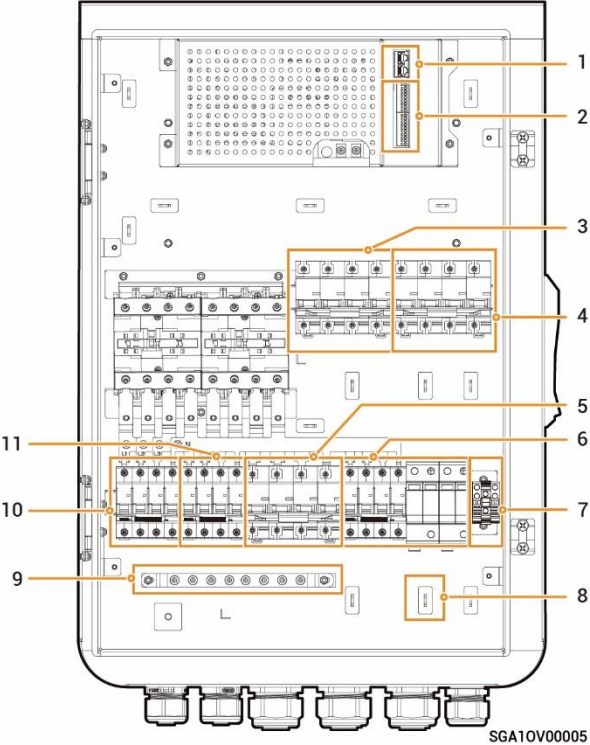


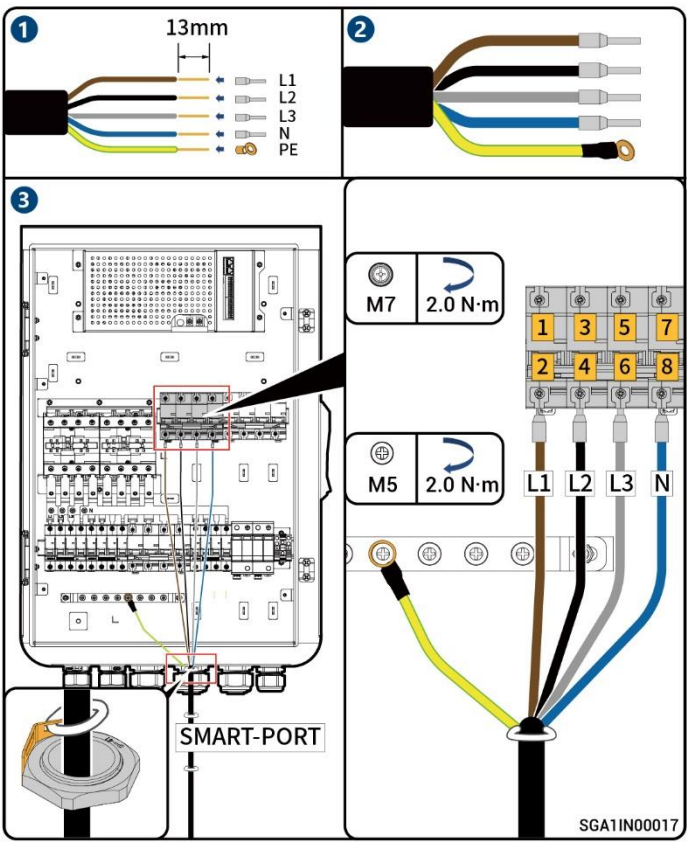
1、Gateway internal view



S/N	Name
1	FE1, FE2
2	RS485, DI, and DO interfaces
3	Miniature circuit breaker (smart loads/diesel generator)
4	Miniature circuit breaker (power grid)
5	Miniature circuit breaker (backup home loads)
6	Miniature circuit breaker + Surge protection device
7	GND
8	Cable clamp
9	Earthing bar
10	Miniature circuit breaker (Inverters 1)
11	Miniature circuit breaker (Inverters 2)

Installation Step 1: Confirm generator-related circuit breaker and I/O control port locations in the Gateway. As shown in the diagram above, NO. 3 is the generator power access circuit breaker and NO. 2 is the I/O control port of the Gateway

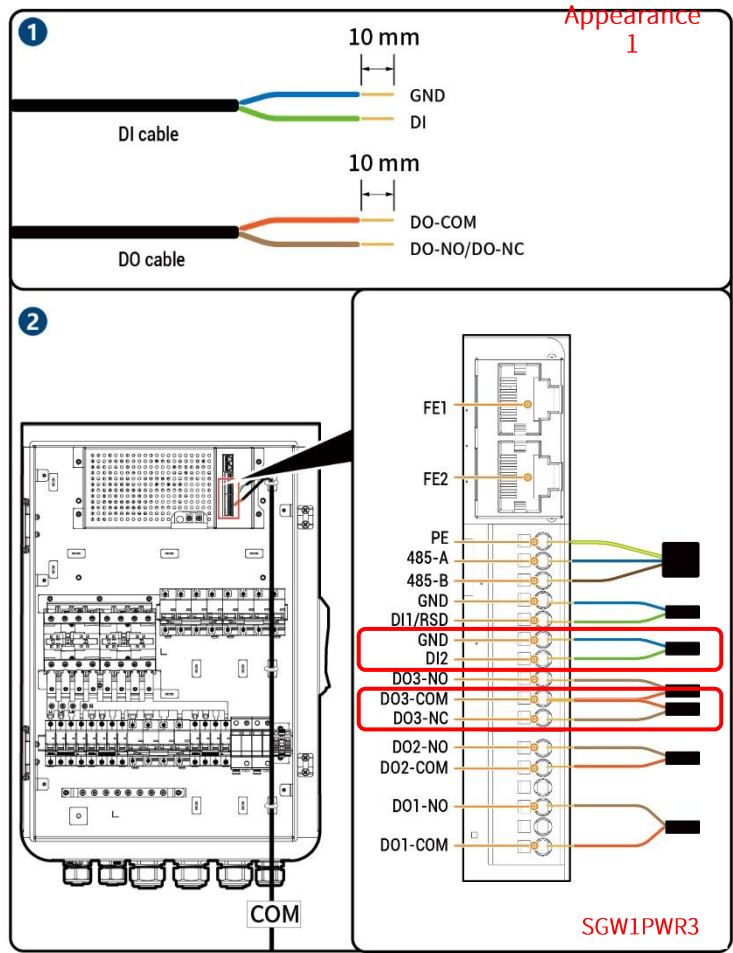
2、Connecting the Generator Power Circuit



Installation Step 2: Follow the instructions in the diagram above to connect the Generator power wires to the Gateway's SMART-PORT circuit breaker. Then refer to the user manual of Gateway, switch off all circuit breakers and wait for at least 5 minutes before connecting the wires, and then switch on the circuit breakers one by one.

* The interface shown is for reference, please refer to the actual product

3.1、 Connecting the Generator Control Circuit(New control boards)



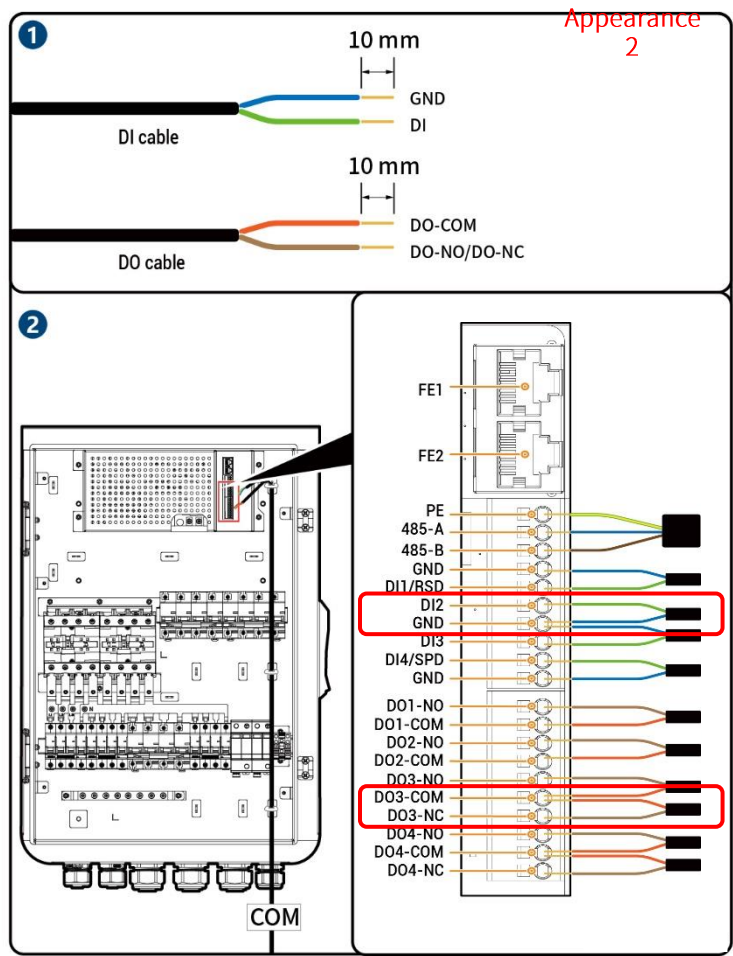
Interface Description		Definition	Function	Description
FE (Network cable interface)		FE1	Fast Ethernet 1	Used to connect an inverter.
		FE2	Fast Ethernet 2	Used to connect an Sigen EV AC Charger, inverter, router and so on.
485 (RS485 interface)		PE	Signal shield GND	Used to connect smart loads including heat pump, air conditioner, and diesel generator.
		485-A	RS485 signal 2_A+	
		485-B	RS485 signal 2_B-	
DI1 (Digital input 1)		GND	Signal GND	Universal DI interfaces, DI 1 support rapid shutdown input signal.
		DI1(RSD)	Digital input 1 (Rapid shutdown)	
DI2 (Digital input 1)		GND	Signal GND	
		DI2(ATS)	Digital input 2	
DO3 (Dry contact 3)	-	DO3-NO	Digital output 3 - Normal Open	- Universal DO interface. DO1 has a contact capacity of 250 Va.c./1 A. DO2 and DO3 have a contact capacity of 30 V/1 A. NO/COM is normally open contact and NC/COM is normally close contact. - The DO3-COM and DO3-NC interface can be used for controlling generator start in two-wire start mode.
	GEN (Diesel generator startup)	DO3-COM	Digital output 3 - Common	
		DO3-NC	Digital output 3 - Normal Close	
DO2 (Dry contact 2)		DO2-NO	Digital output 2 - Normal Open	
		DO2-COM	Digital output 2 - Common	
DO1 (Dry contact 1)		-	-	
		DO1-NO	Digital output 1 - Normal Open	
		-	-	
		DO1-COM	Digital output 1 - Common	

Installation Step 3.1: 油机接线前请先确认Gateway控制板版本，如果是SGW1PWR3，请参考对应油机组网图，按照上面端口位置和定义进行接线

If the generator supports the two-wire remote start (recommended), make sure the DI control signal of the generator is connected to the normally closed contact (NC) of the DO3 port of the Gateway control board for controlling the start of the generator, and the contact capacity of DO3 is 30V/1A.

*If SGW1PWR3 is printed on the label, please refer to Appearance 1 to wire. If SGW1PWR3 is not printed on the label, please refer to Appearance 2 to wire.

3.2、Connecting the Generator Control Circuit (Old control boards)

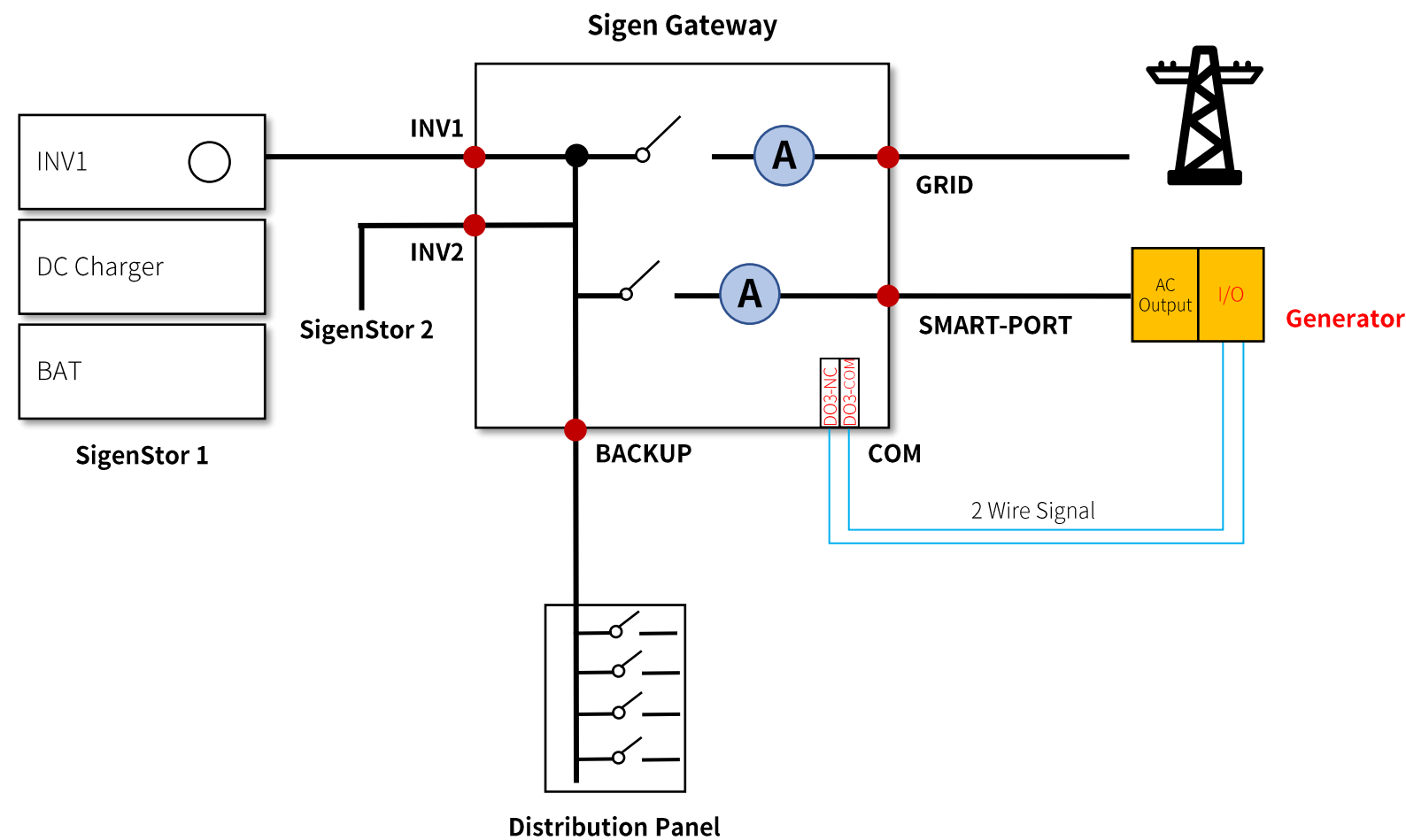


Interface Description	Definition	Function	Description
DI (Digital input)	GND	Signal GND	Universal DI interfaces, DI 1 support rapid shutdown input signal and DI 4 support surge protection device status feedback input signal, among others.
	DI1/RSD	Digital input 1 / Rapid shutdown	
	DI2	Digital input 2	
	GND	Signal GND	
	DI3	Digital input 3	
	DI4/SPD	Digital input 4 / surge protection device	
	GND	Signal GND	
DO1/GEN (Digital output 1 / Diesel Generator startup)	DO1-NO	Digital output 1 - Normal Open	Universal DO interface. The contact capacity of 24 V/40 mA. NO/COM is normally open contact and NC/COM is normally close contact. The DO3-COM and DO3-NC interface can be used for controlling generator start in two-wire start mode.
	DO1-COM	Digital output 1 - Common	
DO2 (Dry contact 2)	DO2-NO	Digital output 2 - Normal Open	
	DO2-COM	Digital output 2 - Common	
DO3 (Dry contact 3)	-	DO3-NO	
	GEN	DO3-COM	
		DO3-NC	
DO4 (Dry contact 4)	DO4-NO	Digital output 4 - Normal Open	
	DO4-COM	Digital output 4 - Common	
	DO4-NC	Digital output 4 - Normal Close	

Installation Step 3.2 : 油机接线前请先确认Gateway控制板版本, 如果不是SGW1PWR3, 请参考对应油机组网图, 按照上面端口位置和信息进行接线

If the generator only supports AMF (Automatic Mains Failure) start control, the wiring method is as follows:
380/400Vac is drawn from the load distribution panel to the Mains Voltage port of the generator, the loop-series contactor is used to control the start of the generator, the contactor coil is connected to 220Vac, and the coil loop is connected to the DO1(NO) port of the Gateway to control the contactor pick-up and disconnection, and the contact capacity of DO1 is 250Vac/1A.

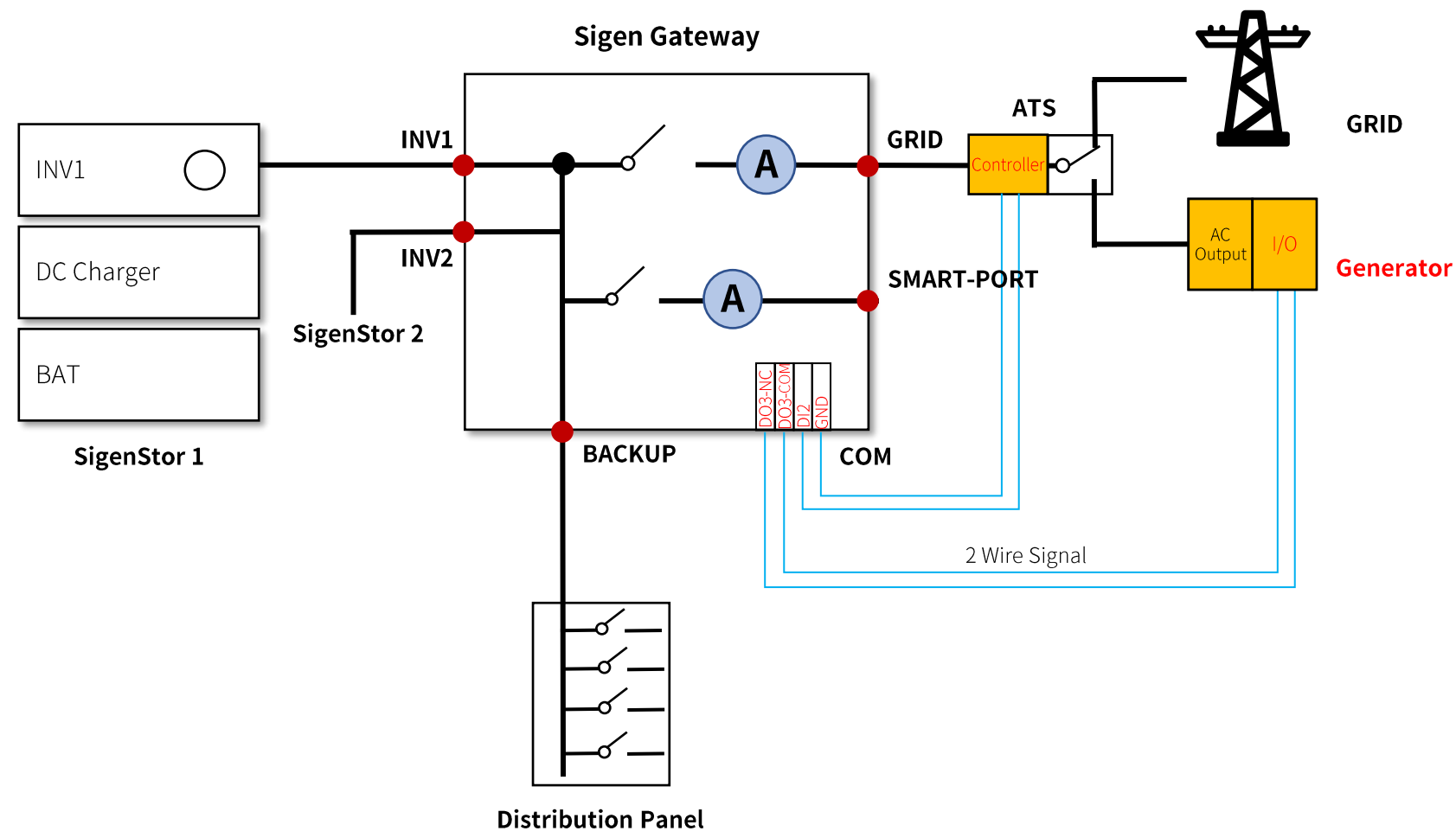
4.1、Generator Typical Networking



Installation Step 4.2:

油机以two-wire start方式接入Gateway时，油机功率输出接Gateway的SMART-PORT端口，对应的DI口（具体见油机控制器说明书）接Gateway控制板的DO3-NC和DO3-COM端口，用于Gateway控制油机的启停。

4.2、Generator Typical Networking with ATS



Installation Step 4.2:

油机通过ATS组网，以two-wire start方式接入Gateway时，油机功率输出接ATS备电端口，信号端口接线如下：

1. 油机：对应的DI口（具体见油机控制器说明书）接Gateway控制板的DO3-NC和DO3-COM端口，用于Gateway控制油机的启停；
2. ATS：控制器对应的DO口（具体见ATS控制器说明书）接Gateway的DI2端口，用于Gateway控制ATS的切换。工作时，当ATS位置信号为低阻抗时，表示电网接入，否则为油机接入

5、Generator App Setup

1. The system can automatically recognize and connect the diesel generator. Check the details and make settings in "Device" → "GENERATOR".
2. **Manual start by operating the generator's switch**
3. In this mode, you must switch on and off the system on the generator side.



No.	Parameter name	Description
1	Rated Power	Sets the rated power of the diesel generator.
2	Best Power Duty	To guarantee the optimal functioning status of the system, you are advised to control the output power of the diesel generator not more than 80%.

3. **Two - Wire – Start**
4. In this mode, you can start and stop the diesel generator in the App, or the diesel generator can start or stop automatically.

No.	Parameter name	Description
1	Operating Mode	ManualAuto
2	Generator Start	In "Manual" mode, when it is set to  you can start or stop the diesel generator using  icon in the App.
3	Rated Power	Sets the rated power of the diesel generator.
4	Best Power Duty	To guarantee the optimal functioning status of the system, you are advised to control the output power of the diesel generator not more than 80%.
5	Time of Use	In "Auto" mode, set the time period and SOC threshold for automatic power-on/off of the diesel generator.