

# OHIO'S ENERGY ASSURANCE EXERCISE

**JUNE 1, 2011**





# WELCOME

- Comm. Cheryl Roberto, PUCO
- Comm. Paul Centolella, PUCO
- Ms. Nancy Dragani, Ohio EMA
- Mr. Rob Glenn, Ohio Homeland Security



# HOUSEKEEPING MATTERS

1. Electronics – set to “STUN”
2. Fire exits
3. Wifi – AT&T Wifi; check the box for terms & conditions; good to go
4. Phone calls, etc. – please step outside to make/take calls, return ASAP
5. Lunch – just 45 minutes; options (boxed/pre-order, buffet, nearby)
6. Cyber/physical security panel begins promptly at 1pm
7. Restrooms, breaks, facilities
8. Seating by tables



# INTRODUCTIONS

- Acknowledgements – DOE, DHS, FBI, OHS, OEMA, PUCO team (Comms./Staff)
- EAX Unit
- PUCO Staff
- Participants



# Ohio's Energy Profile



# Ohio Quick Facts: EIA

- Industrial energy consumption ranks among highest in the United States

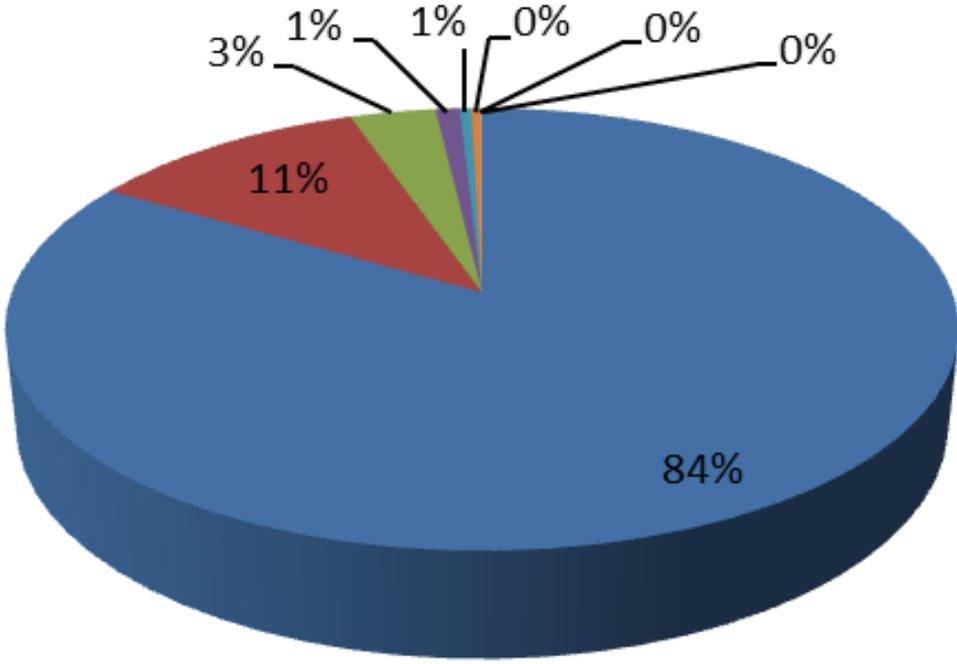
- Industrial Sector Energy Consumption, Ranked by State, 2008

Industrial Sector		
Rank	State	Trillion Btu
1	Texas	5,651.60
2	Louisiana	2,204.00
3	California	1,954.80
<b>4</b>	<b>Ohio</b>	<b>1,341.00</b>
5	Indiana	1,302.10

- 2<sup>nd</sup> highest refining capacity in the Midwest
  - Four operating refineries with an operating capacity of 589,500 Barrels per Stream Day (Source: EIA, Form EIA-820)
- Coal fuels roughly 85% of net electricity generated



# Electric Power Generation, by Primary Fuel Source 2009 (MWH)



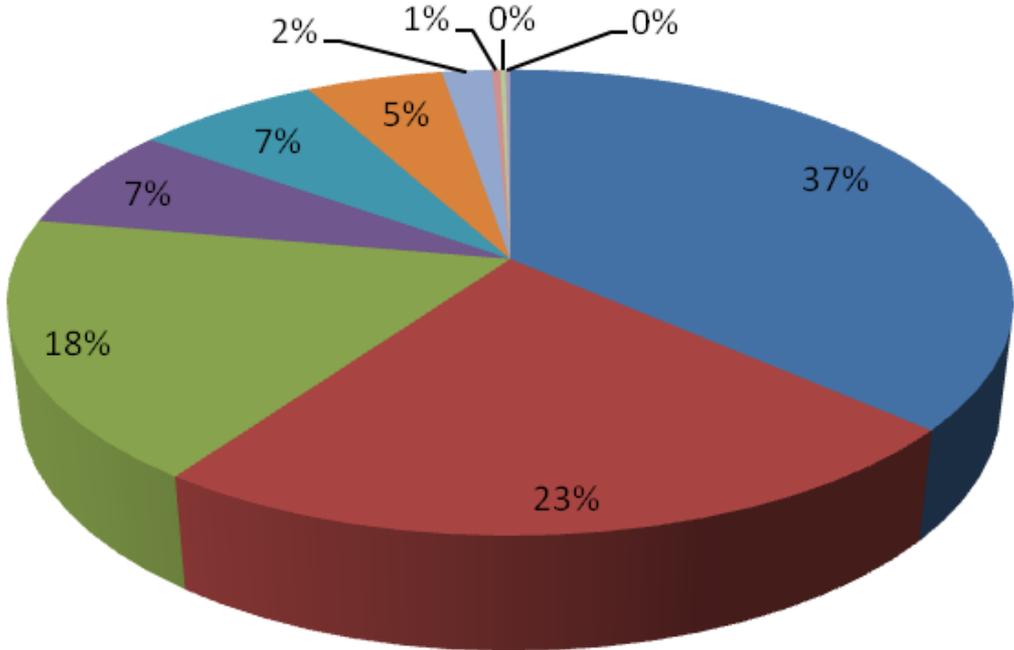
- Coal (113,711,997 MWH)
- Nuclear (15,206,084)
- Natural Gas (4,650,456)
- Petroleum (1,311,743)
- Other Renewables (633,410)
- Hydroelectric (527,746)
- Other Gases (37,477)
- Other (11,312)

Source: EIA, Form EIA-923



# Energy Expenditure Estimates by Source, 2008 (Million Dollars)

- Motor Gasoline (\$16,128.40) ■ Natural Gas (\$10,164.90)
- Distillate Fuel Oil (\$7,960.50) ■ Coal (\$3,173.10)
- Other Petroleum (\$3,127.70) ■ Jet Fuel (\$2,316.90)
- LPG (\$847.50) ■ Biomass (\$143.30)
- Nuclear Fuel (\$87.30) ■ Residual Fuel Oil (\$79.70)



Source: EIA



# Renewables & Smart Grid

In 2008, Senate Bill 221, created a Renewable Portfolio Standard for the State of Ohio, which mandates that:

- By the year 2025, 25% of electricity sold by Ohio's electric companies must come from **alternative** energy sources.
- At least 12.5% must come from **renewable** energy sources (including a 0.5% **solar** carve-out). The rest can come from advanced energy sources.
- At least half of the renewable energy must be generated **in-state**.



# Renewables & Smart Grid

SB 221 also encouraged the deployment of **advanced metering infrastructure (AMI)** in the state. So far...

- AEP has deployed 110,000 smart meters as a part of the first phase of installation with the intent to complete the rollout by 2016.
- Duke Energy has plans to deploy smart meters throughout Ohio service territory, by 2016, and has installed over 80,000 to date.
- FirstEnergy will deploy 5,000 meters as a part of an initial pilot program, in spring of 2011, to determine future deployment activities.

# Energy Assurance

- What is “energy assurance”?
- What is Ohio’s Energy Assurance Project?
- Why are we here today?





# Exercise Objectives

- Understanding interdependencies
- Improving coordination
- Enhancing communication protocols
  - Intra-governmental
  - Between sectors
  - Providing public information
- Testing existing and developing plans
- Developing lessons learned for continuous improvement



# OUTCOMES

1. Participants gain greater understanding of Ohio's energy makeup, capabilities, and utilization
2. All participants take business cards of at least 4 individuals with them (force multiplier)
3. Lessons learned today will be captured in an "After-Action Report" and will be utilized in further development and refinement of Ohio's Energy Assurance Plan

# Discussion Items

- What mitigation opportunities exist?
- When & why would industry seek help?
- What kind of help would be sought?
- What kind of help is not wanted?
- What are service restoration priorities?
- How may prolonged outages be assuaged?
- How may restoration be expedited?



# Consider These (Pre-/Per-/Post- Event)

- Risk Assessment
- Risk Mitigation
- Crisis Management
- Consequence Management
- Resource Identification
- Actionable Intelligence
- Security Support
- Notification Processes
- Resource Mobilization











**Officials see above-average hurricane season looming**

**Ohio**

Energy Assurance Program



**Midwesterners brace for possible record flooding**

**Homemade cyberweapon worries federal officials**  
**Capable of crippling key industrial controls**

**Work-issued mobile devices emerging as key security risk**

**Gas leak shuts down local refinery**  
**Deadly tornado kills 124, leaves 'twilight zone' in its wake**

**Pipeline explosion lights up rural Ohio**

**Security of Siemens SCADA Systems Products Questioned**

**Despite better technology, 2011 set to be deadliest tornado year**

**Three Arrested in Connection with Attempted Copper Theft**

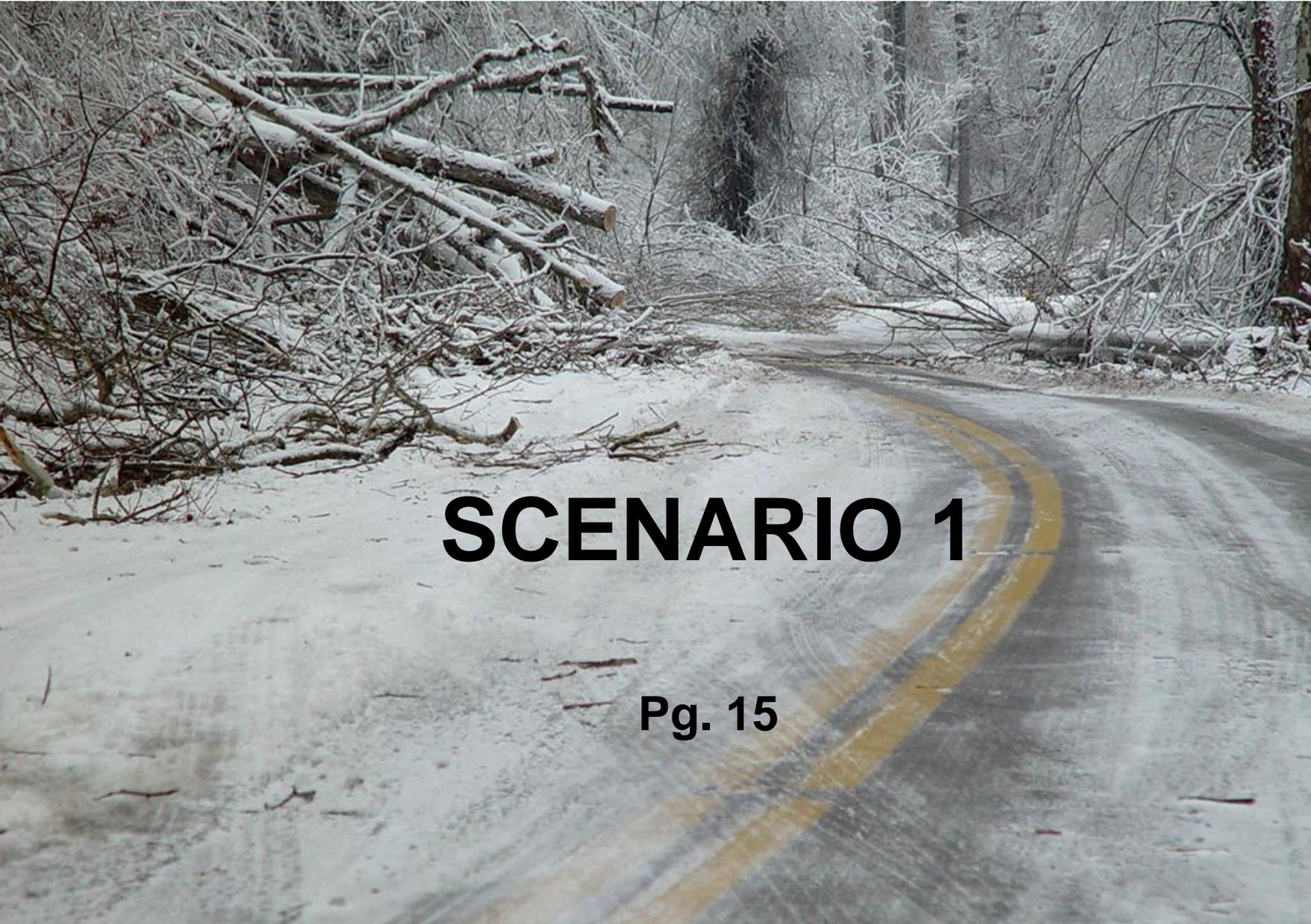
Don't let this happen to you!





# EXERCISE GUIDELINES

- **Non-attribution** – we are participants sharing experience & gaining understanding, **not** officially representing our organizations today; “What goes on in Fawcett, stays in Fawcett”
- Don’t “fight the scenarios” – they are plausible
- NO hidden agenda; NO trick questions; NO wrong answers



# SCENARIO 1

Pg. 15



# Preceding Summer

- Record high number of hurricanes, some with major impacts:
  - Gulf Coast refineries extensively incapacitated; motor fuels & propane inventories measurably impacted
  - Offshore production of oil & gas curtailed (a la Katrina/Rita/Wilma)
  - Pent-up demand leads to bottle-necking



# Preceding Summer/Autumn

- Nationwide impacts:
  - Summer cooling demand greater than normal; natural gas-fired electric generation
  - Injection season inventories end significantly lower than normal; propane & fuel oil inventories also well below normal
- Ohio impacts:
  - Sharply decreased fuel supplies
  - Oil & gas prices driven higher

# Sunday, 11:00am, EST

- It's a crisp Sunday in early February
- The sun is shining
- Expected to give way to more seasonal winter weather





Sunday, 6:00pm, EST

**WEAX**

Storm  
Team **41**





Sunday, 10:46pm, EST

Storm Team **4**

Satellite / Radar Past 4 Hours



# Sunday, 11:15pm, EST

- The Regional Transmission Organization has declared a conservative operations/cold weather alert.



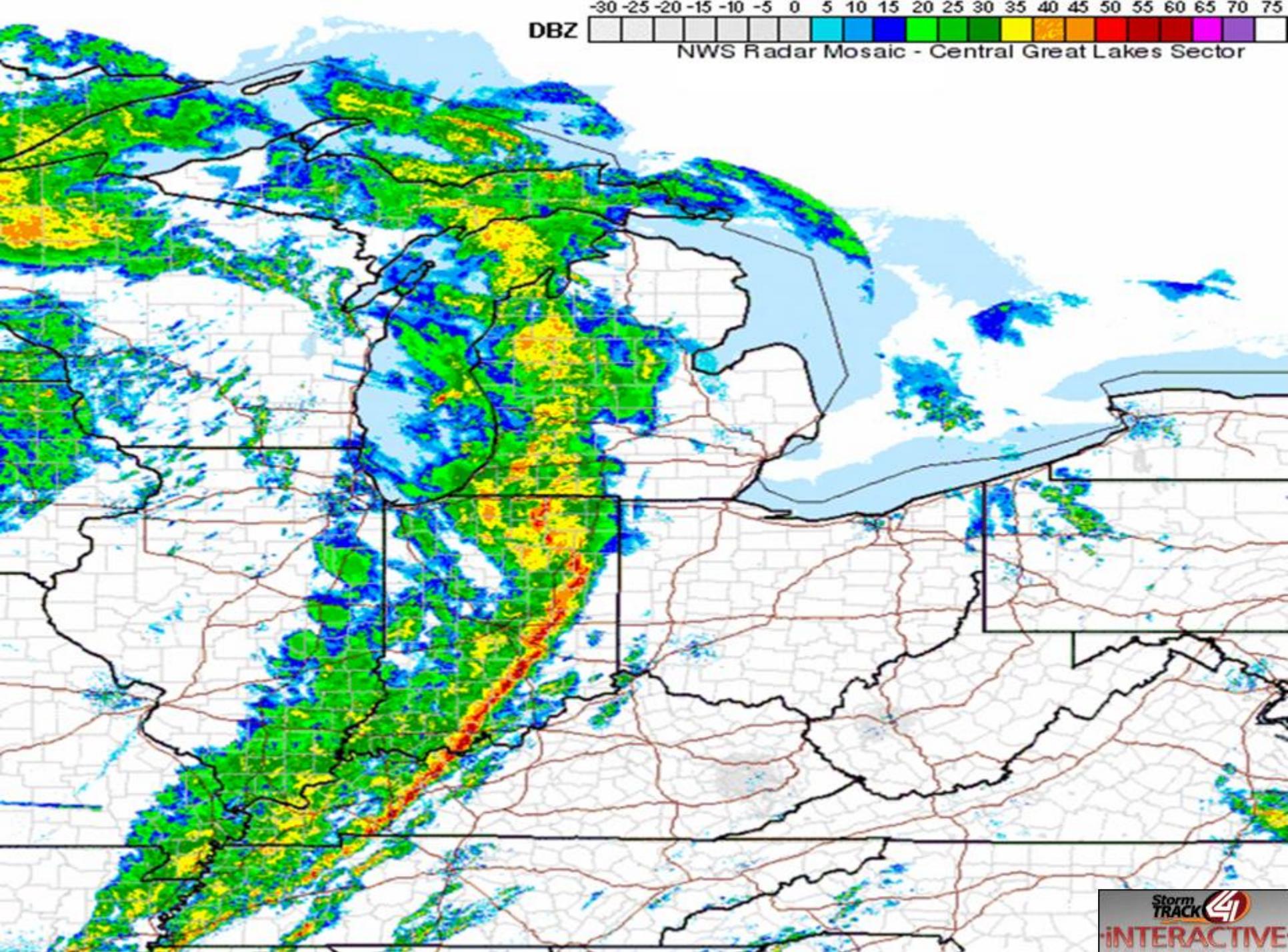
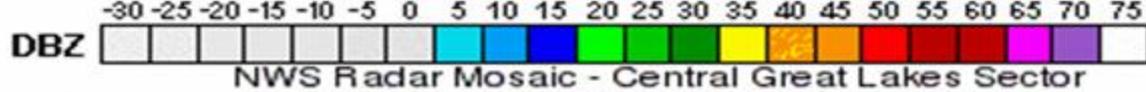


# Monday, 6:00am, EST

- The winter storm may be worse than expected, due to the low pressure system lifting further north than originally predicted
- Snow is expected to start accumulating quickly in the afternoon hours

**WEAX**







# Monday, 10:12am, EST

- Snow begins falling heavily and accumulating quickly
- Low visibility due to blowing & drifting snow
- The Ohio Department of Transportation (ODOT) has nearly its entire crew scheduled for 12 hour shifts for the duration of the winter storm
- Numerous county Emergency Management Agencies have activated their local emergency operations plans



# Monday, 6:15pm, EST

- Snow has begun turning into freezing rain;
- A majority of counties heavily impacted by the weather have issued either Level 1 or Level 2 Snow Emergencies









MAR 5 2008



# Consider:

1. How prepare for/respond to NWS notices?
2. What methods for internal communications?
3. Any info communicated externally?  
Trigger?
4. How monitor? Info sources?
5. Begin implementation of emergency response plans?



# SCENARIO 2



# Tuesday, 4:43am EST

- The wintry-mix of precipitation continues throughout the night; ice accumulation brings down three transmission lines in northeastern Ohio — over 48,000 people are without power
- EDUs are working in conjunction with the Regional Transmission Organization to restore power
- Snow, ice, and storm debris covering roadways continue to make transportation difficult/hazardous
- Local EMAs continue response & recovery activities





# Communications Flow?

- Consistent flow of accurate information crucial during energy emergency;
- Lack thereof:
  - Raises public anxiety
  - Fuels impressions that either exaggerate or underestimate potential harm



# Communications Flow?

- During an actual event, you may be tasked with all or part of the following:
  - Educating the public: actions taken to keep them safe before, during and after an event.;
  - Inducing confidence by informing people about how to take care of themselves and their families;
  - Communicating the coordinated actions of local, state and energy industry resources and explaining how these integrate;
  - Releasing accurate and complete information as soon as it becomes available and can be released without detrimental effect; and
  - Counteracting the effects of rumor and inaccurate information.



# Communications Flow (cont'd)

- Your audiences?
  - Public? Media? Government? Special needs populations (English Second Language, shut-ins, visual/hearing impaired)?
  - Other?
- Communications tools?
  - News conferences and briefings?
  - Interviews? Press releases? Web & **social media**?



# Unified Messages

- Importance of unified message between state/locals/energy sectors
- How can we at the PUCO and other state agencies help you?
- Daily communications conference calls during an event may be helpful in developing timely/accurate/consistent public information messages

# In a real emergency, how would you answer:

1. Who is in charge?
2. How many people have/will be affected?
3. What actions should the public take?
4. How much damage has/could occur?
5. How soon will something be done about it?
6. How long will it last?
7. When can people go back home?
8. When will things be back to normal?
9. Will it happen again?



# LUNCH

- Pre-ordered box lunches available next door
- Buffet in Coach's Café
- Fast food ½ mile north on Olentangy River Road
- CIP Panel begins at 1pm SHARP!



# CYBERSECURITY/ PHYSICAL SECURITY PANEL

**Dr. Carol J. Hawk**

Program Manager

Cybersecurity for Energy Delivery Systems

U.S. Department of Energy

[CEDS Presentation\\_15Min.pptx](#)



# CYBERSECURITY/ PHYSICAL SECURITY PANEL

**Mr. James Emery**

Protective Security Advisor

Southern Ohio

U.S. Department of Homeland Security



# CYBERSECURITY/ PHYSICAL SECURITY PANEL

**Mr. Patrick Shaw**

Protective Security Advisor

Northern Ohio

U.S. Department of Homeland Security



# CYBERSECURITY/ PHYSICAL SECURITY PANEL

**Mr. Darren Mott**

Supervisory Special Agent

Cyber Squad, Cleveland Division

U.S. Federal Bureau of Investigation





# CYBERSECURITY/ PHYSICAL SECURITY PANEL

**Mr. Robert E. White II**

Supervisory Special Agent

Cyber Squad, Cincinnati Division

U.S. Federal Bureau of Investigation

# CYBERSECURITY/ PHYSICAL SECURITY PANEL

**Mr. Robert Glenn**

Executive Director

Ohio Homeland Security

Ohio Department of Public Safety



# CYBERSECURITY/ PHYSICAL SECURITY PANEL

## Questions & Answers

- Dr. Carol Hawk, US DOE
- Mr. James Emery, US DHS
- Mr. Patrick Shaw, US DHS
- Mr. Darren Mott, FBI
- Mr. Robert White II, FBI
- Mr. Rob Glenn, OHS





# HOT WASH/ LESSONS LEARNED



# “Hot Wash”

- Lessons learned
- Participants (by table)
- Observers





# THANK YOU

- Please complete your evaluations
- Contact the Energy Assurance Unit with questions/comments: [EAX@puc.state.oh.us](mailto:EAX@puc.state.oh.us)
  - Krystina Schaefer (General?, Renewables & SmartGrid) 614-466-6493
  - Thom Pearce (General?, Cybersecurity & Critical Infrastructure Protection) 614-466-1846
  - Amanda Stallings (General?, Cybersecurity & SmartGrid) 614-466-7947