



Batteries for smart meters in Russia, that stand the test of weather, come hell or deep frost

Saft Li-SOCl₂, a right as rain solution delivering high and stable operating voltage under any temperature

Key benefits for Vega-Absolute

- A continuous service guaranteed, even under extreme temperatures
- A compact solution that is compatible with LoRaWAN energy needs
- An optimized Total Cost of Ownership (TCO) over the whole life of the metering device compared to other batteries

Features of Saft's power solution

- A battery solution sustaining extreme temperatures, matching all environment conditions
- A Lithium-Thionyl chloride (Li-SOCl₂) chemistry adapted to high-voltage requirements
- A low self-discharge for extended operating life

The challenge: Finding a reliable autonomous power solution capable of withstanding temperatures ranging from - 60°C to + 85°C

Russian weather can be unpredictable. Depending on the season and the location, temperatures can vary from - 60°C to + 85°C.

For Vega Absolute, who specializes in smart utility metering systems for the Russian market, it was a real challenge to find the right battery solution for their range of smart meters. 24 years of experience and more than 700 000 devices produced every year have made them a key player

in Russia's IoT market. Their electronic water meters, pulse counters, gas meters and modems are deployed across several major Russian cities. All of their connected devices are using the low power consuming LoRaWAN communication protocol. A high and stable operating voltage was required, therefore placing high expectations on the battery.

The solution: Saft LS Li-SOCl₂ primary lithium batteries.

Not any battery or battery chemistry can withstand such a wide range of temperature and sustain high voltage over a long period of time. The temperature

has a strong impact on electrochemical efficiency: a low temperature protects the battery from self-discharge, ensuring a longer operating lifetime but can create low voltage readings; high temperatures promote passivation which protects the battery from discharging but can cause voltage delays.

For a metering application that has to deliver reliable information over the course of its – longest possible – life, the choice of battery was more than a mere technical decision. It could influence the whole efficiency of the devices and have a massive impact on the cost of ownership if the devices had to be replaced frequently.

“*Saft batteries are the perfect fit for Russian market as they can sustain very harsh conditions meeting the most stringent requirements for reliability, quality, safety and power. All this, encouraging local content while using qualified Russian lithium.*”

Valery Krasnikov, CEO at Vega-Absolute



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