
Darmstadt, DE, September 9, 2013

Essential Facts about PFC in Siemens Elektromotory Mohelnice
Who is the Customer

- The biggest Siemens plant in Europe
- Covered area of > 30 ha
- 2 100 employees
- > 50 buildings and halls
- Design and production of electric motors with output 0.3 - 15 kW
- Own iron foundry
- ø 7000 motors per day
First meetings and negotiations in 3.Q 2006
- High savings potential discovered, short payback time
- Customer interest in energy efficiency
- Preliminary Analysis Report submitted in October 2006
Pre - Project Situation

- Central heat supply
- High loss in distribution system
- Obsolete heat exchanger stations in buildings
- Incomplete BMS
- Good energy management with limited control possibilities
- Baseline heat consumption 122 900 GJ p.a.
- Continuously rising energy unit price
Acquisition Phase

- January 2007 – April 2007 …searching possible ways to finance the project
- May 2007 …the only solution is: the plant must finance alone
- October 2007 …LoI signed
- November 2007 – February 2008 …Detailed Analysis
- November 2007 …Heat delivery contract terminated by the plant!!!
- March – July 2008 …PFC contract negotiations
Project Description

- design + project management
- new gas pipeline network
- new local boiler plants
- new quick steam generators for production purposes
- reconstruction of heat-exchanger stations
- new BMS Desigo PX incl. 36 submeters and control center
- integration of existing Honeywell controllers
- tariff measure
- energy management + EMC

- Guaranteed savings: 6 795 GJ p.a. (EUR 0,59 million)
- Implementation phase: 04/2008 – 03/2009
- Performance Assurance: 1.5.2009 – 30.4.2012 (3 years)
- Investment: EUR 1,76 million
Planning
Project Results

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total savings</td>
<td>1 698 489 €</td>
<td>1 839 333 €</td>
<td>2 089 037 €</td>
</tr>
<tr>
<td>Guaranteed savings</td>
<td>543 115 €</td>
<td>564 840 €</td>
<td>587 434 €</td>
</tr>
<tr>
<td>Surplus</td>
<td>1 155 374 €</td>
<td>1 274 493 €</td>
<td>1 501 603 €</td>
</tr>
</tbody>
</table>

- €
Project Results

- All work completed according to agreed plan
- 100% functionality of the new equipment
- Savings achieved

- European Energy Service Award 2009
  for the Best European Energy Service Project in Commercial Sector
Key Success Factors

- Consolidated and motivated project team
- Support from local Siemens Management and HQ
- Trust in proposed and implemented solution
- VERY cooperative and cool - headed partner on the customer’s side
Our Team from 2008 to 2011

Radim Kohoutek
EES Head/ SR

Marie Velíková
BAU BA Head

Jiří Dupal
SR

Milan Vodička
EE

Jiří Pulkrábek
EE

Martin Šulc
PA

Jaroslav Kunc
PM

Lubomír Zejda
PM

Jiří Hrouda
PM/ SR

Page 12

Radim Kohoutek, BAU LCM E

Siemens s.r.o / Building Technologies
What Could Have Been Done Even Better

- More clear rules for PFC between Siemens Companies
- More time for planning and project development
- Separate project team incl. 3 PMs since the very beginning

...NO PAIN NO GAIN
What Next in Mohelnice?

- Lighting retrofit …*partly done*
- Electrical energy consumption optimization …*continues*
- AOC connection …*done*
- Green Building Monitor …*to be prepared*
- Cooperation on ME! …*continues*
- …
- Green Building (Plant) Certificate?
Thank You for Your Attention

Radim Kohoutek, EES Manager
SIEMENS, s.r.o.
Building Technologies Division
Siemensova 1, 155 00 Praha 13
E-mail: radim.kohoutek@siemens.com