



POWER TOOLKIT GUIDEBOOK

Georgia Hurricane Response Hub – March 2020

Table of Contents

- **Executive Summary**
- **Safety Recommendations**
- **Power Toolkit List**
- **Storage and Maintenance**
- **Resource Request and Deployment**
- **Setting Up to Operate**
- **Appendix**
 - a. **Power Toolkit Items Spreadsheet**
 - b. **Power Toolkit Exercise**
 - c. **Power Toolkit Video**

1. Executive Summary



Any number of events including hurricanes, tornadoes, wind storms and power grid failures may cause electrical power to be interrupted at a health care facility or create the need to open temporary shelters. To respond to these emergency situations – the Healthcare Coalition has created a mobile Power Toolkit that can be moved to locations as it is needed.

The Power Toolkit is an emergency asset that is distributed to healthcare facilities and/or shelters during power outages. It enables health care workers to care for community residents who require electricity-dependent medical equipment for their care. The Power Toolkit includes a 17.5 KW or 17500 W generator and the related equipment needed to provide this emergency power. You will find the details of the equipment in this guidebook along with a detailed list of items in the appendix.

These emergency assets are property of their respective Regional Healthcare Coalitions and maintained at the regional level. It is made available to member facilities through an established regional request process recommended by your local healthcare coalition. We suggest you first contact your corporate leadership. The second call should be to your local Emergency Management Agency (EMA), and your third call should be to your local Healthcare Coalition Leadership. During this time, please inform your EMA and your Healthcare Coalition Leadership that you would like to acquire the Power Toolkit, which is a local healthcare coalition asset. It is imperative that you officially make a request for this asset through your EMA during federally declared emergencies, to assure qualification of FEMA reimbursement.

Once your local EMA and Coalition have reviewed the resource request and determined that the asset is available, there will be coordination between the EMA, Coalition, and the asset requestor to determine how the asset will get to the needed location. After power has been restored and the requestor is complete with the use of Power Toolkit, the requestor is expected to contact their Coalition Leadership and EMA to coordinate the return of the asset to the appropriate party. The requesting organization will assume the responsibility of replacing the air filter and returning the item clean, free of damage, and in the same condition it was received from the coalition. Please be advised that the Power Toolkit may not be always be available as requested, and all assets are disseminated at the discretion of the Healthcare Coalition, and on a first come first serve basis.

*****Please be advised: Healthcare facilities who utilize any form of emergency power resources and/or assets should consider the State and Federal Emergency Preparedness and Life Safety Code Regulations that govern their facilities prior to usage.***

2. Safety Recommendations



- ☐ This generator will not be connected directly to the facility.
- ☐ Always use it outdoors and away from any structure. Never use it indoors. Generators can give off carbon monoxide. If you do happen to start feeling sick, dizzy or weak while using a generator, get to fresh air immediately and seek medical attention.
- ☐ Let the generator cool down before refueling. A hot generator and flammable fuel aren't a safe mix.
- ☐ Never plug the generator into a wall outlet. This is very dangerous and requires an automatic transfer switch that disconnects the building's wiring from the utility system. This is an area for a licensed electrician.

3. Power Toolkit list



See the Power Toolkit Items list

- ☐ (1) Generac GP 17500-Running-Watt Gasoline Portable Generator
- ☐ (1) Portable Heater / AC unit optional
- ☐ (2) 16 Gauge Light Duty Cord
- ☐ (1) Hubbell Wiring Device-Kellems - 50Amp Straight Distribution Box #3595
- ☐ (1) 50 Amp Distribution Cord #3596 (extension cord for generator to switch box)
- ☐ (1) Kobalt 364-Piece Standard (SAE) and Metric Polished Chrome Mechanic's Tool Set
- ☐ (1) Utilitech 20-Amp 3-Wire Grounding Single to Triple Yellow Adapter
- ☐ (1) Noco Genius BoostPlus Compact Lithium-Ion Jump Starter — 1000 Amps, Model# GB40
- ☐ (1) SmartStraps 4-Pack 1-1/4-in x 10-ft Ratchet Tie Down (1000-lbs Work Capacity)
- ☐ (2) COMMANDER 27-Gallon (108-Quart) Black Tote with Standard Snap Lid
- ☐ (1) 5-Gallon Plastic Gasoline Can
- ☐ (1) Safety Works Plastic Hearing Protection Earmuffs
- ☐ (1) Carry-On Trailer 6-ft x 10-ft Enclosed Trailer with ramp on back
- ☐ (1) Quik Shade 10.71-ft L Square White Pop-Up Canopy (to cover generator)
- ☐ (1) STA-BIL 32-oz 2-Cycle Engines Fuel Additive
- ☐ (1) Oil Filter 070185E
- ☐ Air Filter
- ☐ (2) Motor Oil SAE 30 (Generac)1.7 OT
- ☐ (2) Sudden Solution Mocha Metal Solid Standard Folding Chair

4. Storage and Maintenance



- ☐ Follow manufacturer recommendations, here are some general storage and maintenance recommendations:

Storage

- ☐ If the Power Toolkit is stored in a trailer, ensure vent on the trailer is open during hot weather to allow proper venting of gasoline.
- ☐ If the Power Toolkit is stored in a warehouse space, no extra steps are necessary to follow.
- ☐ If the generator is full of gas, make sure to add fuel stabilizer into the tank to prevent evaporation.
- ☐ If the fuel is in the plastic containers, also add in the fuel stabilizer.
- ☐ If possible and a forklift is available, store the generator on a pallet so a forklift can easily be used to load the unit onto a trailer.
- ☐ All components of the Power Toolkit, such as the tool set, extension cords, jump starter, switch box, etc. should be stored in a plastic tote.
- ☐ If an air and heating unit is purchased, keep the vent on or next to the unit to make sure they are deployed together, the unit will not work without this vent.
- ☐ If the generator and optional cooling/heating unit are stored in the trailer, ensure the straps are secured to keep the units from moving.

Maintenance

- ☐ Follow all manufacturer's guidelines on equipment including the trailer to allow for proper maintenance.
- ☐ At a minimum, run the generators monthly per the manufacturer's guidelines.
- ☐ At a minimum, change the oil of the generators yearly or per the manufacturer's guidelines.

5. Resource Request and Deployment



- ☐ Facility/shelter notifies local HCF/HCC of need for Power Toolkit trailer.
- ☐ If HCC has a Power Toolkit trailer within the coalition, HCC designates Power Toolkit trailer for deployment.
 - If HCC does not have a Power Toolkit trailer within the coalition, HCC coordinates with a healthcare coalition which has a Power Toolkit trailer, and requests that Power Toolkit trailer for deployment.
 - If a Power Toolkit trailer is available for deployment, owning HCC designates the Power Toolkit trailer for deployment.
 - HCC notifies local EMA of request and deployment.
 - HCC follow asset deployment procedures in the Coalition Response Plan

- ☐ If GEMA/HS State Operations Center (SOC) is open, resource request is passed to the local EMA for vehicle transportation asset.
 - EMA makes transportation request to the GEMA/HS SOC via WebEOC.
 - GEMA/HS SOC makes transport vehicle assignment, and communicates assignment to receiving HCC/receiving facility via WebEOC.
 - Transporter communicates with Power Toolkit trailer owning facility for trailer pick-up.
 - Transporter communicates with Power Toolkit trailer receiving facility for trailer delivery.
 - Trailer is delivered to receiving facility.
 - Transporter coordinates with receiving facility/shelter for placement of trailer.
 - Receiving facility/shelter conducts trailer inspection with transporter.
 - Facility/shelter representative signs for Power Toolkit trailer.
- ☐ If GEMA/HS SOC is not open, resource request is passed from the receiving HCC, to the HCC where the Power Toolkit trailer is located.
 - Owning HCC designates Power Toolkit trailer for deployment.
 - Sending and receiving HCC's coordinate pick-up and delivery of Power Toolkit trailer to requesting facility/shelter.
 - Sending HCC/facility makes certain that the Power Toolkit trailer is accessible at the storage location
 - Sending HCC/facility has a representative on site to conduct joint trailer deployment inspection with receiving HCC.
 - Trailer deployment inspection is completed, and Power Toolkit trailer is signed for by receiving HCC.
 - Trailer is deployed to receiving facility.
 - Receiving facility representative coordinates with transporter for placement of trailer at the receiving facility/shelter.
 - Receiving facility/shelter representative conducts trailer inspection with transporter.
 - Receiving facility/shelter signs for Power Toolkit trailer.

6. Setting up to Operate



Generator set up

- ☐ Confirm that all the Power Toolkit equipment is in the trailer. Read the manufacturer's instructions, if you have never used the generator before, or if you have not used it in a long time.
- ☐ Set the generator in a proper place; keep the generator outdoors, in a dry location, at least 3 feet away from anything else, and at least 20 feet away from any doors and windows.

-
- ☐ Check the fuel level, the generator should have some sort of fuel gauge. Make sure the generator's fuel tank is adequately filled before starting the machine. Add more of the appropriate fuel if necessary. Turn on the fuel valve when you are ready to start the generator.
 - ☐ Check the generator's oil level. Check the oil level of your generator before starting it up. Add more oil (using only the type specified by the manufacturer), if necessary.
 - ☐ Inspect the generator air filter, if it's dirty or clogged, clean or replace it before starting the generator.
 - ☐ Flip the circuit breaker off (Automatic IDLE Control). Make sure it is safely in the "OFF" position before starting the generator.
 - ☐ Start the generator.
 - ☐ Plug the main power distribution cable

Distribution Panel set up

- ☐ Set the main power distribution panel 50 feet from the generator
- ☐ Plug the Power Distribution cable to the panel and connect the extension.

Air Conditioner / Heater (Ocean Aire Model 20ACH1811)

- ☐ Place the AC unit under a ceiling tile and lock the wheels (if the place has it, if not find a window to put the vent) and close access to an outlet of 20 AMP if you are connecting the unit to the facility power. If you are using a generator you can connect to the Main Distribution panel.
- ☐ Check the filters are on and clean at the front and the back of the unit.
- ☐ If the filter is dirty, just wash it and put it back in place.
- ☐ Connect the exhaust vent to the ceiling or window and connect the flexible duct vent to the AC unit and secure it with straps or zip ties.
- ☐ Plug the AC/Heater unit to a 20 APM extension.
- ☐ Place and secure the drain hose on a water container.
- ☐ Press the *power button* once to switch the unit to the on mode, and use the panel to set up the temperature.






7. Appendix



-
- A. Power Toolkit Items Spreadsheet
 - B. Exercise Options
 - C. Power Toolkit Video





A. Power Tool Kit Items - Estimates as of March 2020

Item Name		Manufacturer	Size	Quantity	Unit Cost	Total Cost	Vendor
Generac GP 17500 E-Running-Watt Gasoline Portable Generator (holds 14 gallons of fuel, runs 6-7 hours)		Generac	17,500 W	1	\$2,999.00	\$2999.00	Lowe's
TC-18HP Portable Heater/ AC Unit – includes sump pump 16,800 BTU HEAT PUMP)			16,8000 BTU	1	\$7,252.00	\$7,252.00	United Refrigeration
NK – OH 2 NOZZLE KIT				1	\$367.69	\$367.69	United Refrigeration
CK-OH12 CEILING KIT				1	\$423.08	\$423.08	United Refrigeration
C-OH-10 CONDENSATE PUMP				1	\$220.00	\$220.00	United Refrigeration
Freight				1	\$165.00	\$165.00	United Refrigeration
Taxes				1	\$674.23	\$674.23	United Refrigeration

16 Gauge Light Duty Extension Cord			100'	2	\$16.97	\$33.94	Lowe's
Hubbell Wiring Device-Kellems - 50Amp Straight Distribution Box #3595 (Model TPDS)		Hubbell	50 Amp	1	\$725.00	\$725.00	Lowe's
50 Amp Distribution Cord #3596 (extension cord for generator to switch box)			50 Amp	1	\$295.00	\$295.00	Lowe's
Kobalt 364-Piece Standard (SAE) and Metric Polished Chrome Mechanic's Tool Set		Kobalt	Set	1	\$99.00	\$99.00	Lowe's
Utilitech 20-Amp 3-Wire Grounding Single to Triple Yellow Adapter (Twist lock Y type – breaks down 220 – for generator lighting)		Utilitech	12 GA, 20A	1	\$22.48	\$22.48	Lowe's
Noco Genius BoostPlus Compact Lithium-Ion Jump Starter — 1000 Amps, Model# GB40		Noco Genius	GB 40	1	\$99.95	\$99.95	Lowe's
SmartStraps 4-Pack 1-1/4-in x 10-ft Ratchet Tie Down (1000-lbs Work Capacity)		SmartStraps	1"x10" set of 4	1	\$25.98	\$25.98	Lowe's
COMMANDER 27-Gallon (108-Quart) Black Tote with Standard Snap Lid		Commander	27 Gal	2	\$10.98	\$21.96	Lowe's

5-Gallon Plastic Gasoline Can			5 gal	1	\$18.98	\$18.98	Lowe's
Safety Works Plastic Hearing Protection Earmuffs		Safety Works	Ea	1	\$19.98	\$19.98	Lowe's
Carry-On Trailer 6-ft x 10-ft Enclosed Trailer with ramp on back		Carry-On	6x10	1	\$2999.00	\$2999.00	Lowe's
Quik Shade 10.71-ft L Square White Pop-Up Canopy (to cover generator)		Quik Shade	10'x10'	1	\$199.00	\$199.00	Lowe's
STA-BIL 32-oz 2-Cycle or 4-Cycle Engines Fuel Additive			32 oz	1	\$12.98	\$12.98	Lowe's
Oil Filter 070185E		Generac			\$9.49	\$9.49	Electric Generators Direct
Air Filter		Generac		1	\$24.99	\$24.99	Electric Generators Direct
Motor Oil SAE 30 (Generac) 1.7 OT		SAE 30	OT	2	\$3.99	\$7.98	Auto Zone

Ladder				1	\$54.98	\$54.98	Lowe's
Sudden Solution Mocha Metal Solid Standard Folding Chair		Sudden Solution		2	\$19.98	\$39.96	Lowe's
UTILITECH 10/3 100ft extension cord				1	\$149.00	\$149.00	Lowe's
UTILITECH 10/3 50ft extension cord				1	\$105.00	\$105.00	Lowe's
TOTAL						\$17,065.65	



This document provides you with options for including the HRH Power Toolkit in your exercise(s). We have provided 3 scenarios to choose from, or you may use your own. We have also provided 3 different levels of exercises to fit your needs. You may wish to do a simple drill where you set up and take down the kit. You may wish to do a Functional Exercise where you request, set up, use, take down, and return the equipment. Or you may wish to include some questions about the Kit in a TTX Situation Manual. These are merely options to facilitate your exercise process that includes the HRH Power Toolkit.

3 Scenarios

Drill - Set up/Take Down

Functional Exercise

TTX questions

Scenarios

1. Hurricane Jane is approaching the Georgia coast. GEMA/HS has ordered evacuation shelters to be opened in your district/region. As shelters open, many people are arriving with medical equipment that needs charging. The shelter does not have any equipment onsite that can support multiple devices to be charged throughout the day and night. The shelter is asking for a generator to specifically charge medical devices.
2. Ice storm Henry has hit your district/region. A healthcare facility has contacted their local EMA asking for assistance with power options for several residents who have critical medical devices that need power. They report their generator covers only a small portion of their facility and is unable to handle the load of additional medical devices.
3. A personal care home has called their local EMA and asked for a generator. They are requesting it because a contractor will be doing an upgrade to their electrical system and the PCH is concerned about losing power. It has 3 residents who are on oxygen and they want to make sure they can power their concentrators should the power go out.

Drill - Set Up/Take Down

Objectives:

1. Provide education and training on Power Toolkit items, their function, and safe handling and operation
2. Provide practice in setting up and taking down Power Toolkit
3. Determine length of time to set up kit
4. Determine length of time to take down kit
5. Determine gaps in knowledge or items prior to a real event

Set Up Drill Steps:

1. Record start time and date
2. Check inventory of Power Toolkit
3. Follow instructions in Power Toolkit guide. Use instructional video if necessary
4. Record questions, problems, gaps
5. Once Power Toolkit is set up, record end time and date
6. Hotwash on questions, problems, gaps

Take Down Drill Steps:

1. Record start time and date
2. Follow instructions in Power Toolkit guide to separate equipment safely
3. Record questions, problems, gaps
4. When all items are inside trailer, conduct inventory
5. Record end time and date
6. Hotwash on questions, problems, gaps
7. Complete AAR and Improvement Plan

Functional Exercise

Objectives:

1. Provide education and training on requesting, deploying, using, and demobilizing the Power Toolkit items with safe handling and operation
2. Provide practice in requesting, deploying, using and demobilizing the Power Toolkit for community partners
3. Determine length of time from initial request to use of asset
4. Determine length of time from demobilization to return of asset
5. Determine gaps in knowledge or kit items prior to a real event

Functional Exercise Steps:

1. StartEX - Record start date and time
2. Start request process according to policy and procedures
3. Complete notification process with community partners
4. Determine who has available Power Toolkit and its location
5. Determine transportation and logistics – who is responsible, mode of transport, date/time of ETD/ETA
6. Record date/time of deployment and contact/location of where asset will be used
7. Record date/time of asset arrival at location where asset will be used
8. Record start date/time for set up of asset
9. Set up asset
10. Record date/time for set up completion
11. Record date/time of asset use
12. Record date/time when asset use has ended
13. Record date/time of when asset take down starts
14. Inventory asset when loaded into trailer
15. Record date/time that asset is fully packed up
16. Contact partners for return of asset, determine transportation and logistics
17. Record date/time of asset departure to owner
18. Record date/time of asset arrival with owner
19. Document maintenance/repair needs
20. EndEX – Record end date and time
21. Hotwash
22. Complete AAR and Improvement Plan

TTX Questions

1. What is the process for requesting the HRH Power Toolkit?
2. What is the process for demobilizing the HRH Power Toolkit?
3. Which staff would need to be trained on using the HRH Power Toolkit?

This video is a collaborative effort of the Georgia Hurricane Response Hub – Resilience Workgroup. Funding for this video has been provided to the National Network of Public Health Institutes (NNPHI) through a Cooperative Agreement with the Centers for Disease Control and Prevention (CDC – NU1ROT000004-01-00). NNPHI is collaborating with Rollins School of Public Health at Emory University and the CDC’s National Center for Environmental Health on this project.

For additional information and a detailed Power Toolkit Guidebook, please visit www.GHA911.org.