UTILITY FAILURES

We all regularly use electronic equipment that is sensitive to even a split-second loss or change in electric power. On any given day, momentary power interruptions and power fluctuations (power surges or power sags) may occur. These conditions can be caused by utility switching (when the electric utility attempts to isolate a problem to maintain power to an area), weather (lightning, wind), damage to the electric utility's equipment, or even the start-up of major appliances like refrigerators or air conditioners.

- **Power spike/surge/transient (too much voltage):** A sudden upward change in voltage. Although such spikes and surges last only a few milliseconds, they can cause serious damage to computers and other sensitive electronic equipment.
- **Power sag (not enough voltage):** A planned or accidental loss of power, which can cause your appliances, lights, and electronic equipment to trip off and your PC hard drive to crash. A drop in voltage usually lasts only a few seconds, and most equipment will not be damaged by power sag. However, motorized appliances such as air conditioners and refrigerators may be affected.

Power outage information

We understand that no one likes a power outage. It can cause inconvenience in your normal daily life, but there will always be uncontrollable situations in which a power outage can occur. Here are some reasons why your lights may go out:

Natural disasters

- Tropical storms and hurricanes
- Torrential rains
- High winds
- Storm surge (high surf)
- Tsunamis
- Thunderstorms (lightning)
- Earthquakes
- Volcanic eruptions
- Mud slides
- Land slides

Damage to power lines or utility poles

- Trees and branches
- Drones, kites, balloons
- Heavy equipment such as cranes
- Humans and animals
- Damage to overhead transformers
- Vehicle Accidents
- Termites, rot, corrosion

Damage to underground cables or equipment

- Flooding in the cable vault
- Excavation work that results in accidental "dig-ins" (damage) to underground cables
- Damage to pad-mounted transformers
- Cable faults

Electric power generation problems

- Rolling blackouts
- Lack of generation capacity
- Generation problems at the power plants of independent power producers
- Schedules, unscheduled or extended repair and maintenance to utility generators
- Temporarily switching or rerouting power around a problem onto a different circuit to avoid a power outage or serious damage to the power lines and other electrical equipment

Other reason

- Equipment theft and/or damage
- Electric system additions or removals
- Fires
- Electrical equipment failures
- Flashovers/contamination (e.g., dust, salt) on insulators
- Transformer overloads
- Overloading on a customer's household circuit.

Before a Power Outage or Electrical Safety emergency situations

- Remember, electricity always tries to reach the ground. It travels over "conductors" or anything that allows electricity to flow. It is important that electricity is handled safely around people, water, trees, damp ground, and metal, which are all conductors of electricity.
- People are conductors of electricity. Your body can act like a lightning rod and carry the electrical current to the ground, causing electric shock.
- Rubber is an insulator and is the opposite of a conductor. It is used in personal protective equipment worn by professional electricians when handling electricity.
- Most sounds and noises (such as humming or static) are normal, but if you hear unusual sounds (such as an explosion) from the power lines or transformers, please call your electric utility company's Trouble Line.

During a Power Outage or Electrical Safety emergency situations

Protect sensitive equipment during anticipated power interruptions and power fluctuations due to storms, disasters, and rolling blackouts:

- During a storm or hurricane situation, especially when power outages have already occurred:
  - Turn off and unplug all unnecessary appliances or equipment (e.g., computers, TVs, air conditioners, etc.).
  - Most electronic equipment is partially on even when turned off, so electronics should be unplugged to avoid possible damage.
  - When the power comes back on and is steady (no fluctuations or momentary outages), gradually plug in appliances one at a time.
  - Telephone and cell phone service will generally not be affected by a power outage. However, cordless telephones rely on electric power to operate their transmitters and to recharge their batteries.
    - Keep calls to a minimum and less than a minute if possible
    - Send text messages, which use less bandwidth. This is to avoid telephone gridlock and to keep lines open for emergency calls.

- Overloading circuits reduces the efficiency of the entire telephone system.
- During major disasters (hurricanes, tsunamis, etc.) you will be requested by the telephone company and the Emergency Management agencies to limit your calls to emergencies only.

- If the phones work, page OR call management and advise of failure.
  - Building management should also be contacted
- Inform others if they may be at a safety risk.
- If anyone is stuck in the elevators:
  - Assure them in a calm manner that help is on the way.
    - Ask for their names, floor they were headed and inquire whether they are meeting anyone.
    - KEEP IN CONTACT.
  - Call building security and summon Atlas management.

Keep all in-house phone lines as free as possible.

- Acquire a flashlight at the Front Desk (if you do not already have one).
- Wait for instructions and stand by to assist in removal of employees and others in elevators.
  - If poorly lit, refrain from walking in dark hallways or stairways.
  - Ensure that any trip hazards are removed.

Types of Utility / Electrical Safety to Consider

Indoor electrical safety tips

- Do not touch a faulty appliance, plug, or bare wire. They can make you part of the electric circuit and put you at risk of electric shock.
- Report frayed or exposed wires and equipment that sparks, emits smoke, or shocks you.
- Replace inflexible electric cords with cords certified by UL (Underwriters' Laboratories, a leader in product safety testing), which meet specific safety requirements and guidelines.
- Do not use any appliance or touch an electric cord while you are touching metal pipes and faucets or anything wet.
- Outlets near water sources (bathrooms, kitchen sinks, outdoors) should be GFCI (ground fault circuit interrupter) protected.
- Unplug appliances before cleaning them or removing anything from them (such as burnt toast from your toaster).
- Do not yank on the electric cord when unplugging appliances, which can damage the wires. Take hold of the plug firmly and pull straight.
- Keep work areas clean.
- Never overload a circuit or "daisy chain" an extension cord.
  - Overloading a circuit could cause the wire and breaker to heat up and could potentially start an electrical fire.

Elevator safety

If you are trapped in an elevator during a power outage, follow these safety instructions:

- Relax and stay calm until help arrives.
- Use any available emergency communication system in the elevator, such as:
  - Alarm button
  - Two-way speaker system
  - Built-in emergency telephone

- Your mobile phone to communicate where you are and who is with you.

- DO NOT try to force open the elevator doors.
- Never try to exit a stalled elevator car — it is extremely dangerous.
  - Always wait for trained and qualified emergency personnel.
- Never attempt to leave the elevator if it is stopped between floors unless specifically instructed by trained and qualified personnel.

Electrical fires

- First make sure everyone has evacuated the areas before attempting to fight a fire.
- NEVER USE WATER ON AN ELECTRICAL FIRE!
  - Water can carry the electricity back to you and you could receive a deadly shock.
- Familiarize yourself with a multi-purpose, type "ABC" (type "C" for electrical fires) fire extinguisher and its location on your floor.
  - Do not fight the fire if the fire could block your escape route.
- Make sure someone calls the fire department for help even if the fire seems small and you think you can put it out.
- If the fire is confined to an appliance, electrical cord, outlet, or switch, ask the building or Atlas management to shut off the circuit breakers at your electric service panel.
  - Do this ONLY if it is safe without endangering yourself and others.
- Use your multi-purpose fire extinguisher to put out the fire. Even if you manage to put out the fire, have the firefighters check to be sure the fire is not smoldering out of plain sight.

Electric shock

There are two classifications of electric shock: low voltage (indoor) and high voltage (outdoor). If you are with a person who receives an electric shock, call 911 immediately for emergency medical help and follow these instructions:

Low voltage (indoor)

- Determine if the person is still in contact with the circuit or power source.
  - Assume the circuit is still energized.
- De-energize the circuit or power source by turning off the power at the fuse box or circuit breaker panel.
- If you cannot turn the power off, use a dry piece of wood, dry plastic or wooden broom, or dry leather clothing to separate the victim from the power source.
  - Never attempt to remove a person from an energized circuit with your bare hands. Electrical current can travel through them to you and you risk becoming a victim yourself.
- Once the victim is free, check his or her pulse and breathing.
  - If the victim is not breathing and has no heartbeat, start CPR immediately.
  - DO NOT ATTEMPT CPR IF YOU DO NOT KNOW THE CORRECT PROCEDURES.
  - If the victim is conscious, keep them seated and calm.
  - Ensure that the victim is taken to the hospital for testing and observation.

Outdoor – high voltage

- Call 911 immediately.
- If a person is in contact with a power line, assume the line is energized and dangerous.
- Do not attempt to free the person from the power line.

- Electrical current can travel through them to you and you risk becoming a victim yourself.

❖ Stay clear and warn others to keep away (30 feet or more).

Downed power lines

Most overhead power lines are not insulated. When lines from a utility pole fall to the ground or on a guardrail, assume they are energized and dangerous. Energized lines can be deceiving by appearing lifeless and harmless.

❖ Do not touch these lines! Stay a safe distance away — at least 30 feet or more!
❖ A live wire touching the ground causes electricity to fan out in a pool, decreasing in strength as it travels away from the center.
  - A downed line touching a fence or guardrail can energize it for several thousand yards.
    - This poses a danger to anyone coming into contact with these structures.
❖ Running from a fallen line may cause your legs to bridge current from higher to lower voltage and you may receive a shock.
  - Instead, keep your legs together and shuffle away with both feet on the ground. Shuffle a safe distance (30 feet or more) away from other utility poles.
❖ If someone is in contact with a fallen line or guardrail, do not try to rescue them because electrical current can travel through them to you.
  - Warn others to stay away and call 911.
❖ A car touching a downed line will become energized. If a power line falls on your car while you are inside, follow these instructions:
  - Remain where you are, if possible, and wait for help.
  - If you must get out of the car because of a fire or some other hazard, jump free of the car, hopping with both feet together so that your body clears the vehicle before touching the ground.
  - Never step down or simultaneously touch the ground and equipment that is in contact with the power line, as this will increase the risk of electric shock.
  - Once you clear the car, shuffle at least 30 feet away, with both feet on the ground as described above.
    - Call for help immediately by dialing 911

When Power is Restored

❖ Wait for instructions to power on equipment.
  - Ensure equipment is functioning normally again.
❖ Check area to be sure proper safe housekeeping is in order and no problems exist
  - Check all stairwells for guests and employees.
  - Advise them the emergency is over.
❖ Minimizing the use of electric power after an outage
  - Turn on appliances and equipment that are necessary.
    - Typically, refrigerator/ freezer is the one appliance needed most.

Avoid turning on all equipment all at once!