



CHECKLIST PV-GENSET

Please fill in as accurate as possible

Location

Location of the PV-Genset system (Region, Country, specific GPS coordinates, altitude):

Is the planned system **Off-grid** (remote), or **Backup** (sometimes grid-tied)?

If Backup: how often/long does the system operate in backup situation

_____ hr/day

_____ days/week

Are there any local requirements (codes, standards, zero feed in) to fulfil? Yes/ No

If yes: Which: _____

Genset Data

Is it a **Single Genset** or **Multi Genset** system?

Genset manufacturer/model: _____

Please attach **datasheet of the Genset!**

Genset-Controller: _____

Nominal Apparent Power of the Genset(s) in kVA.

Genset A: _____ kVA,

Genset B: _____ kVA,

Genset C: _____ kVA

Nominal/Maximum Active Power of the Genset(s) in kW.

Genset A: _____ / _____ kW,

Genset B: _____ / _____ kW,

Genset C: _____ / _____ kW



Load Data

- Please attach a **load profile** for one year!
- Please attach Average/Min/Max consumption (if not obvious from the load profile):

	Summer				Winter			
	Night	7-9	9-15	15-17	Night	7-9	9-15	15-17
Max								
Min								
Average								

- Planned PV system size in kWp:
Min. _____ kWp.
Max. _____ kWp.

Grid voltage / frequency

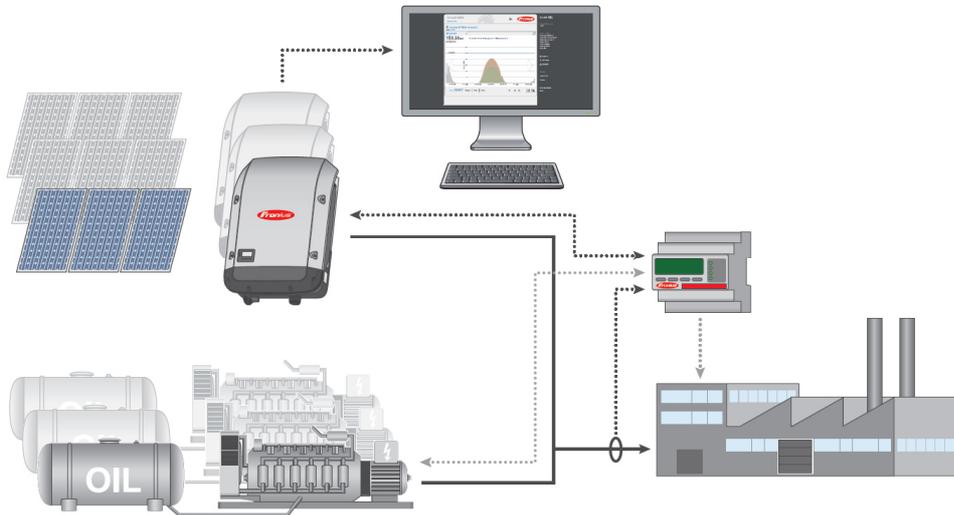
- Nominal grid frequency: _____ Hz
- Nominal grid voltage (LV or MV): _____ (k)V
- Please attach **schematic (SLD .. single line diagram)** of the (existing) system.

Economics

- Diesel price (delivered at site): _____ USD or EUR per liter
or
- Electricity price from the Genset: _____ USD or EUR per kWh

Please send the PV-Genset Checklist with attachments (datasheets, load profiles) to pv-support@fronius.com .

Schematic of the Fronius PV-Genset Solution



Considerations in designing a PV-Genset Solution

- / In a typical configuration the Fronius PV-System Controller is controlling the system in a way that the Genset is operating on at least 30% of its nominal power (configurable)
- / The Fronius PV-system controller is capable of adjusting the PV-power in a very fast way (depending on the communication chosen with a reaction time of <2sec and a time constant of <2sec).
- / Nevertheless in the extreme event of immediate disconnection of a load larger than the operating power of the Genset (e.g. >30%) (see in the figure below at time 11:07:19) for a very short period reverse power into the Genset is possible. Typical Gensets do not have any problem with this short time backfeed current, but Fronius cannot be held liable for all Genset suppliers. If the Genset has a digital controller and protection device, reverse power can lead to shutting down the Genset. This can be avoided by a proper system design, mitigating unwanted disconnections.

