

BURNS  MCDONNELL



BEST PRACTICES

FORUM

Asheville, N.C. | 2019

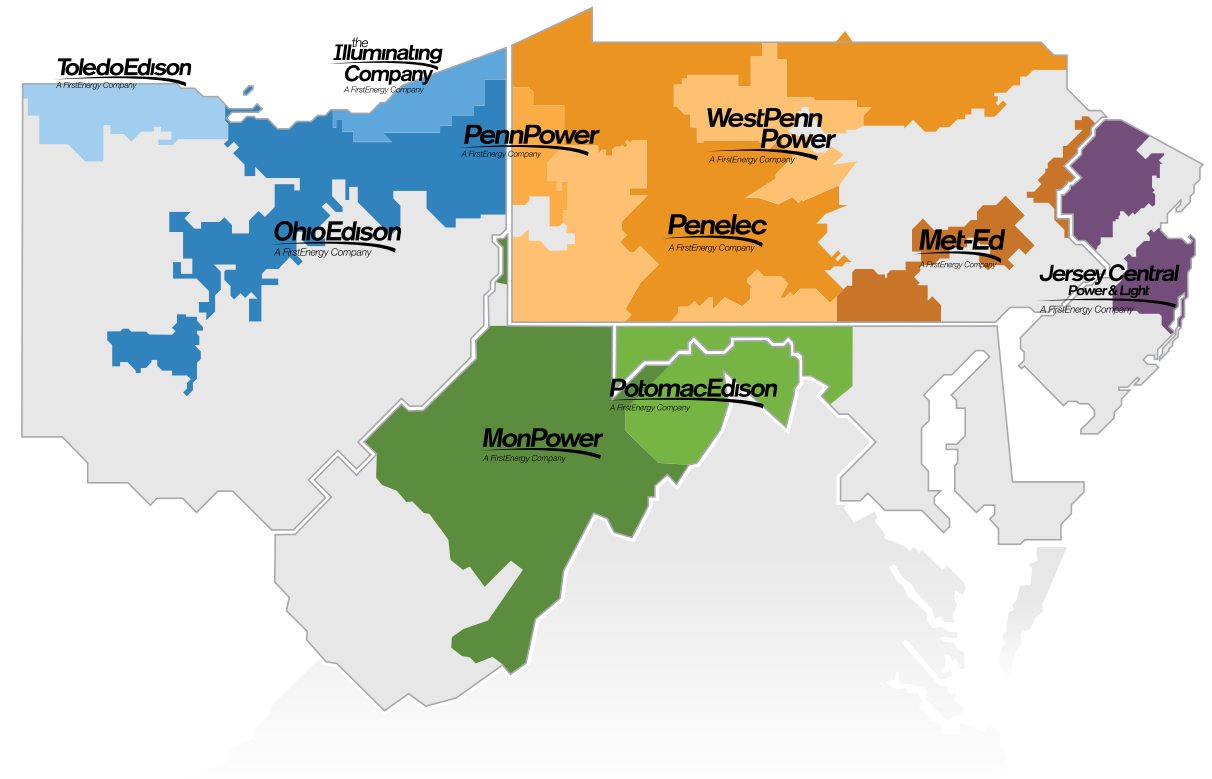


FirstEnergy Corp.



Operating Company	Customers (Thousands)	Square Miles
Ohio Edison	1,051	7,000
■ Illuminating Company	753	1,600
■ Toledo Edison	312	2,300
■ Met-Ed	572	3,300
■ Penelec (PA and NY)	587	17,600
■ Penn Power	167	1,100
■ West Penn Power	727	10,400
■ Monongahela Power	393	13,000
■ Potomac Edison (MD and WV)	414	5,500
■ Jersey Central Power & Light	1,135	3,200
Total	6,111	65,000

Data as of Dec. 31, 2018

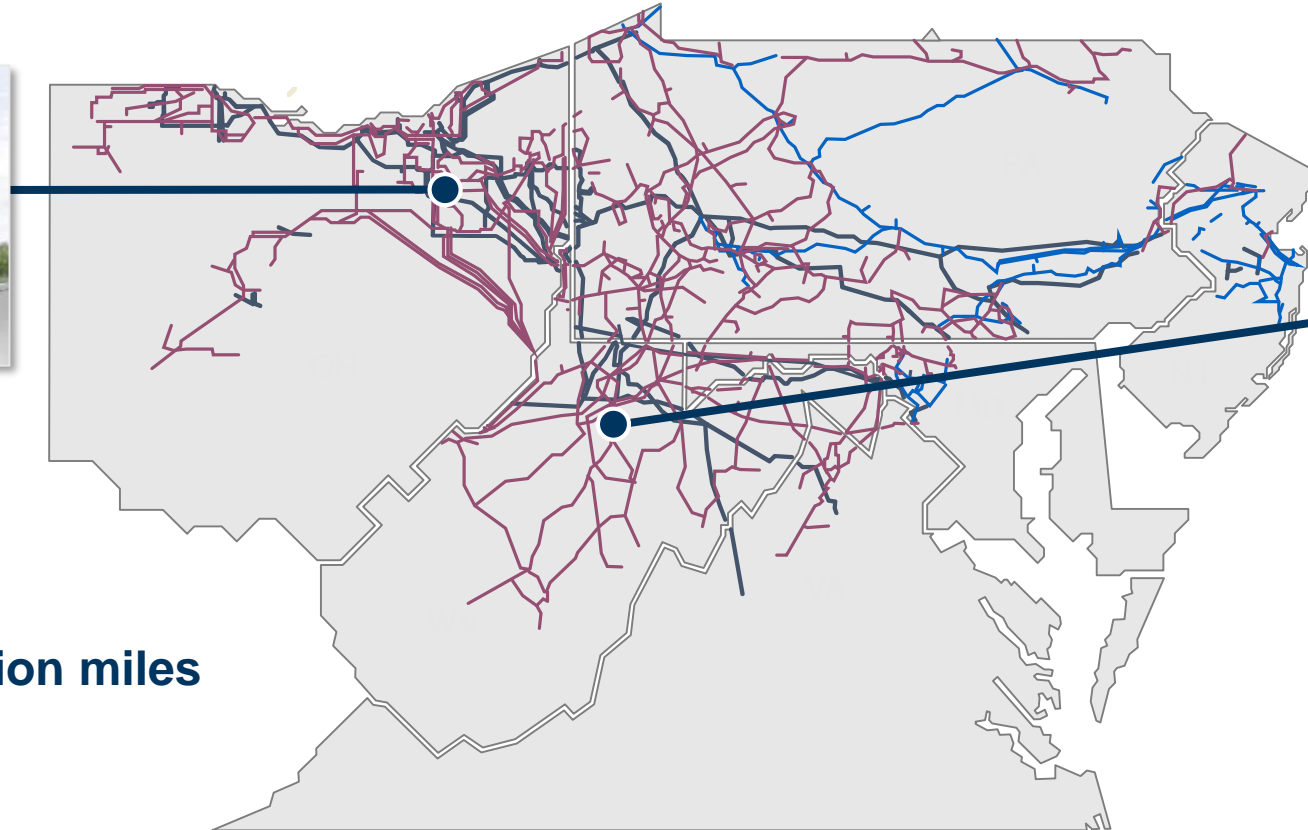


FirstEnergy Transmission

Overview



Akron, Ohio
Transmission Control Center



Fairmont, West Virginia
Transmission Control Center

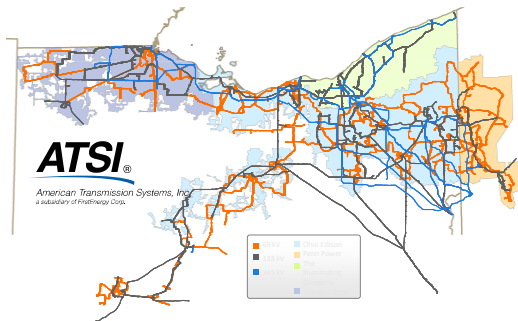
24,000+ transmission miles

Investing In Our Transmission Business

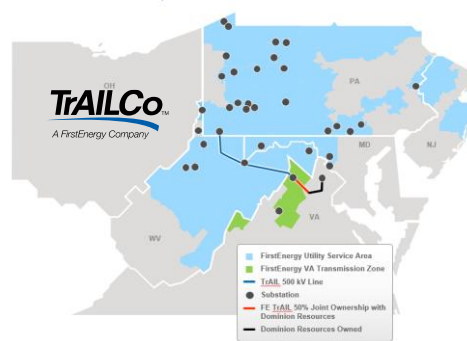
Energizing the Future

- **Regulatory Required:** PJM mandated RTEP projects including those that support generation deactivations and shale gas expansion activities
- **Reliability Enhancement:** Projects focused on enhancing customer service, strengthening grid and cyber-security, and adding resiliency and operating flexibility

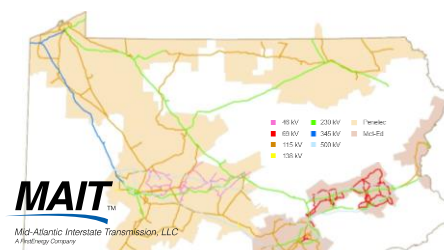
Standalone Businesses



- Established in 1998
- Forward-looking Formula Rate 10.38% ROE
- ~7,800 transmission miles
- 2015 revenues ~\$446M
- PP&E** – \$2.5B

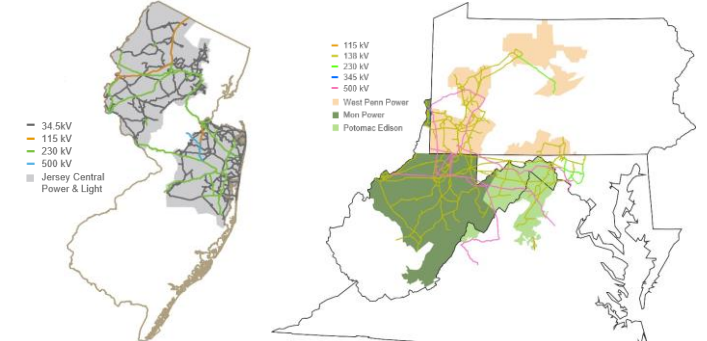


- Established in 2006; In Service May 2011
- Forward-looking Formula Rate 11.7% ROE
- ~200 transmission miles
- 2015 revenues ~\$252M
- PP&E** – \$1.7B



- Established in 2017
- MAIT is comprised of transmission assets from ME, and PN
- \$1B projected rate base as of December 31, 2019
- Forward-looking Formula Rate 10.3% ROE

Utilities



- JCP&L transmission assets on Stated Rates based on Black Box Settlement effective June 1, 2017
- Represents the transmission systems of WPP, MP and PE which comprise the Allegheny Power Zone in PJM

* Includes lines 23kV and above

** Property, Plant & Equipment (PP&E) in-service net of accumulated depreciation as of December 31, 2015

Transmission Investment has Increased Stakeholder Interest

- **Intervenors / Stakeholders**

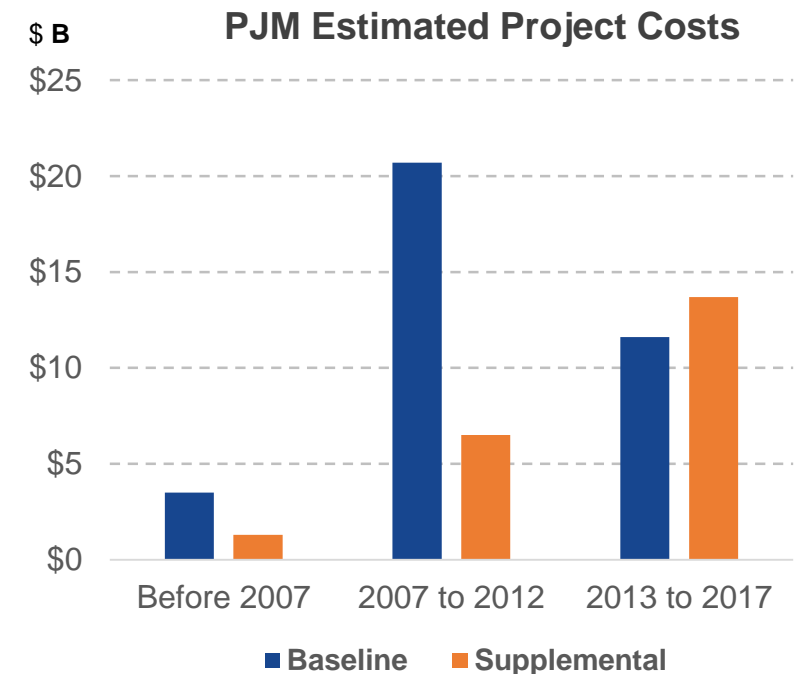
- FERC 'Show Cause' order regarding Order 890 transparency
- Concerns that project oversight of transmission projects was inadequate including transparent planning of the transmission system
- PJM Supplemental process will change to include multiple reviews of each project

- **State Commissions also increasing challenges**

- Siting approval process no longer routine
- Significant increase in data requests regarding need and benefits
- Reduced support of PJM baseline projects

- **FirstEnergy leading way with stakeholder communication**

- Multiple annual meetings with AMP, Buckeye, ODEC & Commissions
- Increased detail in PJM TEAC process
- Well-conceived and explainable methodologies
- Formula rate protocols provide for robust information exchange



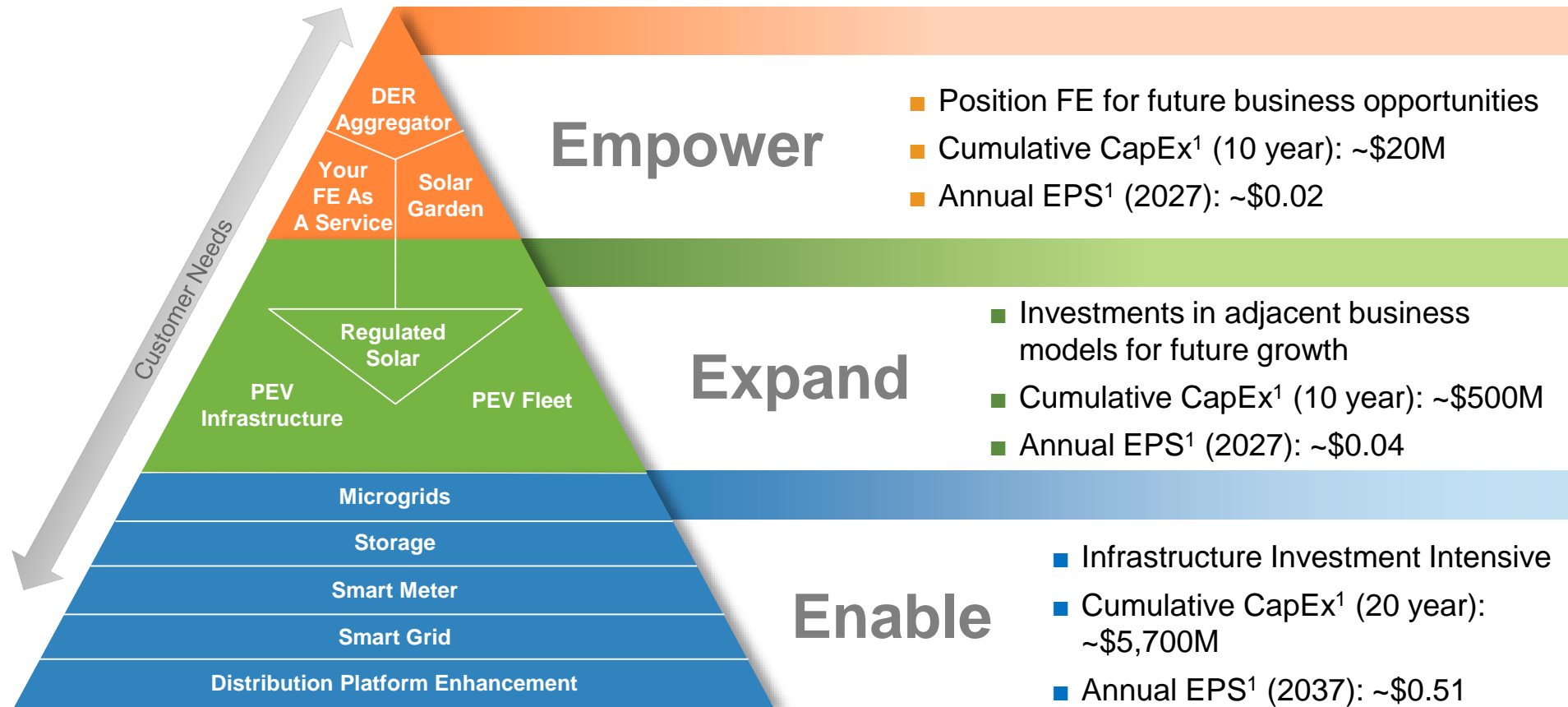
FET Deploying Leading Edge Technology

- **CAET**

- Compliance – Helps meet NERC CIP device management & cyber security requirements
- Operations – Substation protection and control equipment testing and analysis
- Training – Legacy and new equipment for Engineers and Technicians
- Consolidation – Centralized location for OT/IT warehousing and spare plant



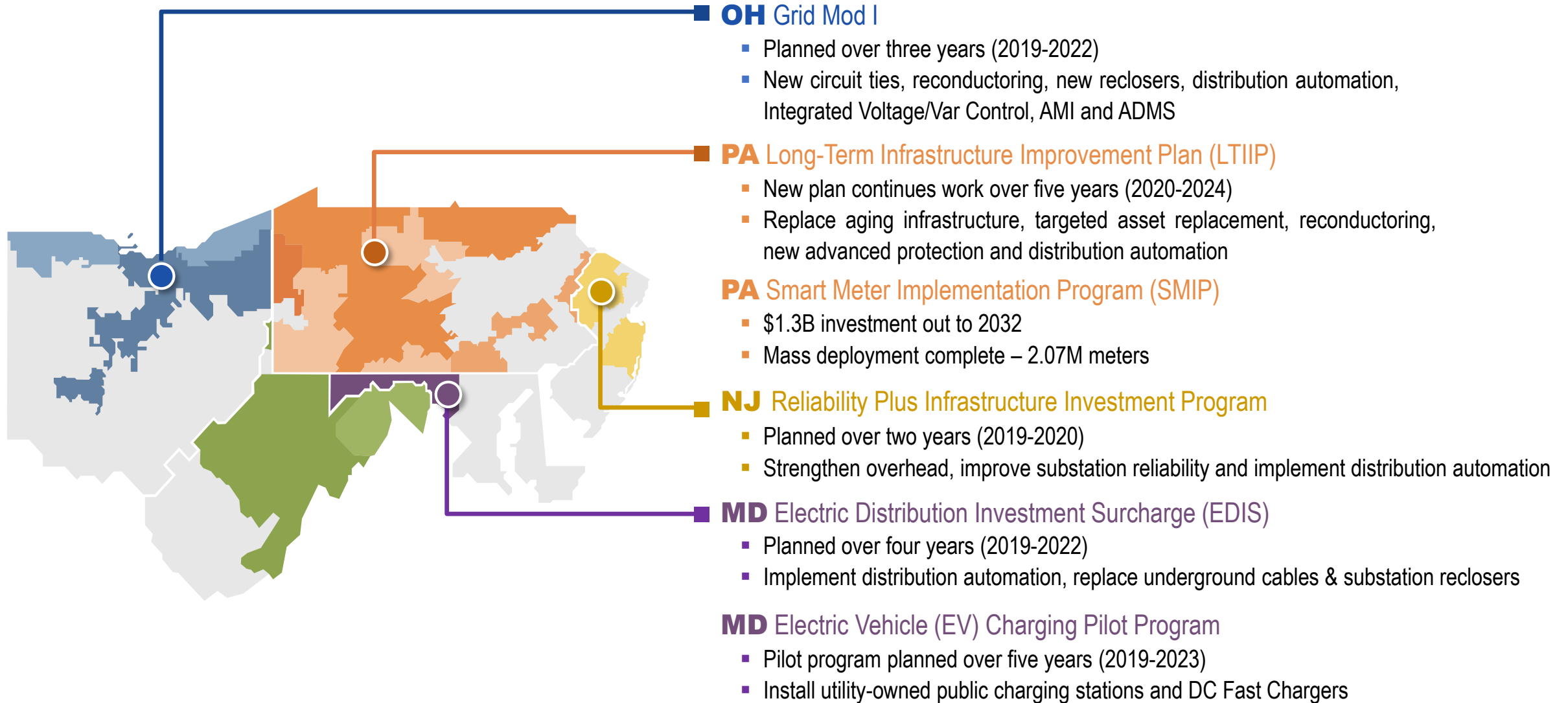
Triangle of Investment



Investment in all three platforms fulfills customer needs; however, the amount of investment decreases as you move up the triangle in the near term.

¹ Includes only the first tranche of planned investments; several programs have significant expansion potential based on results of initial investments

Distribution Enhancement Programs



Meeting the Challenge of Increased Capital Investment

- **Processes**

- Project Lifecycle Management Process (PLMP) goes live
- Dedicated team developing detailed work processes
- Initiatives to improve Scheduling, Estimating and Construction Execution

- **Organization**

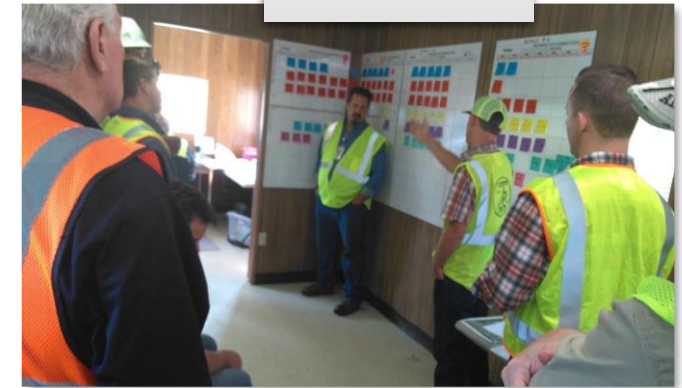
- Transmission Programs Group
 - Project Development
 - Transmission Program Support
 - Safety, quality and productivity functions
- Testing & Commissioning Group

- **Systems**

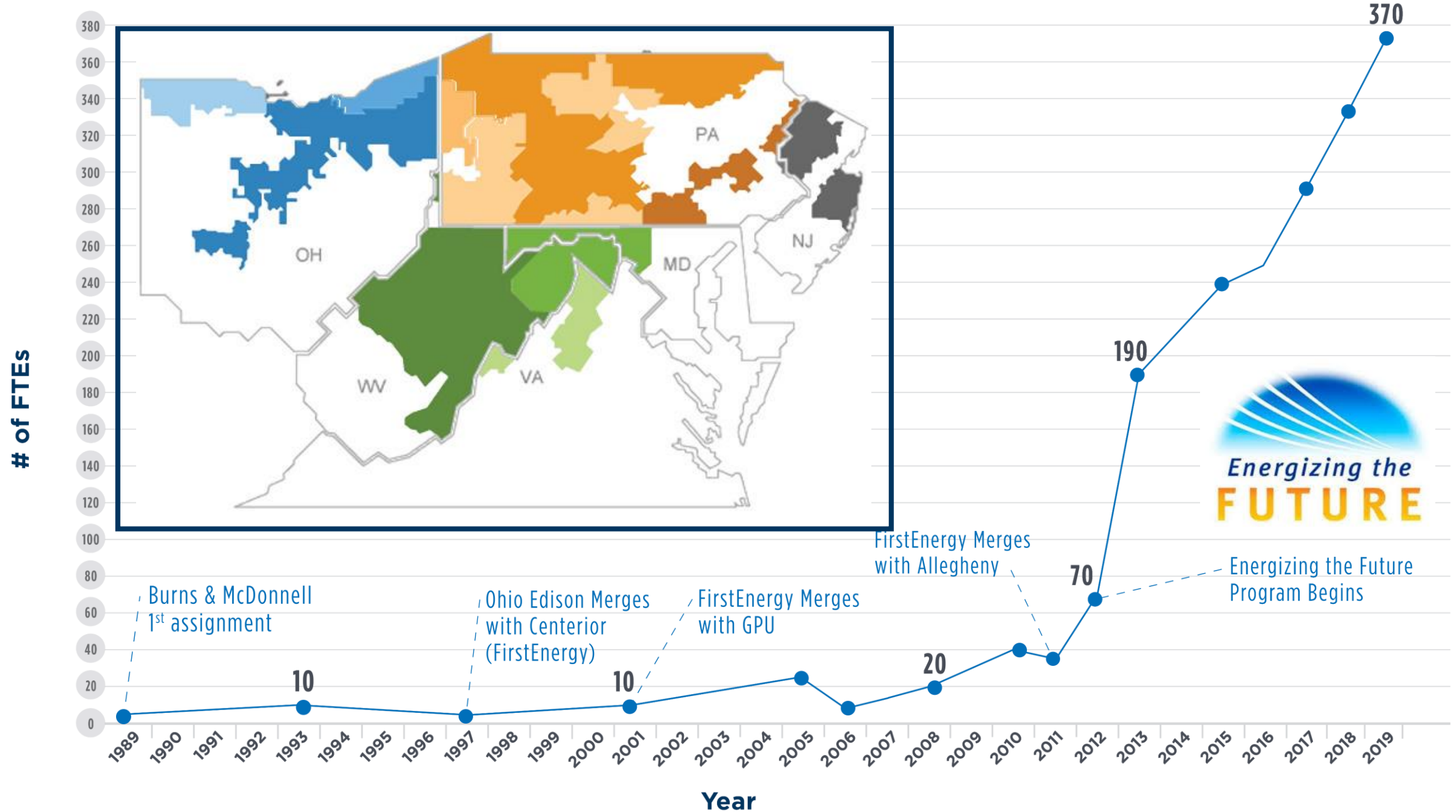
- Portfolio & Project Management System (PPMS)
- Asset management system (Cascade, OTCM, etc.) improvements to comply with NERC regulations

- **Risk Mitigation**

- Transmission control centers coordinate 160 outages on average daily
- Integrated process implemented to analyze and mitigate customer and load impact



30 Year Partnership Leads to Growth



Implementing an Enterprise Software Solution

Unifier



Uniform User Experience



Workflow

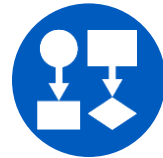


Integrated Solution

Portfolio Management



Engaged End User



Process Governance



Data Clean-Up & Transparency

Forward-Looking Statements: This presentation includes forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 based on information currently available to management. Unless the context requires otherwise, as used herein, references to “we,” “us,” “our,” and “FirstEnergy” refer to FirstEnergy Corp. Forward-looking statements are subject to certain risks and uncertainties and readers are cautioned not to place undue reliance on these forward-looking statements. These statements include declarations regarding management's intents, beliefs and current expectations. These statements typically contain, but are not limited to, the terms “anticipate,” “potential,” “expect,” “forecast,” “target,” “will,” “intend,” “believe,” “project,” “estimate,” “plan” and similar words. Forward-looking statements involve estimates, assumptions, known and unknown risks, uncertainties and other factors that may cause actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements, which may include the following: the ability to successfully execute an exit from commodity-based generation, including, without limitation, mitigating exposure for remedial activities associated with formerly owned generation assets; the risks associated with the Chapter 11 bankruptcy proceedings involving FirstEnergy Solutions Corp. (FES), its subsidiaries, and FirstEnergy Nuclear Operating Company (FENOC) (FES Bankruptcy) that could adversely affect us, our liquidity or results of operations, including, without limitation, that conditions to the FES Bankruptcy settlement agreement may not be met or that the FES Bankruptcy settlement agreement may not be otherwise consummated, and if so, the potential for litigation and payment demands against us by FES or FENOC or their creditors; the ability to accomplish or realize anticipated benefits from strategic and financial goals, including, but not limited to, our strategy to operate and grow as a fully regulated business, to execute our transmission and distribution investment plans, to continue to reduce costs through FE Tomorrow, which is the FirstEnergy initiative launched in late 2016 to identify our optimal organization structure and properly align corporate costs and systems to efficiently support FirstEnergy as a fully regulated company going forward, and other initiatives, and to improve our credit metrics, strengthen our balance sheet and grow earnings; legislative and regulatory developments including, but not limited to, matters related to rates, compliance and enforcement activity; economic and weather conditions affecting future operating results, such as significant weather events and other natural disasters, and associated regulatory events or actions; changes in assumptions regarding economic conditions within our territories, the reliability of our transmission and distribution system, or the availability of capital or other resources supporting identified transmission and distribution investment opportunities; changes in customers' demand for power, including, but not limited to, the impact of change or energy efficiency and peak demand reduction mandates; changes in national and regional economic conditions affecting us and/or our major industrial and commercial customers or others with which we do business; the risks associated with cyber-attacks and other disruptions to our information technology system, which may compromise our operations, and data security breaches of sensitive data, intellectual property and proprietary or personally identifiable information; the ability to comply with applicable reliability standards and energy efficiency and peak demand reduction mandates; changes to environmental laws and regulations, including, but not limited to, those related to climate change; changing market conditions affecting the measurement of certain liabilities and the value of assets held in our pension trusts and other trust funds, or causing us to make contributions sooner, or in amounts that are larger, than currently anticipated; the risks associated with the decommissioning of our retired and former nuclear facilities; the risks and uncertainties associated with litigation, arbitration, mediation and like proceedings; labor disruptions by our unionized workforce; changes to significant accounting policies; any changes in tax laws or regulations, including the Tax Cuts and Jobs Act, or adverse tax audit results or rulings; the ability to access the public securities and other capital and credit markets in accordance with our financial plans, the cost of such capital and overall condition of the capital and credit markets affecting us; actions that may be taken by credit rating agencies that could negatively affect either our access to or terms of financing or our financial condition and liquidity; and the risks and other factors discussed from time to time in FirstEnergy's Securities and Exchange Commission (SEC) filings. Dividends declared from time to time on FirstEnergy's common stock, and thereby on FirstEnergy's preferred stock, during any period may in the aggregate vary from prior periods due to circumstances considered by FirstEnergy's Board of Directors at the time of the actual declarations. A security rating is not a recommendation to buy or hold securities and is subject to revision or withdrawal at any time by the assigning rating agency. Each rating should be evaluated independently of any other rating. These forward-looking statements are also qualified by, and should be read together with, the risk factors included in FirstEnergy's filings with the SEC, including but not limited to the most recent Annual Report on Form 10-K, Quarterly Report on Form 10-Q, and any subsequent Quarterly Reports on Form 10-Q and Current Reports on Form 8-K. The foregoing review of factors also should not be construed as exhaustive. New factors emerge from time to time, and it is not possible for management to predict all such factors, nor assess the impact of any such factor on FirstEnergy's business or the extent to which any factor, or combination of factors, may cause results to differ materially from those contained in any forward-looking statements. FirstEnergy expressly disclaims any obligation to update or revise, except as required by law, any forward-looking statements contained herein as a result of new information, future events or otherwise.