

Coal Plant Issues

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Tom McDonnell – Moderator

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Coal Plant Issues

Peter Nadel

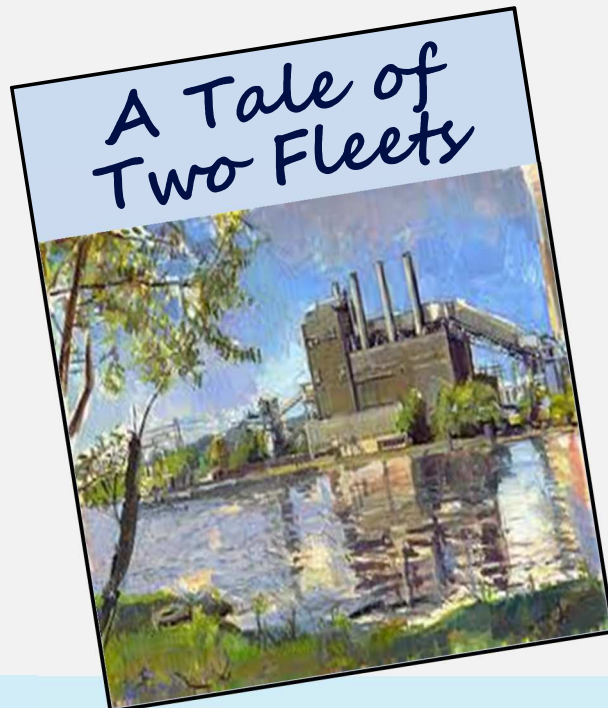
Manager, Corporate Insurance

FirstEnergy Corp.



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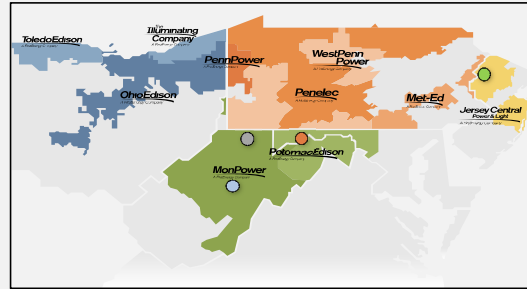
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FirstEnergy Corp. Overview



- Ten operating companies serving ~6 million customers across six states
 - One of the largest contiguous service territories in the US
 - Includes 3,790 MW of regulated generation; primarily serving West Virginia
- One of the largest transmission systems in PJM with ~24,500 miles of lines



Regulated Distribution Companies	
State	Operating Companies
Ohio	OE, CEI, TE
Pennsylvania	ME, PN (1), PP, WPP
New Jersey	JCP&L
West Virginia	MP, PE-WV
Maryland	PE-MD

Regulated Generating Plants		
Plant	MW	Fuel Type
● Harrison 1-3	1,984	Supercritical Coal
● Fort Martin 1-2	1,098	Supercritical Coal
● Bath County	487	Hydro
● Yards Creek	210	Hydro
OVEC	11	Subcritical Coal
Total	3,790	



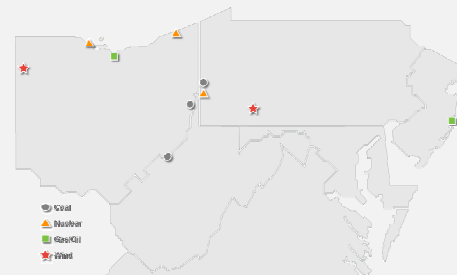
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The Artist Formerly Known as FirstEnergy Solutions



- Leading energy supplier, serving residential, commercial and industrial customers throughout the Northeast, Midwest and Mid-Atlantic regions of the US



Unregulated Generating Plants		
Plant	MW	Fuel Type
Bruce Mansfield	2,490	Supercritical Coal
Sammis	2,210	Supercritical Coal
Pleasants	1,300	Supercritical Coal
Beaver Valley	1,872	Nuclear
Davis Besse	908	Nuclear
Perry	1,268	Nuclear
Total	10,048	

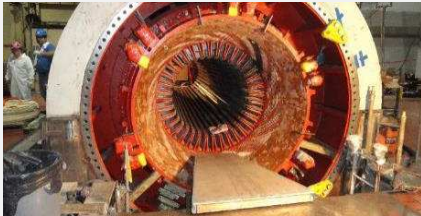


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FirstEnergy Program Highlights

- Hybrid quota share program design
- Two carriers provide primary \$250 million coverage (AEGIS: 80%, EIM: 20%)
- Seven carriers provide \$250 million excess (maximum: 20% / minimum: 4%)



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Insurer Advocacy Unfriend Coal

Insurers need to

- Stop underwriting coal projects
- Divest their funds from coal companies
- Develop plans to move away from other fossil fuels
- Scale up their investment in clean energy sources
- **Not AEGIS**



SUMMARY SCORECARD

	COAL UNDERWRITING	COAL DIVESTMENT	OTHER CLIMATE LEADERSHIP
Swiss Re (Switzerland)	👍	👍	👍
Zurich (Switzerland)	👍	👍	👍
AXA (France)	👍	👍	👍
SCOR (France)	👍	👍	👍
Aviva (UK)	N/A	👍	👍
Allianz (Germany)	👍	👍	👍
Manch. Fx (Germany)	👍	👍	👍
Legal & General (UK)	N/A	👍	👍
Lloyd's (UK)	N/A	👍	👍
Generali (Italy)	👍	👍	👍
MetLife (U.S.)	N/A	👍	👍
Sompo (Japan)	👍	👍	👍
XL Catlin (Bermuda)	👍	👍	👍
AIG (U.S.)	👍	👍	👍
Axis Capital (U.S.)	👍	👍	👍
W.R. Berkley (U.S.)	👍	👍	👍
Berkshire Hathaway (U.S.)	👍	👍	👍
Chubb (Switzerland)	👍	👍	👍
Hannover Fx (Germany)	👍	👍	👍
Liberty Mutual (U.S.)	👍	👍	👍
Mapfre (Spain)	👍	👍	👍
Prudential (U.S.)	N/A	👍	👍
QBE (Australia)	👍	👍	👍
TIAA Family (U.S.)	N/A	👍	👍
Tokio Marine (Japan)	👍	👍	👍



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Coal Ash Ponds

- Increased scrutiny
 - Insurers
 - Regulatory
- Increased trespassing / nuisances
- Communication issues / new responsibilities



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Plant Closure

- Develop best practice procedure baseline
 - Remove **all** combustibles
 - Coal deposits, fuel oil, liquids, belts, etc.
 - Clean and clear out office areas
 - Limit access to plant buildings to one entrance
 - Notify all local authorities
 - Increase barriers to enter the plant
 - Signage, signage, signage!
- Visit each site and develop an individualized plan based on unique plant characteristics



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State Police: Woman Trapped In Pipe At Greene Co. Power Plant Rescued

By Amy Wadas April 15, 2019 at 11:26 am Filed Under: Amy Wadas, Carmichaels, Greene County, Hatfield Power Plant, Local TV



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Doing More with Less

Issues from reduced runtime to reduced staffing

- Reduced equipment operating time
 - Plant heating requirements
 - Start-up fatigue
 - Fire protection service issues
- Knowledge drain
- Staff burnout



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Doing more with less

Strategies

- Expand succession planning
- Identify efficiencies



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Brian Michael Madden

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Property Loss Control Issues and Approaches –
Changes in Fossil Power Plant Operations / Closures

Joshua Fleischer

Vice President, Loss Control Property

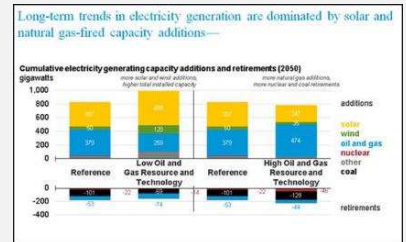
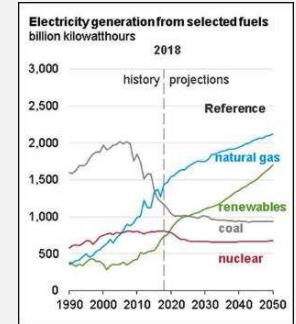
Operations



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Loss Control Considerations and Approaches

- Increase in idle plants and closures
- What is the end state of the facility?
- Risk concerns
 - What are the current risks?
 - What are the risks in the final state of the facility?
 - Have the hazards and risks changed?
 - **Doing more with less: partnering with AEGIS Loss Control to right-size your loss control program**



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Loss Control Considerations and Approaches

What is the current condition and desired end state of the facility?

- Operational impact (e.g. cycling of units, increase in starts / stops, stress on components)
- Partial shutdown of the facility?
 - Are some generating units remaining?
 - Will some operations remain (e.g. switchyards and other generation)?
- Total shutdown of the entire facility?
- Future use of the facility?

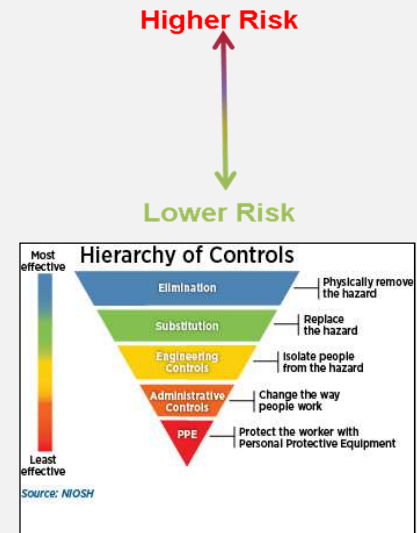


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Risk Reduction Issues – Loss Control Considerations

Items to consider: Will the hazards and risks change?

- Emergency planning
- Security / attractive nuisance
- Facility status – equipment decommissioning, utilities, demolition activities, staffing, O&M, etc.
- Loss control considerations
 - Maintain protection systems until hazards are eliminated / reduced
 - Housekeeping
 - Natural catastrophe hazards
- Periodic reviews!



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Risk Reduction Issues – Loss Control Considerations

Emergency planning

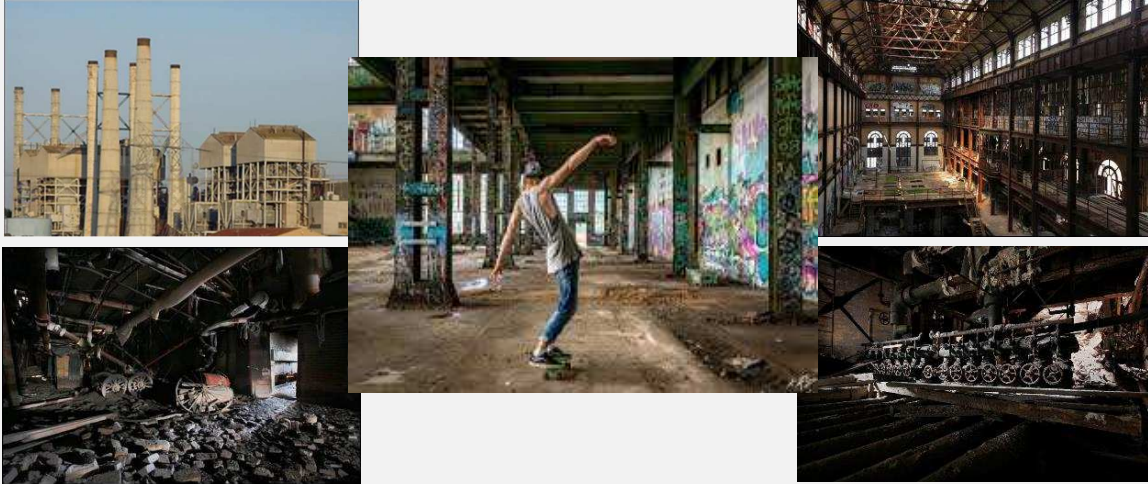
- Risk assessment of the site's exposures, threats, vulnerabilities and target areas, and the consequences of each
- Ensure emergency plan is up-to-date in all phases
- Define security objectives based on local demographics, condition of the site, values, hazards, etc.
- Maintain communication with internal company organizations
- Work with local fire and police departments to review facility emergency plans during all transitional phases
- Many areas have local codes and ordinances which address vacant sites



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Risk Reduction Issues – Loss Control Considerations

Security / Urban Exploration

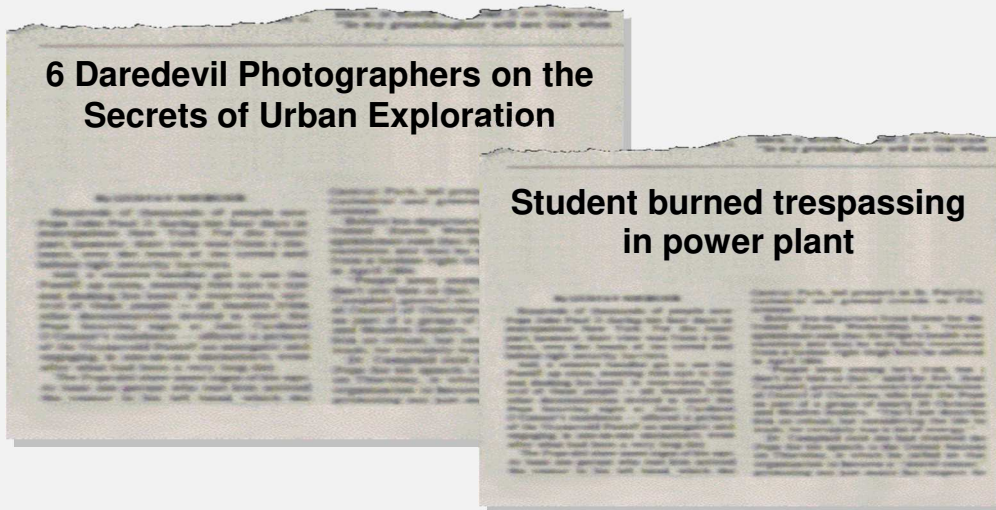


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Risk Reduction Issues – Loss Control Considerations

Security / Urban Exploration



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Risk Reduction Issues – Loss Control Considerations

Security / Urban Exploration



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Risk Reduction Issues – Loss Control Considerations

Security / Urban Exploration



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Risk Reduction Issues – Loss Control Considerations

Security / Attractive Nuisance

- Supervision and security measures
 - Perform a site security survey
 - Control access to the site and buildings
 - Ensure fencing, gates, boarding or securing accessible windows, doors, etc.
 - Eliminate climbing aids
 - Ensure alarms, cameras, detection equipment are in place and operational
 - Evaluate need for facility inspections / security guard service?
 - Ensure proper signage on plant entry points and other site hazards



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Risk Reduction Issues – Loss Control Considerations

Security / Attractive Nuisance

- Supervision and security measures
 - Adequate lighting maintained outside and inside
 - Maintain tight management controls on key or card access
 - Notify local law and fire officials as appropriate
- Arson, vandalism, theft, and sabotage
 - “Because it is there”
 - Increase security in areas where there is an increase in vandalism or suspicious activities
 - Update policies / procedures



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Risk Reduction Issues – Loss Control Considerations

Facility Status

- Utilities
 - Provide building heat, lighting, and power to critical systems, such as fire protection, control panels, communication systems, etc.
 - Building utilities should be isolated and secured with proper lock-out / tag-out procedures
 - Ensure that life safety measures are not compromised!
 - Eliminate the hazards



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Risk Reduction Issues – Loss Control Considerations

Facility Status

- Equipment decommissioning
 - Detailed review of plant assets to determine future use or need – this will determine necessary lay-up measures and how ongoing PM's, etc. are conducted
 - Flammable liquids, chemicals, and gases should be removed from laboratories, processes and tanks; tanks containing acids and caustics should be emptied and neutralized
 - Equipment with extremely high value, and equipment vulnerable to water damage, extreme temperatures, and dust or contamination should be relocated to another facility, if possible
 - Equipment components with a high value are susceptible to theft



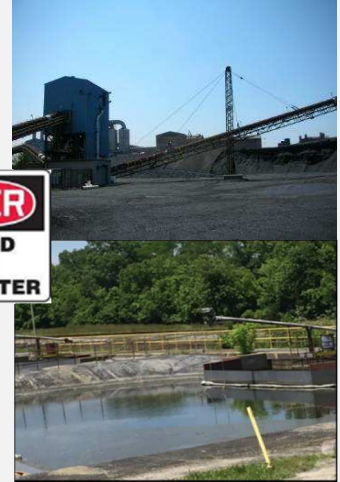
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Risk Reduction Issues – Loss Control Considerations

Facility Status

- Equipment decommissioning
 - Confined spaces should be properly marked and maintained
 - If equipment enclosures are erected, they should be noncombustible: wood, plastic, and tarpaulin enclosures should be avoided
 - Process equipment and tanks should be cleaned and gas / oil or vapor-free
 - Ash ponds / basins made secure and safe



Risk Reduction Issues – Loss Control Considerations

Facility status

- Risk reduction – fuel and ignition sources should be identified and eliminated if possible
 - Remove coal from bunkers, silos, or other equipment
 - Remove oil from storage tanks, reservoirs, etc.
 - Eliminate combustible storage or trash inside buildings
 - Do not use as a warehouse or for storage unless properly protected

Risk Reduction Issues – Loss Control Considerations

Facility status

- Risk reduction – fuel and ignition sources should be identified and eliminated if possible
 - Maintain yard areas free of vegetation to reduce fire exposure to buildings and equipment
 - Minimize energized electrical equipment
 - Ensure all temporary wiring measures are controlled and properly performed
 - Control of hot work activities
 - Monitor and review all temporary heating sources for buildings and equipment
 - Properly isolate other facility hazards (e.g. natural gas, hydrogen, etc.)



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Risk Reduction Issues – Loss Control Considerations

Facility Status - Demolition Risks

- Structural stability / collapse
- Electrical
- Environmental
- Vibration
- Noise
- Dust
- Fire / explosion
- Wildlife
- Natural hazards



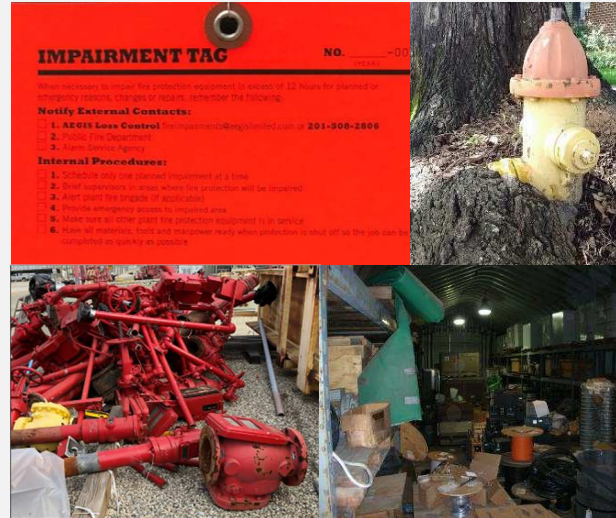
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Risk Reduction Issues – Loss Control Considerations

Loss Control Considerations

- Fire protection
 - Review current hazards and future hazards to ensure adequate mitigations are in place
- Housekeeping
- **Don't remove risk mitigations before the hazards are eliminated!**



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Risk Reduction Issues – Loss Control Considerations

Summary

- Review facilities periodically
- Keep management informed
- Keep local emergency responders informed
- Have you updated the property values and worked with your Underwriter and/or Broker?
- **Teamwork – partner with your AEGIS Loss Control team!**



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