



ESEC[®]
EAST SEA ENERGY ENVIRONMENT



Project: Active Harmonic Filter Solution
Customer: NOI BAI INTERNATIONAL AIRPORT

TURN IT BALANCE



Customer Profile



Noi Bai International Airport is the largest international airport of Northern Vietnam, serving the capital of Hanoi and the neighborhood, replacing the old Gia Lam airport.

TURN IT BALANCE

The Competition



Our main competition is MERUS, POWERMORE, which has an installed base of variable speed drives in the customer's facilities, but the competition is eliminated due to the strong technical team & ESEC's capability.

10:15

Customer Challenge

Harmonic current generated by motion control and VSD system is high that led to high harmonic current and voltage distortion, that results in:

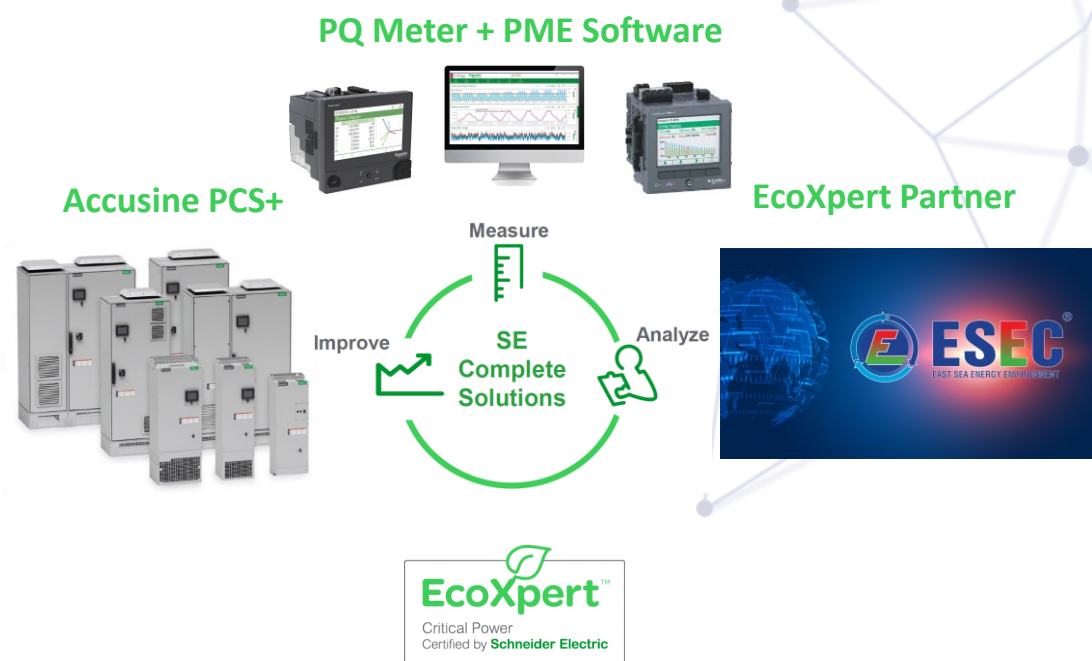
Neutral overload due to 3rd harmonic currents

MCCB trip, overheating cable

Busbar overheating (more than 70°C)

Poor power quality caused by LED lights and PCs

Reduce harmonic level into safe region as suggested by Regular 39,30 – Vietnam MOIT & IEEE 519 standard. < 5% TDD.

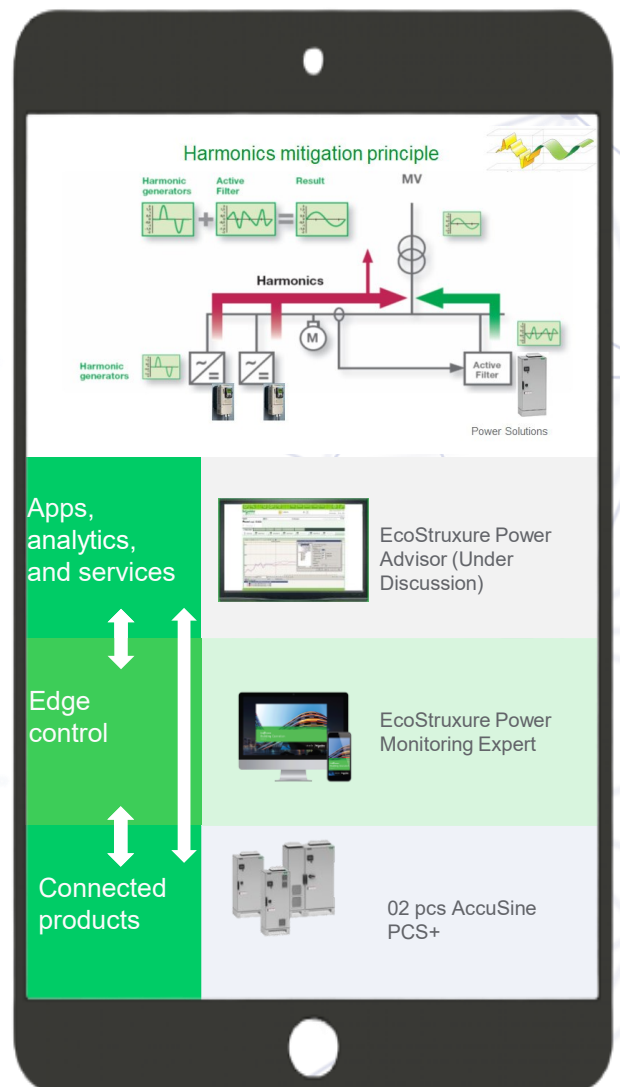


The Solution

Power Quality
Assessment Service
done by ESEC's
Team

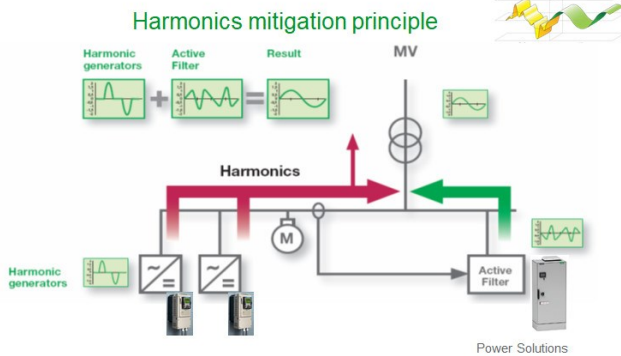
06 pcs of AccuSine
PCS+ for MSB 1,2,3

Power Monitoring
Expert with 03
ION8650



Customer benefits

Power quality (Harmonic) of Hoa Phat Dung Quat will comply with IEEE 519 and TCVN (Regular 39 & 30 – Vietnam MOIT) standard
 Improve power reliability and productivity (power management)

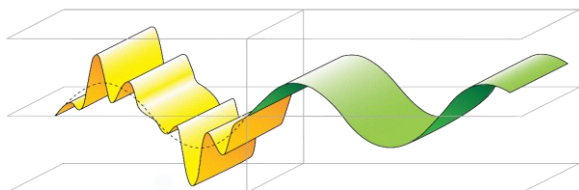


❖ Reduce peak currents which frees system capacity

- Limit current distortion
- Cancel the effects of harmonics

❖ Avoid equipment damage or shortened life (asset management)

- Reduced harmonics diminishes the production of excessive heat
- Prevent logic faults which can result in downtime
- Improve equipment service life time



Parameter	Before	After
THDv	11.7%	5.3%
THDi	22.4%	5%
DPF		1.0

❖ Improve financial performance (cost management)

- Reduce power factor penalties