

EXPORT CONTROL

Zero Export.  
Zero Violations.  
One-time activation 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

Activation Fee

No recurring subscription. Activate once at commissioning.

WHEN TO SPECIFY 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.

ACTIVATION FEE (CAD) — ONE-TIME

No recurring subscription · Requires EMC ownership

SYSTEM SIZE

MSRP (CAD)

NOTES

All systems

\$935

One-time activation · no recurring subscription

Revenue-grade meter and CT not included — separate procurement required. Ask for supporting product selection guide.

COMPATIBLE INVERTERS:

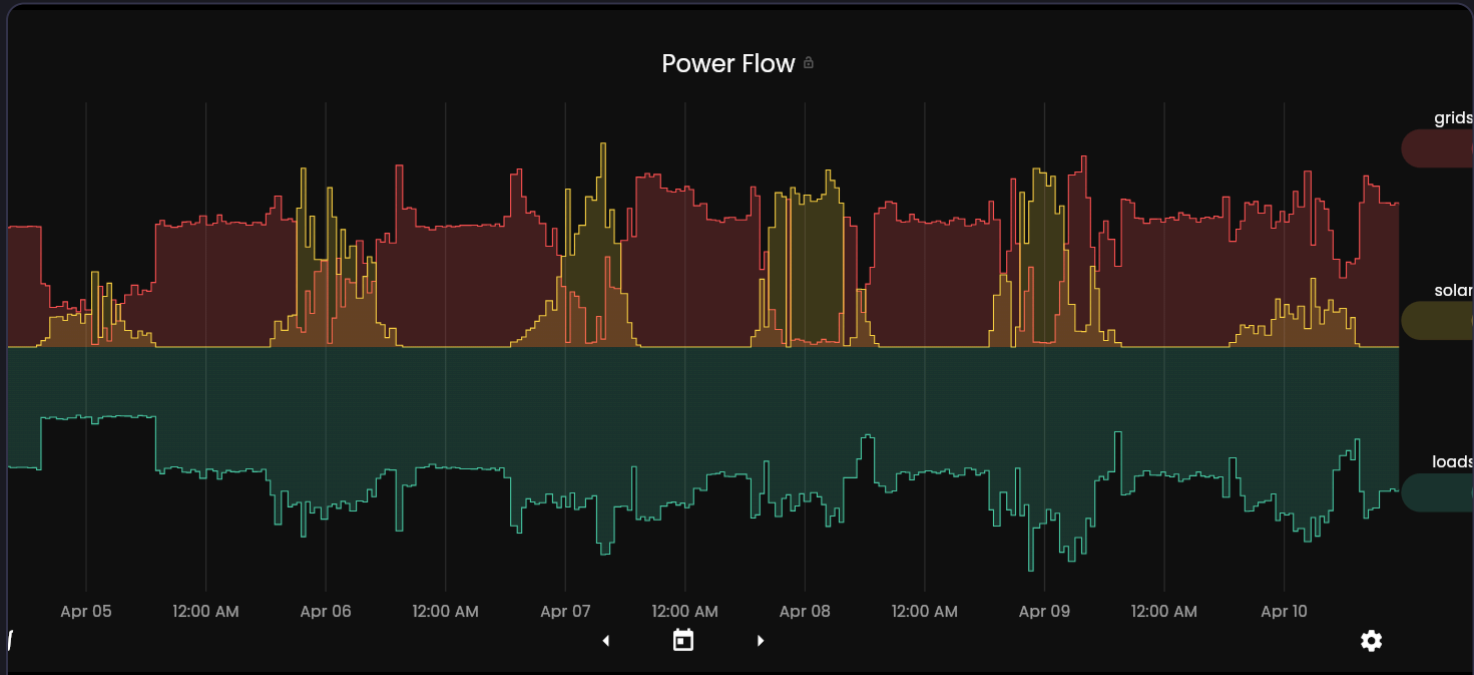


Others on Request

METERING:



Revenue-grade Equivalent

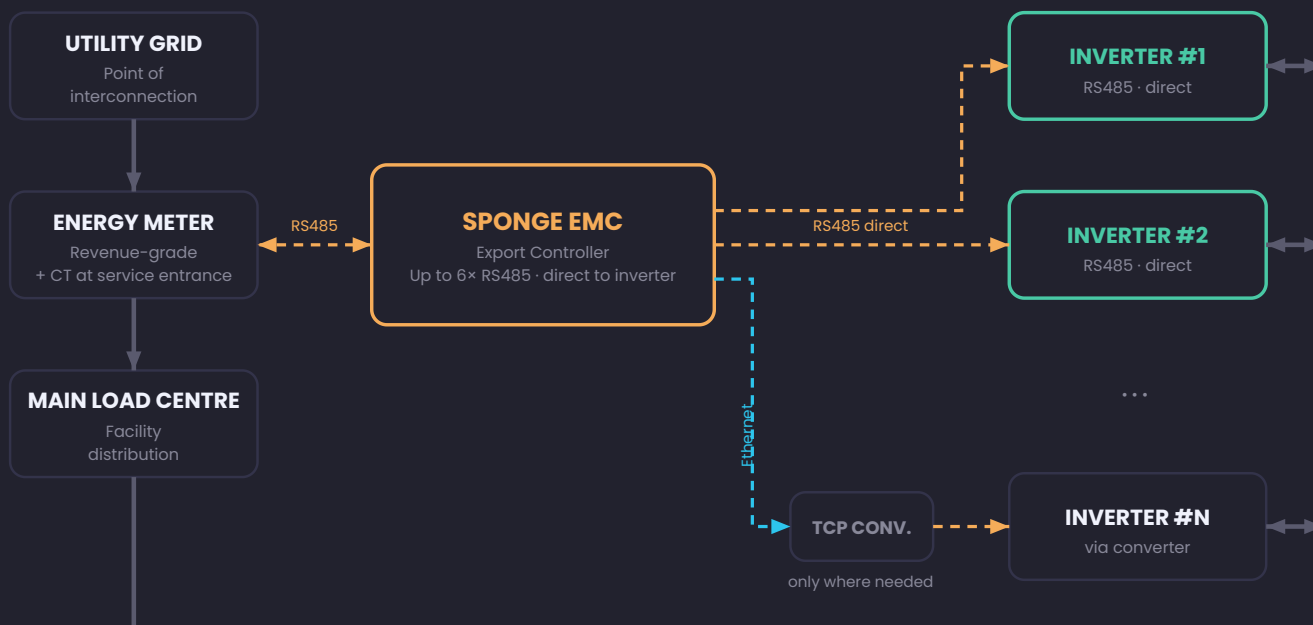


**MonitorBase — Zero-Export Project View:** EMC controls the inverter to ensure that solar production matches onsite consumption — fully offsetting the load whenever possible.

The EMC talks to the energy meter and each inverter directly over RS485 — up to six inverters on an EMC Pro. A TCP converter is only needed where an inverter sits beyond a practical RS485 run. All configurations are included in commissioning.

## Export Control Function Map

Direct RS485 to each inverter · a converter only where an inverter sits beyond a practical cable run



— Power / Wiring    - - - RS485 control (Modbus RTU)    - - - Ethernet (Modbus TCP)

Diagram is schematic — not installation drawings

## 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 and ships the hardware. Your crew mounts, connects, and commissions the system, with Sponge support on call.

01



### Design Consultation

Email your project SLD to [info@sponge.to](mailto: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, you're ready to commission from the Sponge app.

04



### Guided Commissioning

Commission the system from the Sponge app: build the single-line diagram, configure each component, and run Verify Configuration. Set the grid export limit to match the interconnection agreement, enable Actively Control Grid Export on every participating inverter, then confirm the Export Control Active banner on the dashboard. Control goes live the moment commissioning completes, with no discovery period. Capable crews run this solo; Sponge support is on call at [info@sponge.to](mailto:info@sponge.to) when you need it.

#### 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](mailto:info@sponge.to) or our distribution partner at [sales@frankensolar.ca](mailto:sales@frankensolar.ca)