

Your personal power plant

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Woodlog Gasifier - Off-Grid
Rev.: 1.2

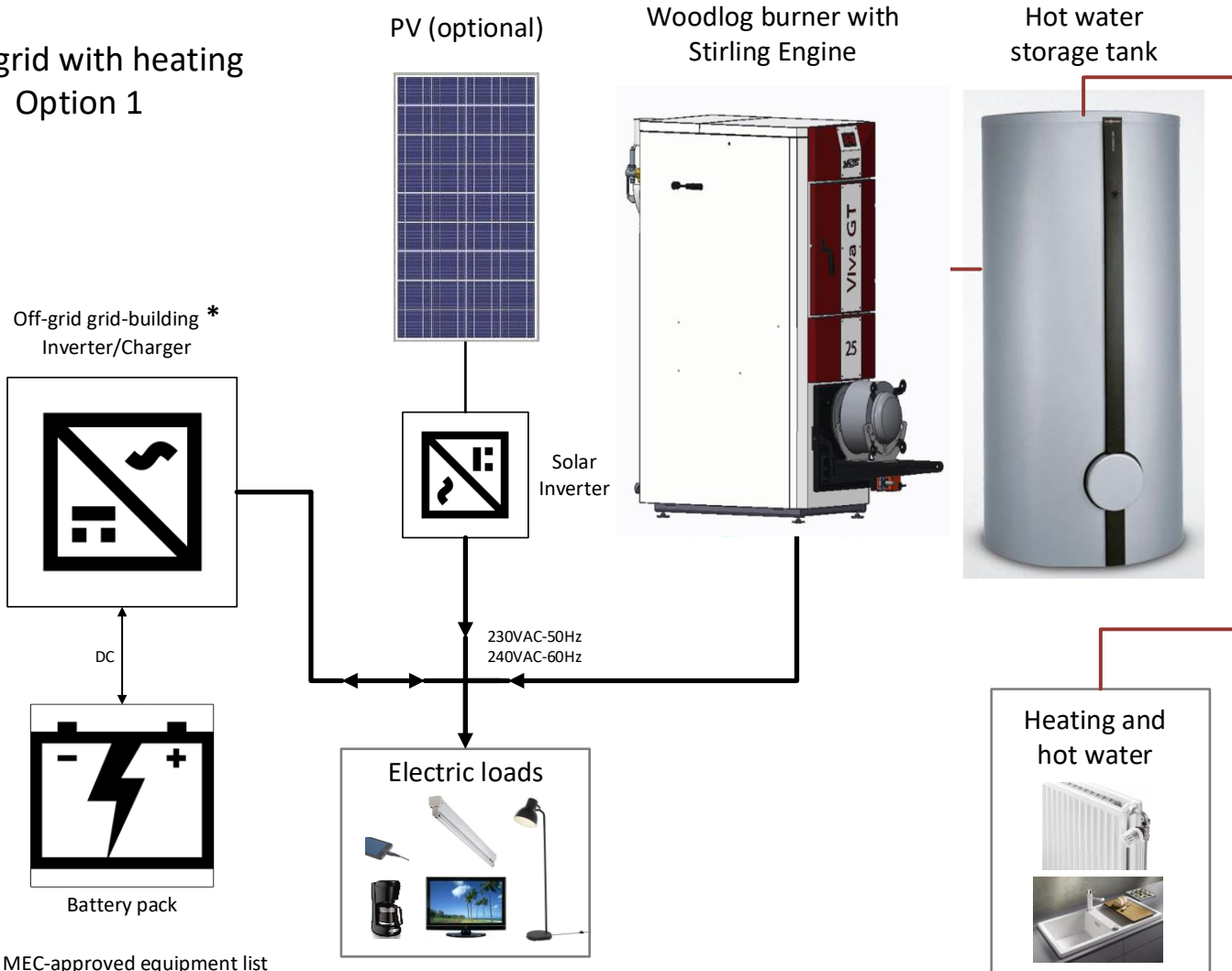


Contents

- Options for an Off-grid Woodlog-Gasifier system
 - Option 1, equipped with a dedicated off-grid, grid-building, bi-directional inverter/charger. This implementation comes with load-switching constraints, meaning the system can only handle limited load switching(!)
 - Option 2, equipped with a separate engine-isolating, grid-building battery charger and a general off-grid AC-inverter. This implementation has no load switching limitations.
 - Option 3, is Option 2 with PV added. Now a general off-grid AC inverter/charger is needed.
 - Capabilities compared
 - Approved Equipment

Option 1

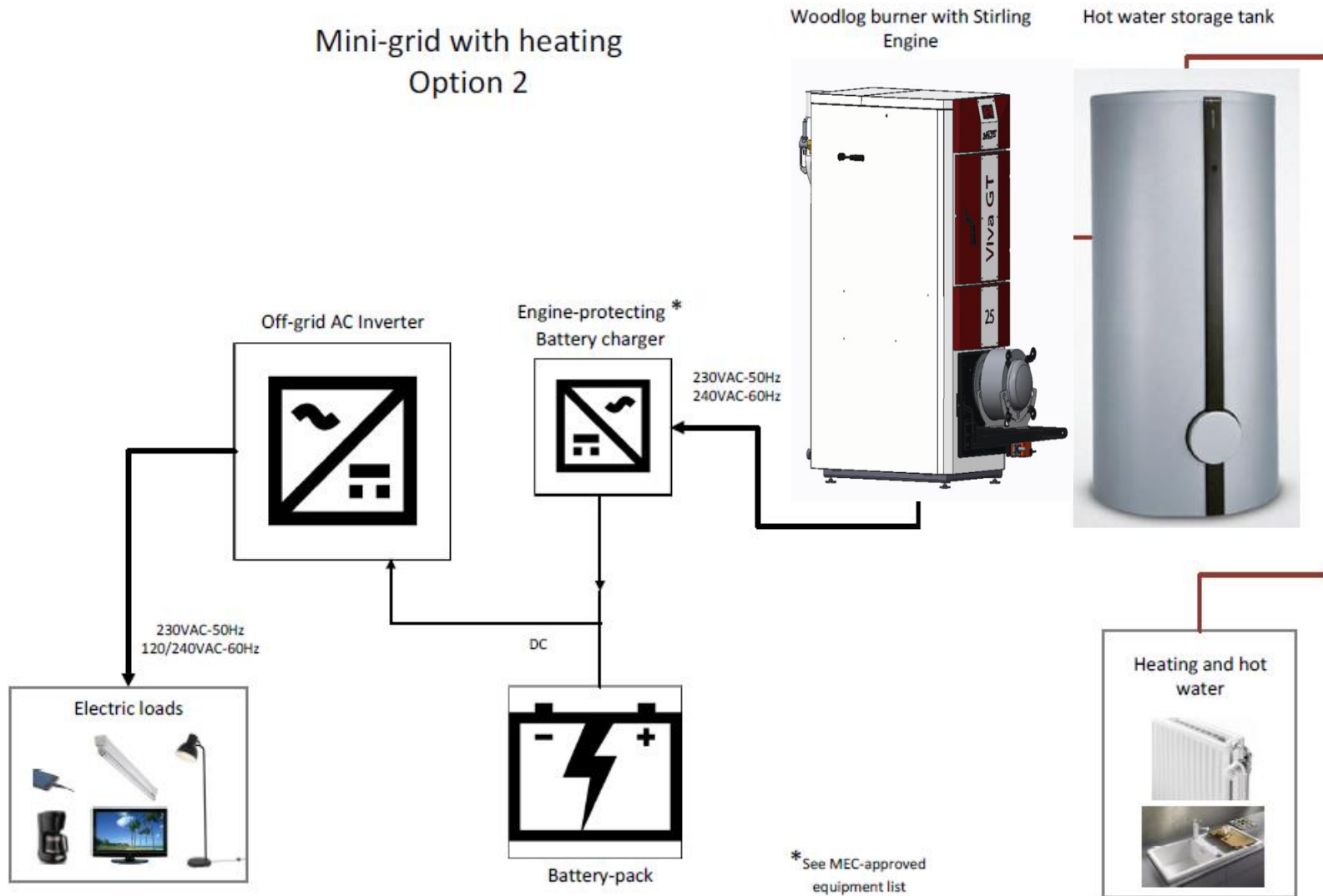
Mini-grid with heating Option 1



* See MEC-approved equipment list

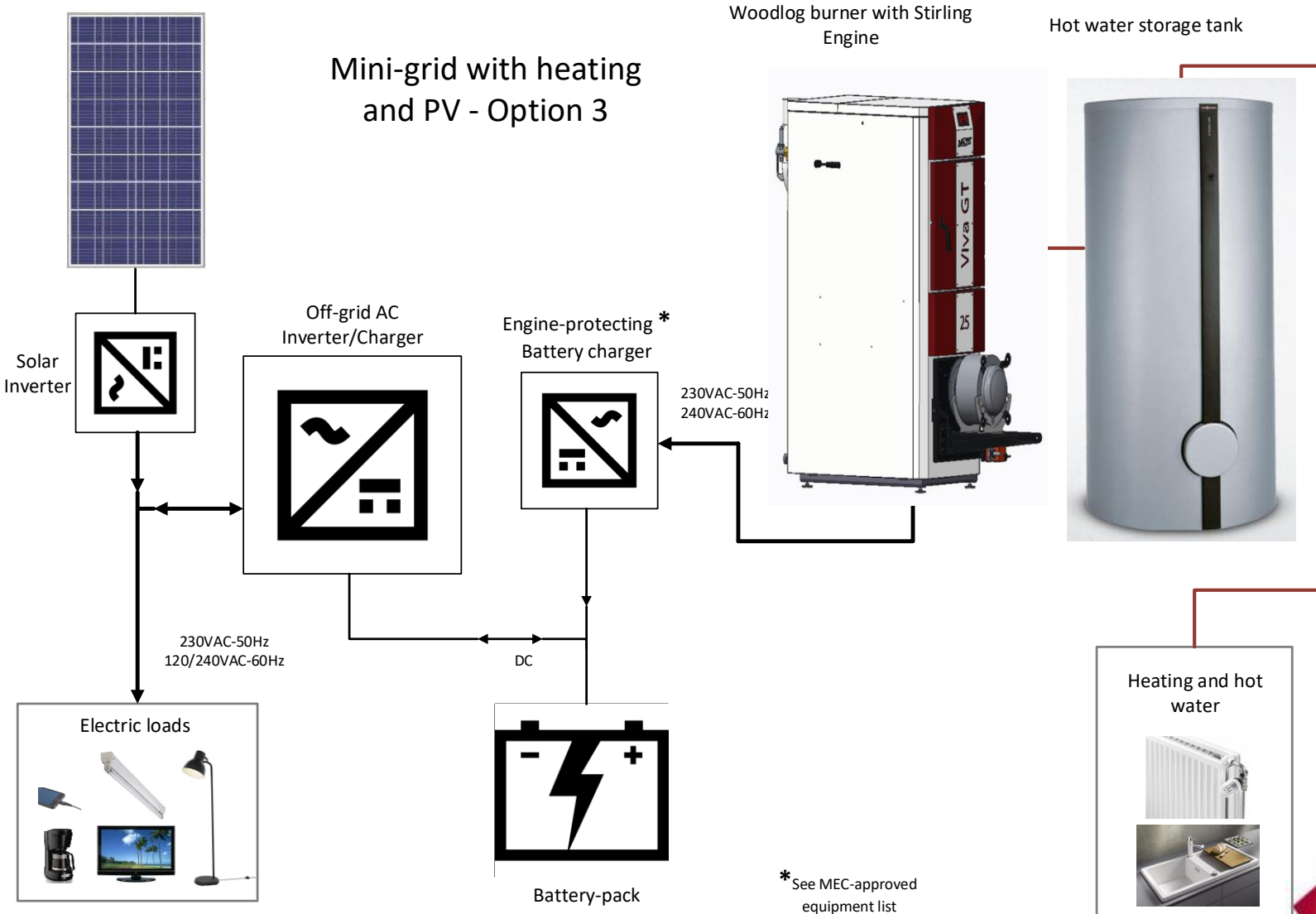
Option 2

Mini-grid with heating Option 2



Option 3

Mini-grid with heating and PV - Option 3



* See MEC-approved equipment list

Capabilities compared

Capabilities	Option 1	Option 2 & 3
Output Voltage	230VAC-50Hz	230V-50Hz
	240VAC-60Hz	120V-60Hz
		240V-60Hz
Output Power	Limited to inverter rated continuous max output power [W]. Also, constraints apply w.r.t. peak power capabilities, see single load switching capabilities	Full inverter capabilities, incl. peak power [W]
Single load switching capability	Up to max 60%* of the inverter rated continuous max output power [W]	No limitations, other than inverter limitations
	* Switching on/off of larger loads will temporary disable the Stirling Engine operation	

Approved Equipment

For Full list see excel list “inverters”

Inverter-type	Brand	Type	Rated output power
Off-grid grid-building inverter/charger	SMA	Sunny Island-series	3.0M – 8.0H
	Victron	MultiPlus-series	1600 – 5000W
Engine-protecting grid-building battery charger	Victron	MultiPlus 24/1600 and larger	AC charging capability > 1000W (minimum requirement for a single 1kW Stirling Engine)
		In principle any type of off-grid grid-building bi-directional 230/240VAC inverter/charger can work.	AC charging capability > 1000W (minimum requirement for a single 1kW Stirling Engine)
AC-inverter	Any	Any	As required