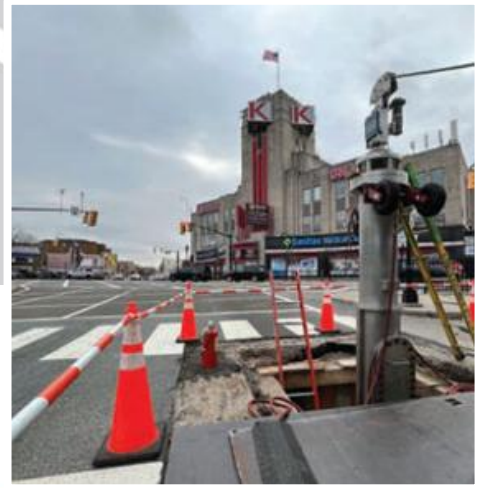
CASE STUDY: PSE&G

- PSE&G had gas readings under a newly paved, 5-way intersection in Union City, NJ
- 20” cast iron, 15psig, 8ft deep
- Traditional repair would have resulted in several deep excavations; curb-to-curb restoration
- City was pushing back on permits
- Utility under mandated deadline to fix the leaks

ULC TECHNOLOGIES

CASE STUDY: PSE&G

- PSE&G opted to utilize CISBOT to:
  - **Reactive:** Repair the leak from a less disruptive location
  - **Proactive:** Repair other joints in the vicinity to prevent future leaks
- Entry pit was placed right across the town line in North Bergen (150ft away); eased permit requirements and avoided curb to curb restoration
- CISBOT sealed 89 joints over 4 weeks; 1,079ft
- Work performed in Dec/Jan



THANK YOU / QUESTIONS

Ryan McGowan, VP Operations
Ryan.McGowan@spx.com

ULC TECHNOLOGIES

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