ZERO-EXPORT CONTROL

Zero Export.
Zero Violations.
One-time commissioning fee.

When your customer's utility says no backfeed, the EMC enforces the limit precisely — not approximately. A revenue-grade meter reads export power in real time. The EMC trims PV production before any power crosses the threshold. Automated, continuous, compliant.

5 Hz
Sampling Rate
Real-time power measurement at the service entrance

Feed-forward
Control Method
Proactive setpoint — calculates before power crosses the limit

One-time
Commissioning Fee
No recurring subscription. Activate once at commissioning.

WHEN TO SPECIFY ZERO-EXPORT CONTROL

Utility-Prohibited Export
Sites with interconnection agreements that restrict or prohibit grid backfeed. Zero-export keeps the site compliant without sacrificing generation.

Contractual Export Limits
PPAs or distribution agreements that cap net export at a defined threshold. The EMC enforces the exact limit configured at commissioning.

Load Displacement Capital Incentives
Comply with Zero Export requirements to qualify for capital incentives like Ontario's SaveOnEnergy program.

Regulatory Export Caps
Jurisdictions with hard export limits on grid-tied PV. The configurable import/export buffer ensures the threshold is never exceeded.

COMMISSIONING FEE (CAD) — ONE-TIME

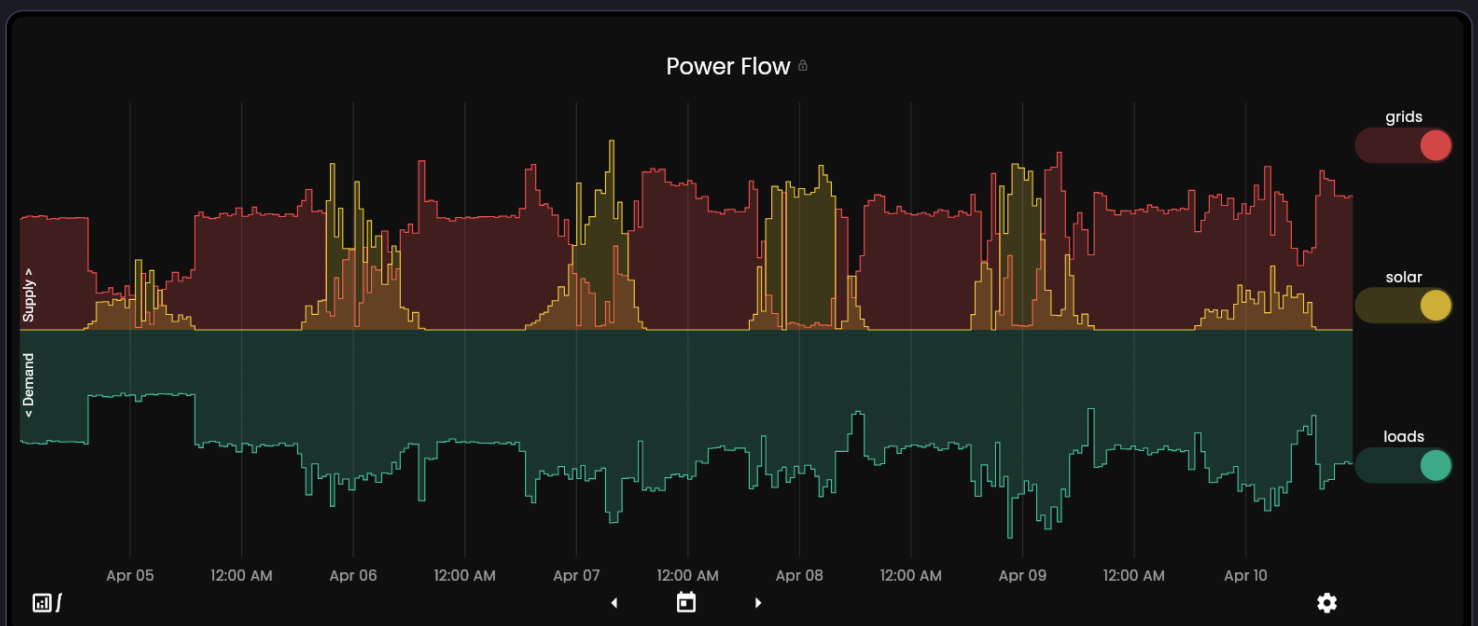
No recurring subscription · Requires EMC ownership

SYSTEM SIZE	MSRP (CAD)	NOTES
< 30 kW AC	**Free**	Small commercial · no commissioning charge
> 30 kW AC	**$935**	Medium/large commercial · one-time activation

Revenue-grade meter and CT not included — separate procurement required. Sponge can procure these items for you upon request.

COMPATIBLE INVERTERS: solis · SUNGROW · CanadianSolar · Others on Request

METERING: CCS · ACCUENERGY · Revenue-grade Equivalent

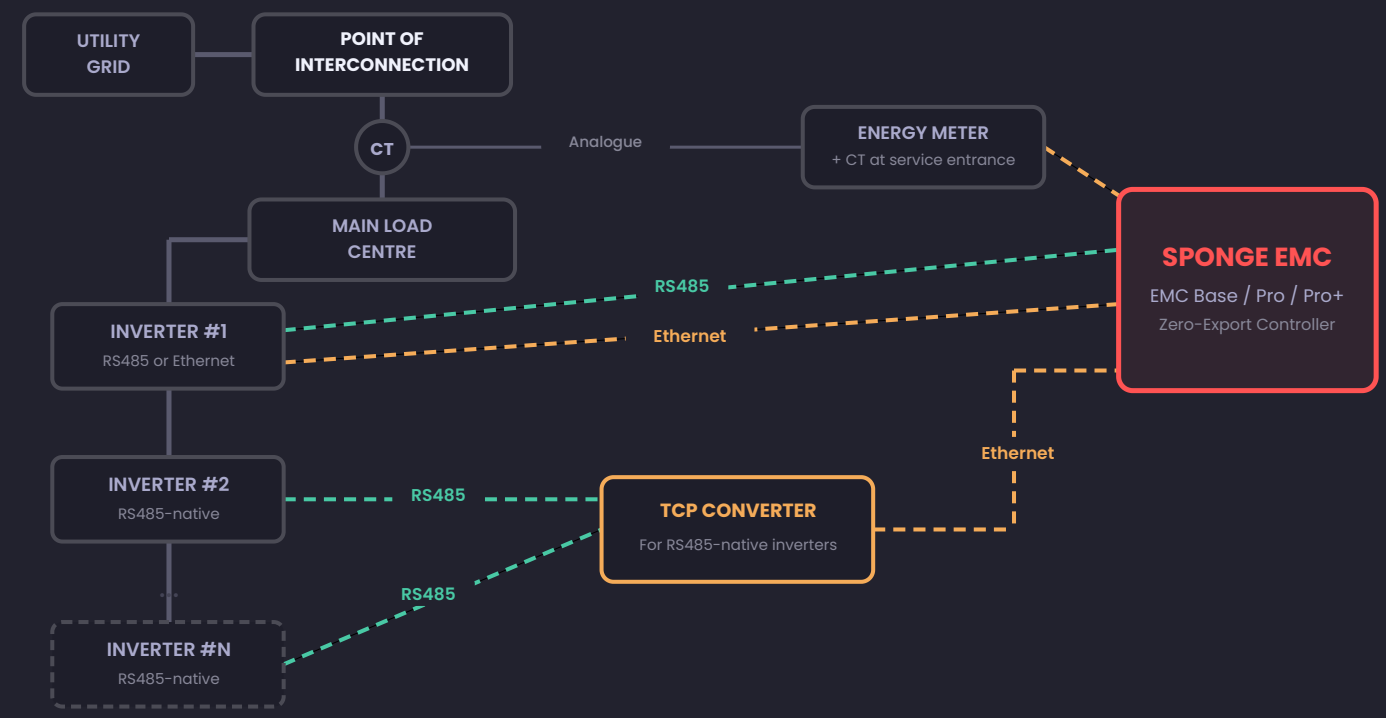


MonitorBase — Zero-Export Project View: EMC controls the inverter to ensure that solar production matches onsite consumption — fully offsetting the load whenever possible.

The EMC communicates with the energy meter and inverter fleet via RS485 or Ethernet — or through a TCP Converter for RS485-native inverters. Three configurations, all included in commissioning.

Export Control Function Map

Three supported communication configurations · select based on inverter protocol and site network architecture



NORMAL OPERATIONS

The EMC samples power from the service entrance meter and inverter fleet simultaneously, calculates the required output setpoint, and issues commands — all within a single control cycle. Feed-forward control means the EMC acts before export occurs, not after.

CONFIGURABLE SETPOINTS

- Import / Export Buffer (kW)
- Fail Safe Power Limit (%)

Both setpoints are configured by the commissioning engineer at project handoff. The import/export buffer defines the permitted power flow at the point of common coupling. The fail safe limit is applied automatically if meter communication is lost.

STEP 01

Sample

EMC reads power measurements in parallel from the service entrance meter and all inverters simultaneously — at up to 5 Hz.

Sample rate determined by site communication architecture.

STEP 02

Compare

At each sample interval, EMC compares inverter fleet generation against service entrance power flow and calculates the setpoint needed to hold the import/export buffer.

Feed-forward control — proactive, not reactive.

STEP 03

Setpoint

If the required power limit differs from the current setpoint, the new value is written to the inverter fleet. All inverters adjusted in proportion to current output.

No single inverter is throttled while others run at full capacity.

STEP 04

Respond

Inverters receive the new setpoint and adjust output by modifying DC array operating voltage — reducing or increasing generation as required.

Response time subject to inverter firmware.

PROCUREMENT, INSTALL & COMMISSIONING PROCESS

Send the drawing. Sponge designs the control layer, ships the hardware, and commissions the system remotely. Your crew handles mount and connect.

01

Design Consultation

Email your project SLD to info@sponge.to. Sponge marks up the drawing with component requirements — EMC unit, energy meter, CTs — and communication architecture (TCP or RTU). If anything needs clarification, Sponge reaches out before quoting. You receive the marked-up SLD and a project quote.

02

Purchase Order

Submit your PO with site install date and shipping address. Energy meters and CTs are sourced separately — quote these through your normal procurement channel.

03

Mount and Connect

Sponge ships the EMC to site with installation instructions. Your crew mounts the unit, connects power, ethernet, inverters, and meters, then confirms internet connectivity. Once the EMC is online, hand off to Sponge.

04

Remote Commissioning

Sponge verifies all communication channels, configures the digital SLD, and tunes control coefficients over the first two weeks. Conformance to the utility export standard is typically confirmed by end of Week 2.

NOTE

Revenue-grade meter and CT not included — separate procurement required. See **Field Notes** on the Sponge website for selection instructions.

QUESTIONS ABOUT A PROJECT? Reach Sponge at **info@sponge.to** or our distribution partner at **sales@frankensolar.ca**