

Resilience Working Group Meeting

September 17, 2019, 8:30 am – 12:30 pm

American Savings Bank Tower, 8th Floor, Training Room 2

Breakout Session Results

Question #1: Are proposed criteria for identifying critical customers/sectors (shown below) acceptable?

	Criteria	Acceptable? (Y/N)
Tier 1	Essential for national security and/or public safety and health	Y
	Essential for power system restoration	Y
	Power should be restored within minutes up to several hours (by utility or backup resource)	Y
Tier 2	Important for national security, public safety and health, and other essential services	Y
	Supports power system restoration	Y
	Power should be restored within hours up to several days (by utility or backup resource)	Y
Tier 3	Remaining customers	Y

Are there other criteria we should include/exclude?

Sector 1 Response

Yes

Sector 2 Response

Yes

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Sector 3 Response

	Criteria	Acceptable? (Y/N)
Tier 1	Essential for national security and/or public safety and health	Y
	Essential for power system restoration	N
	Power should be restored within minutes up to several hours (by utility or backup resource)	N
Tier 2	Important for national security, public safety and health, and other essential services	N
	Supports power system restoration	N
	Power should be restored within hours up to several days (by utility or backup resource)	Y
Tier 3	Remaining customers	N

- Adjusting time frames to incorporate event-specific criticality (eliminate sector)
 - Time frame is arbitrary
- Move Hospitality & Finance to Tier 3

Sector 4 Response

Yes

- National security on an island vs. continental U.S. is different
 - As a whole, we agree with what is in the grid above
- Put community needs first

Sector 5 Response

Yes

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Sector 6 Response

Yes

- Should be location specific (this criteria could be used to drill down further)
- For Tier 3, power should be restored by some duration. This criteria should be specified.

Sector 7 Response

Yes

- Clarify that Tier 1 for life sustaining
- Possibly consider banking in Tier 3

Sector 8 Response

Yes

Question #2: Is your sector shown in the correct tier below?

Tier 1	Tier 2	Tier 3
<ul style="list-style-type: none">• Military• Telecommunications• Hospitals and critical healthcare• Water and wastewater• Emergency management and first responders	<ul style="list-style-type: none">• Transportation• Hospitality• Banking and finance	<ul style="list-style-type: none">• Remaining customers

If not, please explain:

Sector A Response

Yes, but it depends...

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Example: Attack → military should be tier 1 for response (for national security)

Natural catastrophe → resilient for 2-4 days so acceptable to be tier 2

FAA needs to be operational to keep air space clear for military operations and to safely land any commercial aircraft

- Consider representation from federal agencies (FAA, FBI)
- Breakout “Transportation” to air, ground, and sea.
- Tier 1 is Air transportation (including FAA and commercial air travel)

Sector B Response

- Yes – national defense
- Use of ports and air field for transporting/offloading cargo
 - supports power system generation
 - support to the State during emergency
- Want to note ranking of military that was lower at earlier meetings – due in part to civilian awareness of military purpose

Sector C Response

- Move Hospitality & Finance to Tier 3
 - Not serving life saving functions
- Resources to repair under HIEMA directions
- Energy should be a sector

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Sector D Response

Tier 1 - Yes	Tier 2 - No	Tier 3
<ul style="list-style-type: none">• Military• Telecommunications• Hospitals and critical healthcare• Water and wastewater• Emergency management and first responders	<ul style="list-style-type: none">• Transportation• Hospitality• Banking and finance• Public Health<ul style="list-style-type: none">○ State labs• Pharmacies	<ul style="list-style-type: none">• Remaining customers• Hospitality

- Critical healthcare definition (need to define)
 - Dialysis included in critical healthcare
 - Labs included in critical healthcare (ask Diagnostic Labs, independent labs, non-hospital labs, clinical labs to determine which locations are critical)

Sector E Response

- All agree w/ tiering categorization
- However, for hospitality sector, there's a significant impact regarding time to prepare/response based on tsunami vs. hurricane vs. fuel supply (e.g., 4 hours vs. days to prepare)

Sector F Response

YES!

- Because they have a higher capability they see themselves as more critical
- Telecom is an interdependency that glues things together
- Locally hosted systems are fine but systems off site can be vulnerable (talking about cloud hosted systems)

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Sector G Response

- Yes, it is correct as long as it can be restored in approximately 7 days
-

Sector H Response

- OK with all Tiers except questions Banking in Tier 2.
-

Question #3: Is the list of sector interdependencies (shown below) valid? What additional details would you provide? What do you depend on most from the other sectors (to survive and function)?

Sector Interdependencies	Valid? (Y/N)	Sector Interdependencies	Valid? (Y/N)
Electricity • All sectors need power restored as soon as possible.		Telecommunications • All sectors need cell, landline, and data communications as soon as possible	
Transportation • Road access is critical to most other sectors • Airports and ports critical for fuel and supplies for recovery		Water and wastewater • All sectors require water and wastewater support	
Banking and finance • Required to pay employees and critical supplies		Emergency management, hospital, hospitality • All sectors need housing facilities and healthcare	

Sector J Response

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Sector Interdependencies	Valid? (Y/N)	Sector Interdependencies	Valid? (Y/N)
Electricity • All sectors need power restored as soon as possible.	Y	Telecommunications • All sectors need cell, landline, and data communications as soon as possible	
Transportation • Road access is critical to most other sectors • Airports and ports critical for fuel and supplies for recovery	Y	Water and wastewater • All sectors require water and wastewater support	Y
Banking and finance • Required to pay employees and critical supplies	Y/N	Emergency management, hospital, hospitality • All sectors need housing facilities and healthcare	Y

Additional Details:

- Sector is OK w/o Telecom
- Banking not life/safety issue

Electricity #1

Transportation #2

Telecom – have own emergency system

Banking not ranked

Sector K Response

Sector Interdependencies	Valid? (Y/N)	Sector Interdependencies	Valid? (Y/N)
Electricity • All sectors need power restored as soon as possible.	2/1	Telecommunications • All sectors need cell, landline, and data communications as soon as possible	4

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Sector Interdependencies	Valid? (Y/N)	Sector Interdependencies	Valid? (Y/N)
Transportation <ul style="list-style-type: none"> Road access is critical to most other sectors Airports and ports critical for fuel and supplies for recovery 	1/2	Water and wastewater <ul style="list-style-type: none"> All sectors require water and wastewater support 	3
Banking and finance <ul style="list-style-type: none"> Required to pay employees and critical supplies 	6	Emergency management, hospital, hospitality <ul style="list-style-type: none"> All sectors need housing facilities and healthcare 	5

Additional Details:

- Right after the event, self-sufficient
- ~ A week after the event
- #1 fuel – as long as they can refuel, they can operate
- #2 electricity because the assumption is that with electricity comes water and wastewater capability and telecom
- **The majority, if not all, are internally supplied**

Sector L Response

Sector Interdependencies	Valid? (Y/N)	Sector Interdependencies	Valid? (Y/N)
Electricity <ul style="list-style-type: none"> All sectors need power restored as soon as possible. 	Y	Telecommunications <ul style="list-style-type: none"> All sectors need cell, landline, and data communications as soon as possible 	Y
Transportation <ul style="list-style-type: none"> Road access is critical to most other sectors 	Y	Water and wastewater <ul style="list-style-type: none"> All sectors require water and wastewater support 	Y

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Sector Interdependencies	Valid? (Y/N)	Sector Interdependencies	Valid? (Y/N)
<ul style="list-style-type: none"> Airports and ports critical for fuel and supplies for recovery 			
Banking and finance <ul style="list-style-type: none"> Required to pay employees and critical supplies 	N	Emergency management, hospital, hospitality <ul style="list-style-type: none"> All sectors need housing facilities and healthcare 	N

Additional Details:

- Water/Wastewater: Some areas are self-sufficient
- Telecomm: Yes for outlying areas
- Transportation: Yes to deploy

Sector M Response

Sector Interdependencies	Valid? (Y/N)	Sector Interdependencies	Valid? (Y/N)
Electricity <ul style="list-style-type: none"> All sectors need power restored as soon as possible. 	N	Telecommunications <ul style="list-style-type: none"> All sectors need cell, landline, and data communications as soon as possible 	Y/N
Transportation <ul style="list-style-type: none"> Road access is critical to most other sectors Airports and ports critical for fuel and supplies for recovery 	Y	Water and wastewater <ul style="list-style-type: none"> All sectors require water and wastewater support 	Y
Banking and finance <ul style="list-style-type: none"> Required to pay employees and critical supplies 	N	Emergency management, hospital, hospitality <ul style="list-style-type: none"> All sectors need housing facilities and healthcare 	* N

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Additional Details:

- * Remove hospitality / housing
- Emergency Management is not a sector
- Consider aligning local priorities w/ national priorities
- Prioritize & identify critical roads
- FEMA lifelines (prioritizes needs to government)
- Comm & transportation to get people to work
 - Comm includes radio
 - 1 way messages to public
 - 2 way comm allowing emergency management to interact with responders (i.e., DOFAW, police, sheriff, HFD, lifeguard)
- Transportation (ports, airports, clear priority roads)

Sector N Response

Sector Interdependencies	Valid? (Y/N)	Sector Interdependencies	Valid? (Y/N)
Electricity • All sectors need power restored as soon as possible.	1	Telecommunications • All sectors need cell, landline, and data communications as soon as possible	3
Transportation • Road access is critical to most other sectors • Airports and ports critical for fuel and supplies for recovery		Water and wastewater • All sectors require water and wastewater support	1
Banking and finance • Required to pay employees and critical supplies		Emergency management, hospital, hospitality • All sectors need housing facilities and healthcare	

Additional Details:

- Tied for #1 is Electricity and Water
 - Electricity is #1, but have generators

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- Water, we have no backup for water and we will need water
 - currently adding capability for water
 - need it for equipment cleaning
 - need for air conditioning
- Telecommunications – lots of things stored in cloud, so may be hard if telecom is down. However, there are procedures – they go back to paper.

Sector O Response

Sector Interdependencies	Valid? (Y/N)	Sector Interdependencies	Valid? (Y/N)
Electricity <ul style="list-style-type: none"> • All sectors need power restored as soon as possible. 	Y	Telecommunications <ul style="list-style-type: none"> • All sectors need cell, landline, and data communications as soon as possible 	Y
Transportation <ul style="list-style-type: none"> • Road access is critical to most other sectors • Airports and ports critical for fuel and supplies for recovery 	Y	Water and wastewater <ul style="list-style-type: none"> • All sectors require water and wastewater support 	Y
Banking and finance <ul style="list-style-type: none"> • Required to pay employees and critical supplies • Financial transactions 	Y	Emergency management, hospital, hospitality <ul style="list-style-type: none"> • All sectors need housing facilities and healthcare 	Y

Additional Details:

Dependency ranking:

1 – water

2 – electricity

3 – lodging & healthcare

4 – telecomm

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5 – banking

6 – transportation

Sector P Response

Sector Interdependencies	Valid? (Y/N)	Sector Interdependencies	Valid? (Y/N)
Electricity • All sectors need power restored as soon as possible.	Y	Telecommunications • All sectors need cell, landline, and data communications as soon as possible	Y
Transportation • Road access is critical to most other sectors • Airports and ports critical for fuel and supplies for recovery	Y	Water and wastewater • All sectors require water and wastewater support	Y
Banking and finance • Required to pay employees and critical supplies	Y	Emergency management, hospital, hospitality • All sectors need housing facilities and healthcare for prioritization	Y

Additional Details:

What this sector depends on most:

- Utility poles
- Roads
- Water for employees
- Transportation (1a)
- Electricity (1b)
- Water
- Banking

For non-sector organization, Communications is most important (#1). They have backup to do functions but needs communication to relay info. Electricity (#2).

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Sector Q Response

Sector Interdependencies	Valid? (Y/N)	Sector Interdependencies	Valid? (Y/N)
Electricity • All sectors need power restored as soon as possible.		Telecommunications • All sectors need cell, landline, and data communications as soon as possible	
Transportation • Road access is critical to most other sectors • Airports and ports critical for fuel and supplies for recovery		Water and wastewater • All sectors require water and wastewater support	
Banking and finance • Required to pay employees and critical supplies		Emergency management, hospital, hospitality • All sectors need housing facilities and healthcare	

Additional Details:

One part of sector

- Fuel
- Telecom

One part of sector

- Water
- Harbors
- Telecom

- Liquid fuel becomes primary power source if lose electric utility
- Identify critical gas customers

Question 4: In addition to backup power supply and refueling provisions, what other customer/sector mitigation strategies are recommended for your sector to improve resilience from the priority threats and power outages?

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Breakout Session Results

Sector S Response

- Larger generators on site
 - Larger fuel storage
 - Debris management (equipment & manpower)
 - Identify evacuation/alternate routes
 - Larger water storage
-

Sector T Response

- Address sea level rise risks
 - Planning stage
 - Transportation of personnel to remote sites
-

Sector U Response

- Teach communities to be more resourceful and self-reliant
 - Full-load testing
 - Deficiency documentation
 - Organizational awareness
 - Collaboration
 - Assessment
 - Identify priorities
 - Undergrounding lines
-

Sector V Response

- Comprehensive maintenance strategy for generating units

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- Collaborative, statewide emergency plan to highlight interdependencies across sectors as an example
 - does healthcare sector share with Tripler Hospital?
 - Collective MOU across sectors
- Comprehensive management strategy – maintenance of our assets tested w/o load

Sector W Response

- County, State, Federal grant funding mitigation plans are already in place & expanding
- Need to have coordination between mitigation plans & utility
 - This is the 1st instance to do that
- Realistic expectations – generator access & availability

Sector X Response

- Water storage and/or wells
 - Water conservation plan
 - Pumping stations
- Utilize microgrids to last longer than 7 days – hospitals
- Research critical healthcare
 - Define what they are and what their needs are
- Personal Preparedness
 - i.e., individuals make sure they have enough of their own meds

Sector Y Response

- Continue Operation Plan in place, also review and update current plan
- Requisite agreement with government on when hotel do and do not serve as shelter (outside of hotel guests)

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Sector Z Response

- Sheltering employees and families
 - food, shelter, water
 - Drills to simulate disaster as well as reduction in workforce
 - Critical spares but not for major events
 - Equipment cooling resiliency
 - water for cooling
 - Diversify transport routes
 - Satellite, microwave in addition to fiber
-