## OUR VISION OF SMART CITIES



The intelligent electricity network (Smart Grid) is the backbone of every Smart City. Today's cities consume 75% of the energy. Smarter Buildings accounting for 40% of energy use provide customers with information of their usage to make smarter decisions.

Smarter equipment is needed for the Smart Grid to provide reliable integration of distributed renewable energies, energy storage and electric vehicle charging stations.

LEM improves the grid by measuring electrical parameters (current and voltage, AC and DC, etc.) allowing control rooms to automate, monitor remotely and share real-time data of their equipment.

By working closely together with our OEM customers, we provide innovative, accurate, reliable, easy-to install, non-intrusive sensors for better performance on the grid and smarter cities.

#### → LEM CITY COMPONENTS

**RT** Series TOP Series EMN Series Flexible Rogowski Coil Split-Core Current Wireless Energy Meter (New ART series Transformer (New ATO Node "Wi-LEM" coming soon) series coming soon) Most accurate flexible AC Compact easy clip-on without Single or three phase energy meter with Open protocol measurements with unique disconnection for accurate AC "Perfect Loop" coil clasp measurements transmission → Thin, Flexible, Light weight → Class 3 → Current 20-5000 A → Diameter 70-125 mm → Voltage 90-500 V AC → Range 75 A → Diameter 10-16 mm → Comprehensive monitoring  $\rightarrow$  Position error < 0.65 % → Cut installation costs → No saturation → Output: mA → Electrostatic shield → Standard IEC 61869-2 → Easy commissioning

→ OUR ACTIVITIES Founded in 1972, LEM is the market leader in designing and manufacturing current and voltage transducers worldwide. We:

→ Act as Pure play components company.

- → Produce components for electrical parameter measurements.
- → Offer full-standard or customized (private label) portfolio.
- → Support innovative Smart-up's.
- → Follow Industrial standards, Six Sigma method, IEC standards and UL.





## OUR APPLICATIONS

	→ Power Generator	
	The electricity is conducted to the network and measured at the output of the generator through the RT current sensors, which are connected to the energy meter.	
	→ Home Energy Management (HEM)	
	HEM with TOP current sensors to inform the occupants of their energy use by displaying the result of these measurements in order to better control consumption.	
	→ Battery Monitoring System (BMS)	
	Automated, compact and simple to install, home energy storage with BMS + TOP current sensors allows independence from the grid, emergency backup and avoiding peak demand rates.	
Power Meter	$\rightarrow$ MV/LV Substation	
P	A Smart Meter installed in the LV panel measures the transformer's health with non-intrusive RT current sensors allowing safe commissioning on a "live" transformer.	
	→ Submetering	
	To reduce the electricity consumption in a building, the Wi-LEM (EMN+TOP/RT) energy solution provides site managers and users with the power consumption of equipment, departments, floors, buildings	
	→ EV Charging Station	
	The challenge is to provide fast charging without	
	The charger uses the TOP sensor to measure the AC current.	
DHR	→ Solar Power Plant	
	The detection of any defective solar string, reducing the total output of the installation, must be made in real time. A simple way to detect this is to check the current produced by each group of strings with the DHR transducer.	

# OUR CONTACTS



At the heart of our planet's energy measurements www.lemcity.com

#### LEM has local roots but global reach with same quality around the world !





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### **ENERGY SENSING FOR SMARTER CITIES**

Measuring the Smart Grid - the Backbone of Smart Cities





