



# Emergency Generators: A “Weak Link” in Community Disaster Recovery



*“It’s like being in a Third World country. We’re trying to work without power. Everyone knows we’re all in this together. We’re just trying to stay alive.”*  
 Mitch Handrich  
 Registered Nurse Manager at Charity Hospital



**PROBLEM:** When needed, a significant number of emergency generators don’t start or operate reliably!

- Documented in “after action,” “lessons learned,” and disaster evaluation reports
- Both government & privately owned units
- Improper facility design and/or installation
- Lack of training or experience of personnel
- Inadequate maintenance & regular testing\*
- Inadequate refueling provisions\*  
 \* Identified most often

**SOLUTION:** A public-private effort to increase reliability and performance of emergency generators by City’s emergency manager

- Identify emergency generator owners and operators
- Implement “best practices” for operation, maintenance, and testing
- Support pre-negotiated refueling agreements
- Include fuel distributors in effort

**PRODUCTS:**

- Documentation – Installation/equipment characteristics, capabilities, & limitations
- Integration – Information into Emergency Operations Center activities
- Integration – Refueling procedures into City’s Emergency Operating Plan
- Foundation – Subsequent capability demonstration
- Foundation – Subsequent analysis of peak load shaving analysis



Data Center

Portable Unit

Emergency- Backup Generators



Charlotte County, Florida: County EOC damaged and emergency generators flooded in Hurricane Charley

**SURVEY FORM**

- Equipment location
- Equipment responsibility
- Equipment characteristics
- O&M and testing history
- Fuel storage & refueling info.
- Critical Loads Served

**TARGET SECTORS**

- All local government offices/ departments/systems
- All organizations supporting vulnerable populations
- Larger commercial & industrial firms

**DELIVERABLES**

- Summary reports for city and participants
- Excel/Access database
- Map layer for City GIS system
- Articles & technical papers

**PRELIMINARY RESULTS**

Installed Capacity: ~8 MW  
 Fuels: Diesel, gasoline, LP, propane, & natural gas  
 Size Range: < 5 kW to 2 MW  
 Testing/Operation: From 2/Wk to “occasionally”  
 Fuel Storage: 4 hrs to 7+ days