Building Resiliency Task Force

SUMMARY OF PROPOSALS

Approved by the Steering Committee February 12, 2013

Mitigate Hazards

Preventative measures can mitigate extreme weather events and grid strain, and minimize their impact

- Peak load management, including industry education
- Improve efficiency of systems used during utility failures to extend useful life of backup supply of fuel or water
- Reduce urban heat island effect
- Stormwater reduction through building water retention (for stormwater effect), green roofs, or permeable paving

Preventing Damage During Extreme Weather Events

Resist damage to buildings, and facilitate recovery

- Elevation of critical items
- Dry flood proofing, including permanent or temporary flood barriers such as sandbags. Allow barriers within sidewalks
- Wet flood proofing
- Anchorage of equipment and other potential wind-borne projectiles; strengthening/designing of façade and structural elements to reduce associated damage; public information on buildings with wind vulnerabilities
- Mold-resistant materials in areas that may become wet
- Ensuring mechanical equipment operability during extreme hot and cold temperatures
- Backflow preventers
- Earthquake preparedness
- Salt- and wind-resistant landscaping

Backups Against Utility Failures

Avoid evacuations / minimize reoccupation time through backup power for life safety systems and some level of drinking water supply, space conditioning, vertical transportation, and common area lighting during outages (functional occupancy). Potential backup for convenience loads and basic IT.

- Onsite backup generators, including air quality and testing; held to different standard than "emergency" generators.
- Onsite standby / continuous power (cogeneration, solar PV) from different fuel source to backup; improved islanding ability; DC charging stations
- Facilitate sharing of backup and standby power between buildings

- Prepare to utilize temporary services
- Ensure stairwell lighting

Failsafe Life Safety Measures

Non-powered building systems provide the last line of defense for life safety during extreme events. Generators fail, fuel may not be available for generators, and there are limits to the city's ability to evacuate and shelter.

- Operable windows
- Well-insulated buildings
- Maintain water supply for drinking and sanitary purposes, and ensure waste disposal functions
- Education on 'passive operation' of buildings

Emergency Preparedness Plans (EPP)

Operational plans can help mitigate damage to buildings and protect people.

- EPPs for all buildings
- Submit EPPs to City annually (like lead paint forms)
- Communication of upcoming events by the city, including suspension of rules such as water discharge to streets so owners can prepare
- Pre-negotiated agreements with contractors to facilitate rapid repair after events