Verizon’s cell on wheels at MetLife Stadium ran off grid on a Tri-Brid™.

New York Giants fans at MetLife Stadium got enhanced wireless service for a Monday Night Football game from a Verizon Cell on Wheels (COW) in the stadium parking lot. Its power came from one 123eSolar Tri-Brid™ — solar, battery storage and standby diesel in a single mobile unit.

Customer	**Verizon**
Site	**MetLife Stadium parking lot**
Event	**New York Giants Monday Night Football**
Load	**Verizon Cell on Wheels (COW), supporting 5G**
Power	**123eSolar Tri-Brid™ — solar, battery storage, standby diesel**
Utility connection	**None — full off-grid, 24/7**

A high-profile event, a temporary cell site, and no utility power.

Verizon positioned a Cell on Wheels (COW) in the MetLife Stadium parking lot to deliver enhanced wireless service to New York Giants fans for a Monday Night Football game.

A 123eSolar Tri-Brid™ served as the backbone of the COW’s power. Its solar array, battery storage and standby diesel generator work as one off-grid system, giving the cell site a constant, reliable supply and 24/7 operating capability through the event.

Solar with storage, and diesel on standby, delivered a seamless experience for fans while significantly reducing greenhouse gas emissions — in line with the environmentally conscious practices of both companies.

123-STG-71S62

Solar Tri-Brid™ Generator

123esolar.com/123-STG-71S62

9 kW Tri-Brid™ with sixteen panels and 12 days between refuels at 6 kW.

Sixteen panels raised overhead, jacks down and running on a desert site.

OVERVIEW

A new cell site is often ready to go on air before utility power reaches it, and until it does, a temporary diesel generator runs it around the clock. 123-STG-71S62 is the long-endurance Tri-Brid™ for that job: a sixteen-panel solar array, 22.8 kWh of lithium storage and a 9 kW diesel generator on one trailer, built for remote sites where every refuelling trip is a truck, a driver and a day.

The 7.36 kW array produces 31.6 kWh on an average day — enough that below 1.32 kW the site runs on sun and battery alone with the engine off. Continuous output is rated at 9 kW, set by the generator; the battery holds up to 12 kW for short peaks, with surges to 24 kW for motor starts.

Above the solar break-even the generator runs only to make up what the sun and the bank cannot. At a steady 6 kW the engine runs 12.81 hours a day where the 40 kW generator telecom sites use for temporary power would run all 24, and a full 120-gallon tank lasts 12.03 days between refuels against 7.92 for the 40 kW alone — 9.48 gallons a day instead of 16.8. At 4 kW the tank lasts 20.63 days. Both engines are read by the same fuel rule: their own published figures, held at the lowest one below it. That is the figure that decides how often a remote site has to be visited, and it is what makes this the cost-effective way to keep the site on air. The engine is certified to EPA Tier 4 Final.

Output is 120/240 V or 120/208 V at 50/60 Hz with a 5 ms transfer, and the machine is rated for operation from -4 to 140 °F (-20 to 60 °C). Size a continuous load at or under the 9 kW rating; the table below shows exactly what happens above it.

FEATURES AND BENEFITS

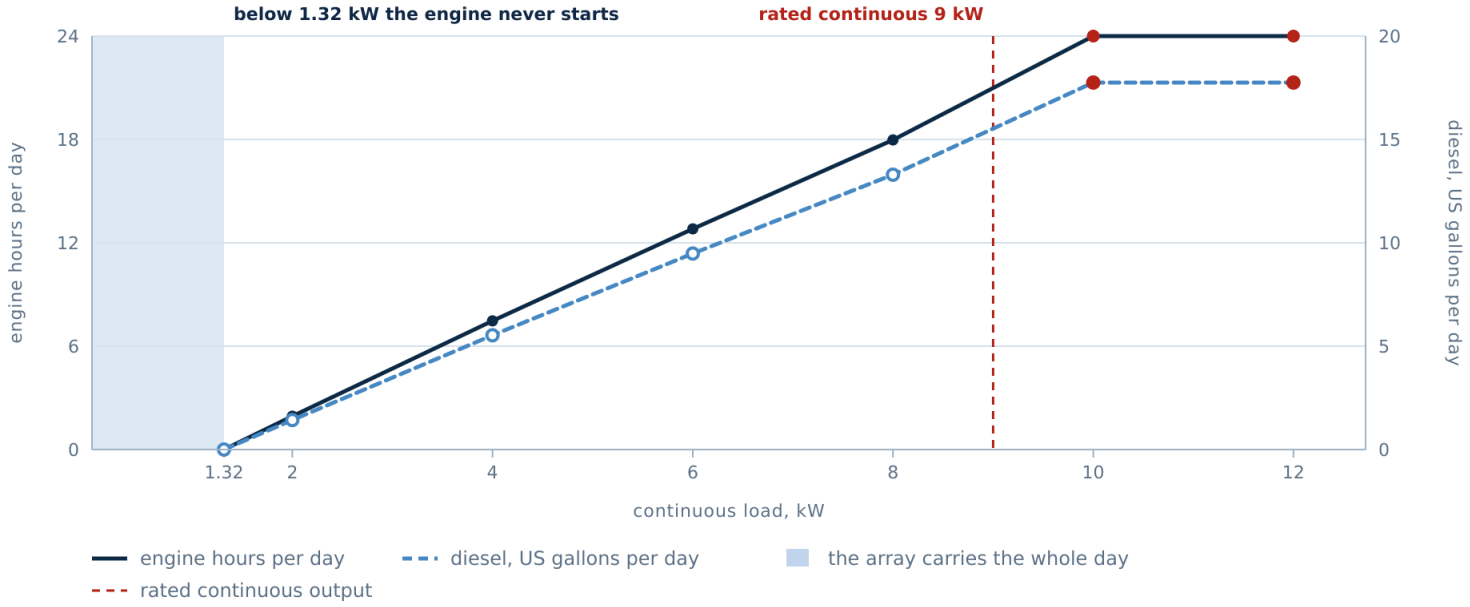
- **Sixteen 460 W panels, 7.36 kW** — Light loads burn no fuel at all.
- **9 kWe diesel with a 120-gallon tank** — 12 days between refuels at 6 kW, the longest interval in the line.
- **22.8 kWh lithium iron phosphate bank** — Motor starts and short peaks never lean on the engine.
- **EPA Tier 4 Final engine** — Ready for sites that specify Tier 4 Final equipment.

KEY SPECIFICATIONS

POWER	
Rated continuous output	**9 kW**
Peak output	**12 kW**
Surge	**24 kW**
Surge, 30 minutes	**13 kW**
Output voltage and phase	**120/240 V or 120/208 V**
Output frequency	**50 / 60 Hz**
Transfer time	**5 ms**
ENERGY STORAGE	
Battery technology	**Lithium iron phosphate (LFP)**
Arrays installed	**6**
Total stored energy	**22.8 kWh**
Usable stored energy at 50%	**11.4 kWh**
Silent runtime at 6 kW	**1.8 hours**
SOLAR	
Array rated power	**7.36 kW**
Solar panels	**16 x 460 W**
Daily solar production	**31.6 kWh/day**
Load covered by solar alone	**1.32 kW**
DIESEL BACKUP	
Generator output	**9.0 kWe**
Fuel capacity	**120 US gallons**
Days between refuels at 6 kW	**12 days**
Engine starts and stops at	**30% and 80% state of charge**
Engine runs at 6 kW	**3.1 a day, 4.1 h each**
Emissions	**EPA Tier 4 Final**
MECHANICAL AND SITE	
Ambient operating range	**-4 to 140 °F (-20 to 60 °C)**

PERFORMANCE ACROSS THE LOAD RANGE

What the engine does at each load. Below 1.32 kW the array carries the whole day and the engine never starts. Above it, the engine runs only to put back what the sun did not: at 8 kW, 17.97 hours a day on 13.3 US gallons.



LOAD, CONTINUOUS	BATTERY ONLY	DAILY DRAW	AFTER SOLAR	GENERATOR	ENGINE RUNS	DIESEL	DAYS ON A TANK
1.32 kW · solar break-even	**8.34 h**	**31.6 kWh**	**covered**	**0 h/day**	**none**	**0 gal/day**	**—**
2 kW	5.5 h	48 kWh	16.4 kWh	1.93 h/day	1.1 × 1.8 h	1.4 gal/day	79.7 days
4 kW	2.75 h	96 kWh	64.4 kWh	7.47 h/day	3 × 2.5 h	5.5 gal/day	20.6 days
6 kW	1.83 h	144 kWh	112.4 kWh	12.81 h/day	3.1 × 4.1 h	9.5 gal/day	12 days
8 kW	1.38 h	192 kWh	160.4 kWh	17.97 h/day	1.5 × 12.4 h	13.3 gal/day	8.6 days
10 kW	1.1 h	240 kWh	208.4 kWh	24 h/day	—	17.8 gal/day	6.4 days
12 kW	0.92 h	288 kWh	256.4 kWh	24 h/day	—	17.8 gal/day	6.4 days

Every load runs continuously and the day is 24 hours: daily draw is the load × 24 h. Solar is a daily energy offset, not an instantaneous power match. The engine starts at 30% state of charge (a 70% depth of discharge) and stops at 80%, putting 11.4 kWh back into the bank on each run while it carries the load.

AGAINST THE 40 KW GENERATOR RUNNING ALONE

LOAD, CONTINUOUS	40 KW ALONE	DAYS ON A TANK	THIS SYSTEM, ENGINE	THIS SYSTEM, DIESEL	DAYS ON A TANK	ENGINE HOURS SAVED	DIESEL SAVED
2 kW	16.8 gal/day	7.9 days	1.9 h/day	1.4 gal/day	79.7 days	**92%**	**91%**
4 kW	16.8 gal/day	7.9 days	7.5 h/day	5.5 gal/day	20.6 days	**69%**	**67%**
6 kW	16.8 gal/day	7.9 days	12.8 h/day	9.5 gal/day	12 days	**47%**	**44%**
8 kW	16.8 gal/day	7.9 days	18 h/day	13.3 gal/day	8.6 days	**25%**	**21%**

The 40 kW generator telecom sites use for temporary power carries the load alone, 24 h a day with no sun and no battery, on its own 140-gallon tank (133 usable). Both engines are read by the same rule: their own published fuel figures, a straight line between them, and below the lowest published point that point's burn.