STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:
APPLICATION OF NEW CINGULAR WIRELESS PCS, LLC (AT&T) FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE CONSTRUCTION, MAINTENANCE AND OPERATION OF A TELECOMMUNICATIONS TOWER FACILITY LOCATED AT THE FIRSTLIGHT HYDRO GENERATING COMPANY PROPERTY AT KENT ROAD IN THE TOWN OF NEW MILFORD, CONNECTICUT

DOCKET NO. 444

December 11, 2014

NEW CINGULAR WIRELESS, PCS LLC (AT&T) RESPONSES TO
CONNECTICUT SITING COUNCIL D&M PLAN QUESTION

Q1. Order No/ 2(b) of the Connecticut Siting Council's Decision and Order in Docket No.444 notes that the Development and Management Plan (D&M Plan) shall include, "...specifications for the emergency backup generator..." Provide the specification sheet(s) for the 50-kW propane-fueled backup generator noted on Sheet C-2 of the D&M Plan.

A1. Attached are the specifications for AT&T's 50-kW propane fueled backup emergency generator.

CERTIFICATE OF SERVICE

I hereby certify that on this day, an original and fifteen copies of the foregoing was sent electronically and by overnight mail to the Connecticut Siting Council with a copy to:

Mayor Pat Murphy
New Milford Town Hall
10 Main Street
New Milford, CT 06776
860-355-6010
Mayor@newmilford.org

First Selectman Clay Cope
Sherman Board of Selectman
Mallory Town Hall
9 Rt 39 North
PO Box 39
Sherman, CT 06784
860-355-1139
CCope@townofshermanct.org

Dated: December 11, 2014

Lucia Chiocchio

cc: Michele Briggs, AT&T
John Lawrence, Centerline Communications
Alex Murshteyn, Centerline Communications

GENERAC® | INDUSTRIAL POWER

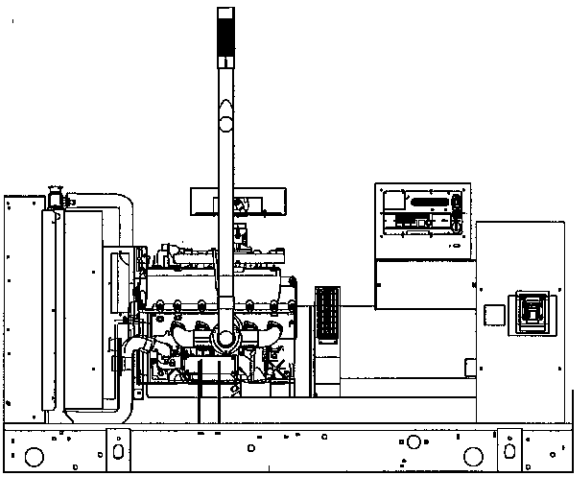
SG050

Industrial Gaseous Generator Set

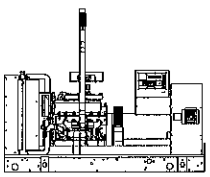
EPA Certified Stationary Emergency

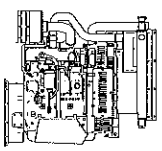
Standby Power Rating

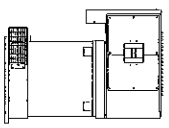
63kVA 50kW 60 Hz

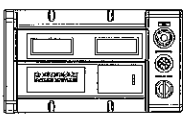


Generator image used for illustration purposes only









features	benefits
Generator Set	
• PROTOTYPE & TORSIONALLY TESTED	› PROVIDES A PROVEN UNIT
• UL2200 TESTED	› ENSURES A QUALITY PRODUCT
• RHINOCOAT PAINT SYSTEM	› IMPROVES RESISTANCE TO ELEMENTS
• WIDE RANGE OF ENCLOSURES	› PROVIDES A SINGLE SOURCE SOLUTION
Engine	
• EPA COMPLIANT	› ENVIRONMENTALLY FRIENDLY
• INDUSTRIAL TESTED, GENERAC APPROVED	› ENSURES INDUSTRIAL STANDARDS
• POWER-MATCHED OUTPUT	› ENGINEERED FOR PERFORMANCE
• INDUSTRIAL GRADE	› IMPROVES LONGEVITY AND RELIABILITY
Alternator	
• TWO-THIRDS PITCH	› ELIMINATES HARMFUL 3RD HARMONIC
• LAYER WOUND ROTOR & STATOR	› IMPROVES COOLING
• CLASS H MATERIALS	› HEAT TOLERANT DESIGN
• DIGITAL 3-PHASE VOLTAGE CONTROL	› FAST AND ACCURATE RESPONSE
Controls	
• ENCAPSULATED BOARD W/ SEALED HARNESS	› EASY, AFFORDABLE REPLACEMENT
• 4-20mA VOLTAGE-TO-CURRENT SENSORS	› NOISE RESISTANT 24/7 MONITORING
• SURFACE-MOUNT TECHNOLOGY	› PROVIDES VIBRATION RESISTANCE
• ADVANCED DIAGNOSTICS & COMMUNICATIONS	› HARDENED RELIABILITY

primary codes and standards

NEMA c UL us LISTED NFPA ASME ISO CE

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SG050 application and engineering data

ENGINE SPECIFICATIONS

General

Make	Generac
EPA Emissions Compliance	Stationary Emergency
EPA Emissions Engine Reference	See Emissions Data Sheet
Cylinder #	10
Type	V
Displacement - L (Cu. In.)	6.8 (414.96)
Bore - mm (in.)	90.17 (3.55)
Stroke - mm (in.)	105.92 (4.17)
Compression Ratio	9:1
Intake Air Method	Naturally Aspirated
Number of Main Bearings	7
Connecting Rods	Forged
Cylinder Head	Aluminum
Cylinder Liners	No
Ignition	High Energy
Pistons	Aluminum Alloy
Crankshaft	Steel
Lifter Type	Overhead Cam
Intake Valve Material	Steel Alloy
Exhaust Valve Material	Steel Alloy
Hardened Valve Seats	Yes

Lubrication System

Oil Pump Type	Gear
Oil Filter Type	Full-flow spin-on cartridge
Crankcase Capacity - L (qts)	5.7 (6)

Cooling System

Cooling System Type	Pressurized Closed
Water Pump Flow	38 gal/min
Fan Type	Pusher
Fan Speed (rpm)	2300
Fan Diameter mm (in.)	558 (22)
Coolant Heater Wattage	1500
Coolant Heater Standard Voltage	120V

Fuel System

Fuel Type	natural gas, propane
Carburetor	Down Draft
Secondary Fuel Regulator	Standard
Fuel Shut Off Solenoid	Standard
Operating Fuel Pressure	11" - 14" H2O

Engine Electrical System

System Voltage	12VDC
Battery Charging Alternator (Amps)	30
Battery Size	925CCA
Battery Group	31
Battery Voltage	12VDC
Ground Polarity	Negative

ALTERNATOR SPECIFICATIONS

Standard Model	390
Poles	4
Field Type	Revolving
Insulation Class - Rotor	H
Insulation Class - Stator	H
Total Harmonic Distortion	<5%
Telephone Interference Factor (TIF)	<50
Standard Excitation	Brushless
Bearings	Sealed Ball
Coupling	Flexible Disc
Load Capacity - Standby	100%
Prototype Short Circuit Test	Yes

Voltage Regulator Type	Full Digital
Number of Sensed Phases	3
Regulation Accuracy (Steady State)	+/- 0.25%

Engine Governing

Governor	Electronic
Frequency Regulation (Steady State)	+/- 0.25%

CODES AND STANDARDS COMPLIANCE (WHERE APPLICABLE)

NFPA 99	BS5514
NFPA 110	SAE J1349
ISO 8528-5	DIN6271
ISO 1708A.5	IEEE C62.41 TESTING
ISO 3046	NEMA ICS 1

Rating Definitions:
Standby – Applicable for a varying emergency load for the duration of a utility power outage with no overload capability. (Max. load factor = 70%)
Prime – Applicable for supplying power to a varying load in lieu of utility for an unlimited amount of running time. (Max. load factor = 80%) A 10% overload capacity is available for 1 out of every 12 hours.

SG050 operating data (60Hz)

POWER RATINGS (kW)

	Natural Gas		Propane Vapor	
Single-Phase 120/240VAC @1.0pf	50	Amps: 208	50	Amps: 208
Three-Phase 120/208VAC @0.8pf	50	Amps: 173	50	Amps: 173
Three-Phase 120/240VAC @0.8pf	50	Amps: 150	50	Amps: 150
Three-Phase 277/480VAC @0.8pf	50	Amps: 75	50	Amps: 75
Three-Phase 346/600VAC @0.8pf	50	Amps: 60	50	Amps: 60

STARTING CAPABILITIES (sKVA)

sKVA vs. Voltage Dip

		480VAC						208/240VAC					
Alternator	kW	10%	15%	20%	25%	30%	35%	10%	15%	20%	25%	30%	35%
Standard	50	34	52	69	86	103	120	26	39	52	65	77	90
Upsize 1	60	42	63	83	104	125	146	32	47	62	78	94	110
Upsize 2	70	59	88	117	147	176	205	44	66	88	110	132	154
Upsize 3	100	79	118	157	197	236	275	59	89	118	148	177	206
Upsize 4*	130	116	174	232	290	348	406	87	131	174	218	261	305

*Brushless excitation only

FUEL

Fuel Consumption Rates**

Natural Gas			Propane Vapor			
Percent Load	ft³/hr	m³/hr	Percent Load	ft³/hr	gal/hr	m³/hr
25%	258	7.3	25%	107	2.9	3.0
50%	425	12.0	50%	176	4.8	5.0
75%	592	16.8	75%	245	6.7	6.9
100%	760	21.5	100%	315	8.7	8.9
** Refer to "Emissions Data Sheet" for maximum fuel flow for EPA and SCAQMD permitting purposes.						

COOLING

		STANDBY
Air Flow (inlet air combustion and radiator)	ft³/min (m³/min)	5760 (163.1)
System Coolant Capacity	Gal (Liters)	6.3 (23.9)
Heat Rejection to Coolant	BTU/hr	212,800
Max. Operating Air Temp on Radiator	°F (°C)	122 (50)
Max. Ambient Temperature	°F (°C)	104 (40)
Maximum Radiator Backpressure	in H_2O	1.50

COMBUSTION AIR REQUIREMENTS

		STANDBY
Flow at Rated Power	cfm	160

ENGINE

		STANDBY
Rated Engine Speed	rpm	1800
Horsepower at Rated kW***	hp	80
Piston Speed	ft/min	1251
BMEP	psi	84.7

*** Refer to "Emissions Data Sheet" for maximum bHP for EPA and SCAQMD permitting purposes.

EXHAUST

		STANDBY
Exhaust Flow (Rated Output)	cfm (m³/min)	455 (12.9)
Maximum Recommended Back Pressure	inHg	1.5
Exhaust Temp (Rated Output)	°F (°C)	1000 (537.8)
Exhaust Outlet Size (Open Set)	in	2.5"

Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions. Please consult a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528 and DIN6271 standards.

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SG050

standard features and options

GENERATOR SET

●	Genset Vibration Isolation	Std
O	IBC Seismic Certified/Seismic Rated Vibration Isolators	Opt
O	Extended warranty	Opt
O	Gen-Link Communications Software	Opt
O	Steel Enclosure	Opt
O	Aluminum Enclosure	Opt
O	Enclosure Lighting Kits	Opt

ENGINE SYSTEM

	General	
●	Oil Drain Extension	Std
O	Oil Make-Up System	Opt
O	Oil Heater	Opt
O	Critical Exhaust Silencer (Enclosed Sets)	Opt
●	Stainless steel flexible exhaust connection	Std
●	Air cleaner	Std
●	Fan guard	Std
●	Radiator duct adapter	Std
	Fuel System	
●	Fuel lockoff solenoid	Std
●	Secondary Fuel Regulator	Std
O	Flexible fuel lines	Opt
O	Automatic Gaseous Dual Fuel	Opt
	Cooling System	
O	120VAC Coolant Heater	Opt
O	208VAC Coolant Heater	Opt
O	240VAC Coolant Heater	Opt
O	Other Coolant Heater_____	Opt
●	Closed Coolant Recovery System	Std
●	UV/Ozone resistant hoses	Std
●	Factory-Installed Radiator	Std
●	Radiator Drain Extension	Std
	Engine Electrical System	
●	Battery charging alternator	Std
●	Battery cables	Std
●	Battery tray	Std
O	Battery box	Opt
O	Battery heater	Opt
●	Solenoid activated starter motor	Std
O	2.5A UL battery charger	Opt
O	10A UL float/equalize battery charger	Opt
●	Rubber-booted engine electrical connections	Std

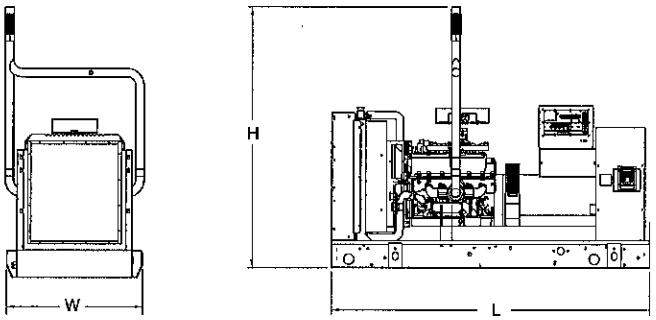
ALTERNATOR SYSTEM

●	UL2200 GENprotect™	Std
O	Main Line Circuit Breaker	Opt
O	2nd Circuit Breaker	Opt
O	3rd Circuit Breaker	-
O	Alternator Upsizing	Opt
O	Anti-Condensation Heater	Opt
O	Tropical coating	Opt
O	Permanent Magnet Generator	Opt

CONTROL SYSTEM

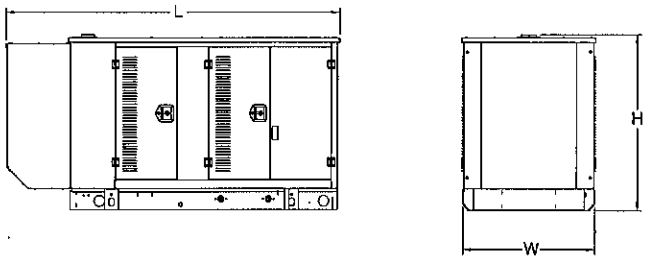
	Control Panel	
●	Digital H Control Panel - Dual 4x20 Display	Std
O	Digital G-100 Control Panel - Touchscreen	-
O	Digital G-200 Paralleling Control Panel - Touchscreen	-
●	Programmable Crank Limiter	Std
●	Programmable Crank Limiter	Std
O	21-Light Remote Annunciator	Opt
O	Remote Relay Panel (8 or 16)	Opt
●	7-Day Programmable Exerciser	Std
●	Special Applications Programmable PLC	Std
●	RS-232	Std
●	RS-485	Std
●	All-Phase Sensing DVR	Std
●	Full System Status	Std
●	Utility Monitoring (Req. H-Transfer Switch)	Std
●	2-Wire Start Compatible	Std
●	Power Output (kW)	Std
●	Power Factor	Std
●	Reactive Power	Std
●	All phase AC Voltage	Std
●	All phase Currents	Std
●	Oil Pressure	Std
●	Coolant Temperature	Std
●	Coolant Level	Std
O	Oil Temperature	Opt
●	Low Fuel Pressure	Std
●	Engine Speed	Std
●	Battery Voltage	Std
●	Frequency	Std
●	Date/Time Fault History (Event Log)	Std
O	Low-Speed Exercise	-
●	Isochronous Governor Control	Std
●	-40deg C - 70deg C Operation	Std
●	Waterproof Plug-In Connectors	Std
●	Audible Alarms and Shutdowns	Std
●	Not in Auto (Flashing Light)	Std
●	Auto/Off/Manual Switch	Std
●	E-Stop (Red Mushroom-Type)	Std
O	Remote E-Stop (Break Glass-Type, Surface Mount)	Opt
O	Remote E-Stop (Red Mushroom-Type, Surface Mount)	Opt
O	Remote E-Stop (Red Mushroom-Type, Flush Mount)	Opt
●	NFPA 110 Level I and II (Programmable)	Std
●	Remote Communication - RS232	Std
O	Remote Communication - Modem	-
O	Remote Communication - Ethernet	-
O	10A Run Relay	-
	Alarms (Programmable Tolerances, Pre-Alarms and Shutdowns)	
O	Low Fuel	
●	Oil Pressure (Pre-programmed Low Pressure Shutdown)	Std
●	Coolant Temperature (Pre-programmed High Temp Shutdown)	Std
●	Coolant Level (Pre-programmed Low Level Shutdown)	Std
O	Oil Temperature	Opt
●	Engine Speed (Pre-programmed Overspeed Shutdown)	Std
●	Voltage (Pre-programmed Overvoltage Shutdown)	Std
●	Battery Voltage	Std
	Other Options	
O	_____	
O	_____	
O	_____	

dimensions, weights and sound levels



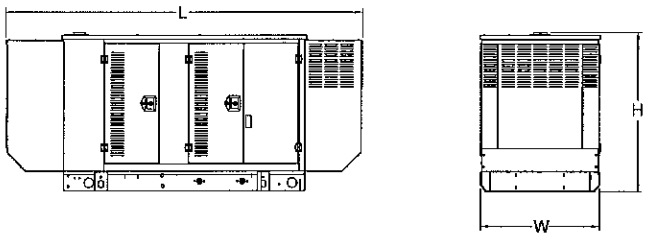
OPEN SET (Includes Exhaust Flex)

L	W	H	WT	dBA*
93	40	75	1930	84



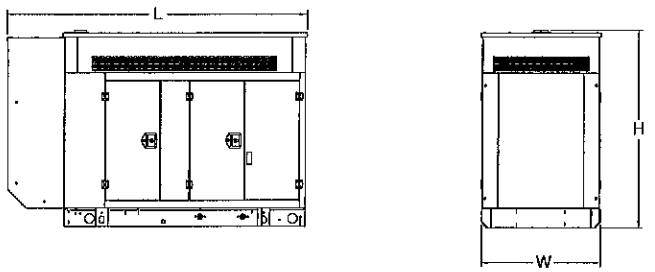
STANDARD ENCLOSURE

L	W	H	WT	dBA*
112	41	55	2371	76



LEVEL 1 ACOUSTIC ENCLOSURE

L	W	H	WT	dBA*
129	41	55	2591	73



LEVEL 2 ACOUSTIC ENCLOSURE

L	W	H	WT	dBA*
112	41	68	2812	71

*All measurements are approximate and for estimation purposes only. Sound levels measured at 23ft (7m) and does not account for ambient site conditions.

YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

Specification characteristics may change without notice. Dimensions and weights are for preliminary purposes only. Please consult a Generac Power Systems Industrial Dealer for detailed installation drawings.