

Energy Metering: Integration from traction to billing





Agenda

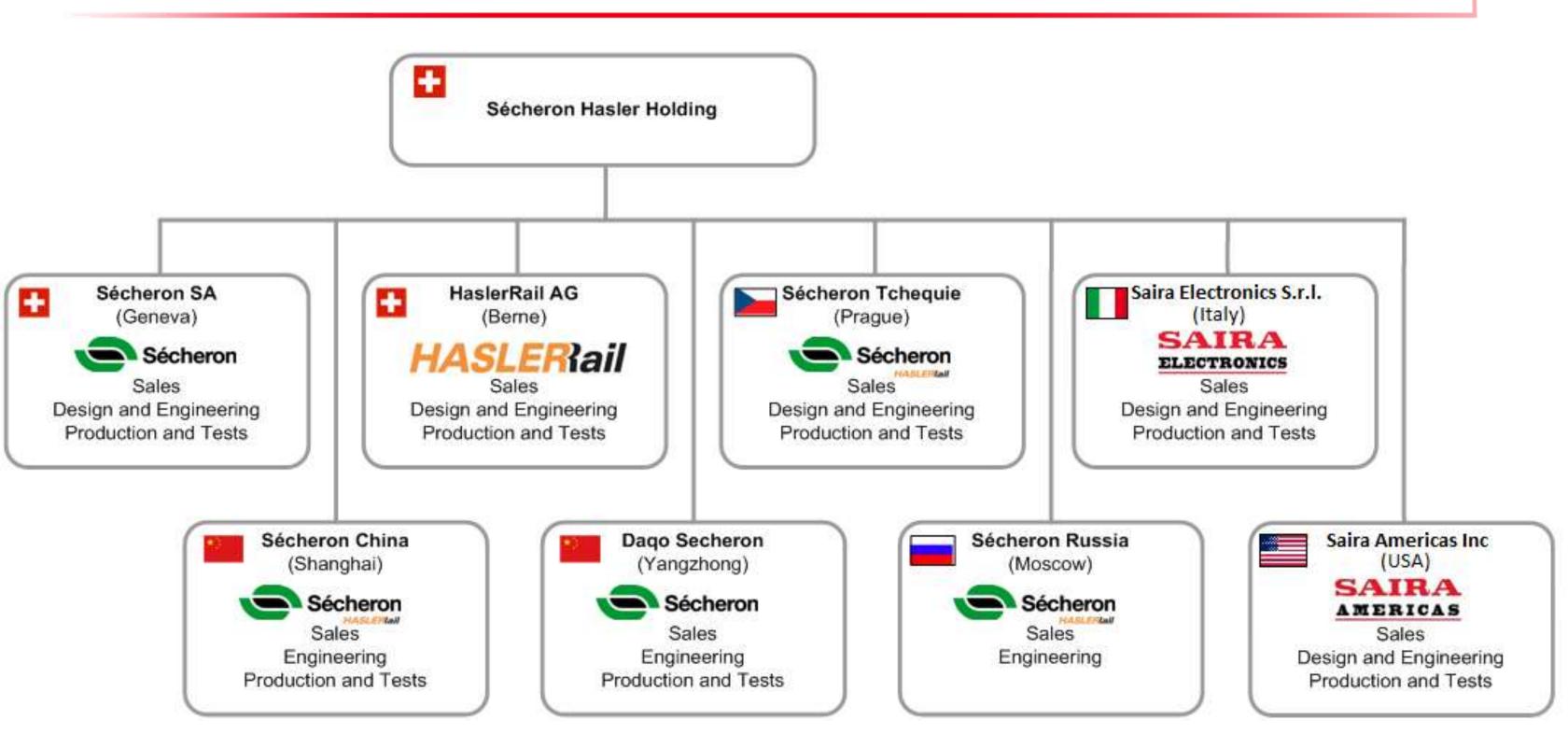
- 1. Saira Electronics, now.
- 2. EMS: a roadmap of experiences and success
- 3. Integration of the EMS with protection systems and traction control
- 4. The new generation DCS Enegy portal



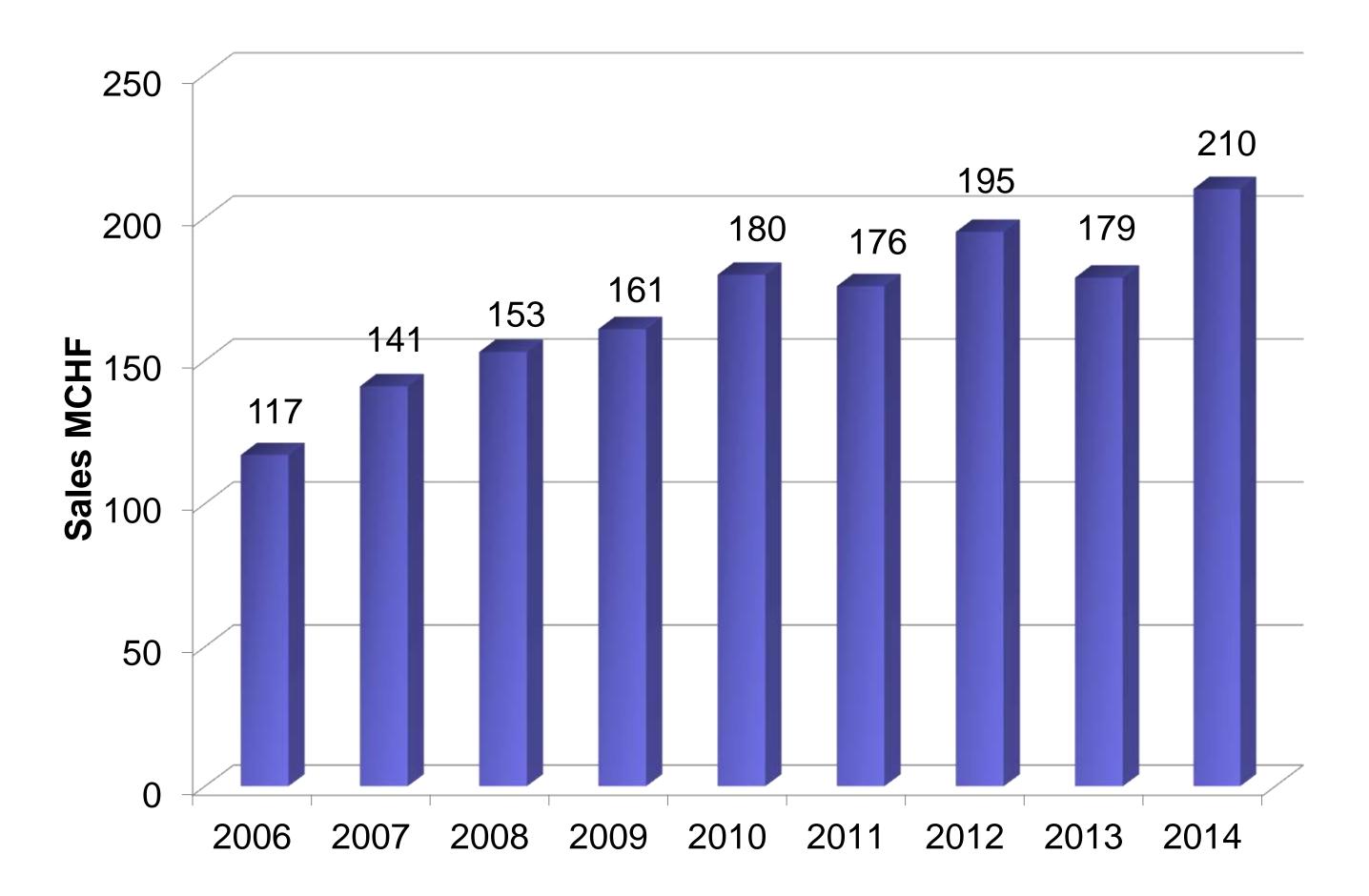
-orgot your password ? no worries, dick to reset your password.



Saira Electronics, now.



Group Turnover





Worldwide presence





EMS Installations

Background of our experience

- 2007-2009 Product Design Phase and EN+BS validation
- 2009 UK office Opened
- 2010 UK trial tests with some TOCs
- 2011 Start of mass production for Billing
- 2012 Release of EN50463
- 2013 Certification of EN50463



EMS Installations

More then 2000 Installations

UK			NETHE	NETHERNLAND			
CLASS 319	DC-AC	25 kV / 750 V DC	CLASS 1700		DC	1.5KV DC	
CLASS 318	AC	25 kV AC	CLASS 4000		DC	1.5KV DC	
CLASS 313	AC	25 kV AC	CLASS 8000		DC	1.5KV DC	
CLASS 320	AC	25 kV AC					
CLASS 365	AC	25 kV AC					
CLASS 455	DC	750 V DC	NORWAY				
CLASS 458	DC	750 V DC	EL16 LOCO		AC	15kV AC	
CLASS 444	DC	750 V DC					
CLASS 377	DC	750 V DC	FINLAND				
CLASS 442	DC	750 V DC	SR1 LOCO		AC	25kV AC	
CLASS 455	DC	750 V DC					
CLASS 321	AC	25 kV AC	SWEDEN				
CLASS 323	AC	25 kV AC	BR185		AC	25kV AC	
CLASS 86	AC	25 kV AC	X2		AC	25kV AC	
CLASS 89	AC	25 kV AC					
CLASS 90	AC	25 kV AC	ITALY				
CLASS 90	AC	25 kV AC	ET500	AC/DC	25kV AC/3kV DC		
GWML	AC	25 kV AC	TAF27 DC 3k		3kV DC		
ECML	AC	25 kV AC					
			TURKEY				
BELGIUM			E43		AC	25kV	
TRAXX T28 AC-	DC 25/15 k	V AC 4kV/1.5kV DC					



Integration of the EMS with protection systems and traction control

Saira EMS integrated and tested additional functions:

At on board level:

- Transducers with dual output (EMF+Traction)
- Integrated Line protection (VCB protection + panto diag.)
- TCMS interface
- Integrated MCG (DCS for other end devices)
- WiFi commissioning

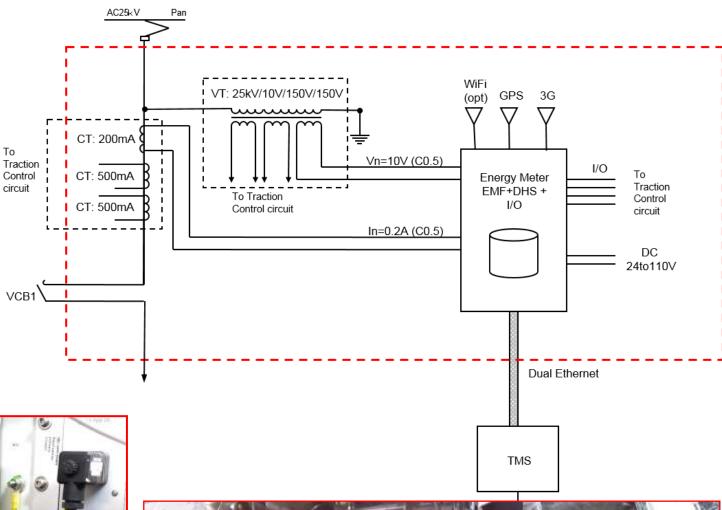
At DCS level:

- Full remote access
- Real time monitoring
- Integration with substation monitoring
- Compliance to other EMS

Advantages:

- Reduced system cost
- Reduced installation time
- Encreased system diagnostics







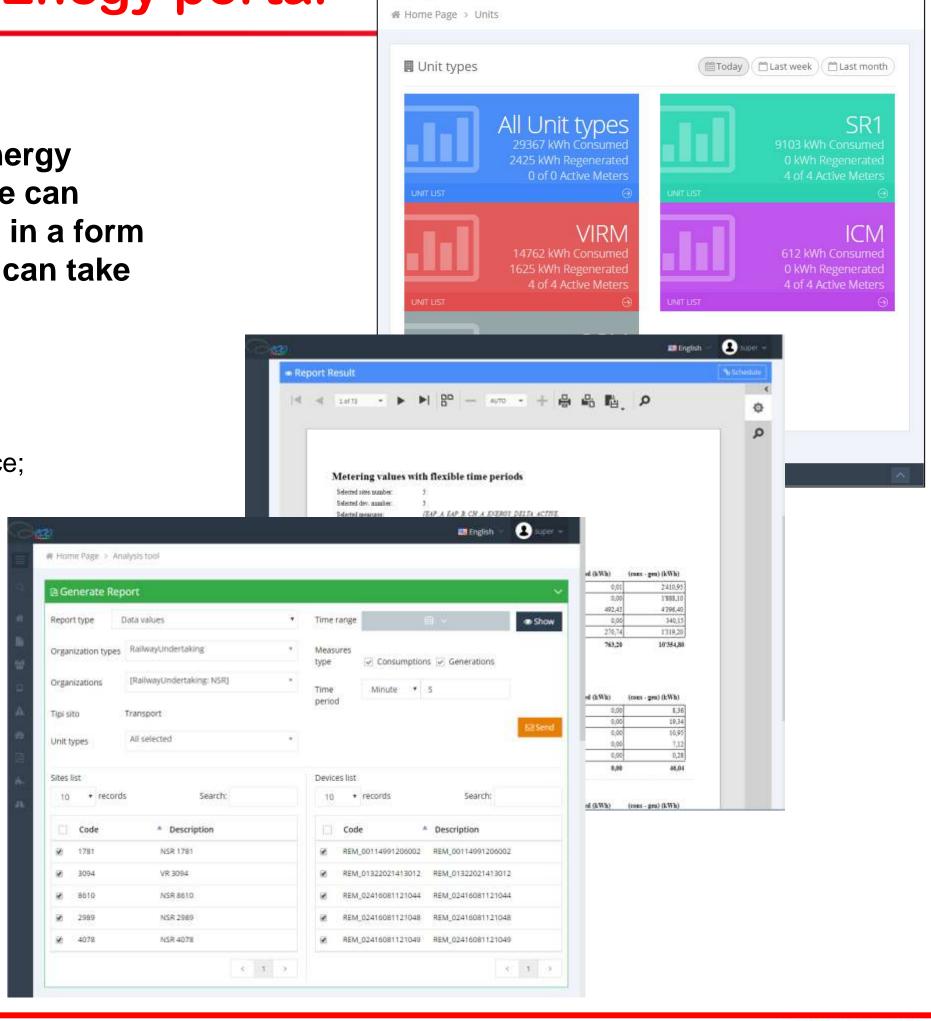


The new generation DCS Enegy portal

Energy Portal main goal is to give to the energy manager a <u>single shareable place</u>, where he can transform raw data into useful information, in a form that is easily understandable to those who can take energy saving decisions.

Energy Portal is a web application that:

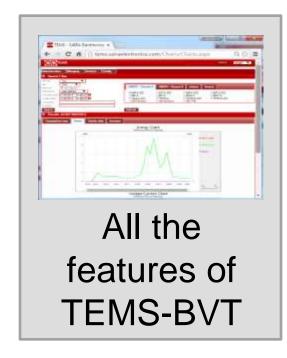
- 1. collects data from any kind of measurement device;
- validates collected data on the basis of an extendable set of rules;
- 3. automates operative procedures such as:
 - thresholds monitoring
 - energy model executions
 - report distributions
 - remote control
 - billing





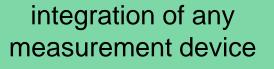
super v

The new generation DCS Enegy portal











custom dashboard, widgets and report

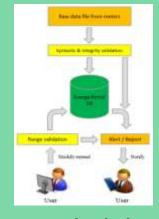


remote access

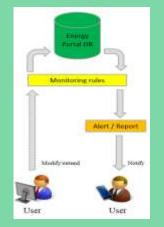




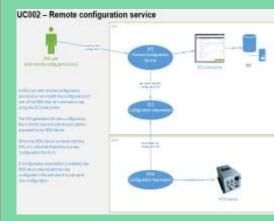
advanced data reporting



extended data validation



user defined monitoring rules



remote configuration management





State-of-the-art software foundation



RESTful API for interoperability



extendable ETL scripts

Saira Electronics

THANK YOU

