



Technical Documentation - Concepts for Energy Industry Sectors

Rolf Schwanecke

Let's make engineering easy!

 **AUCOTEC**



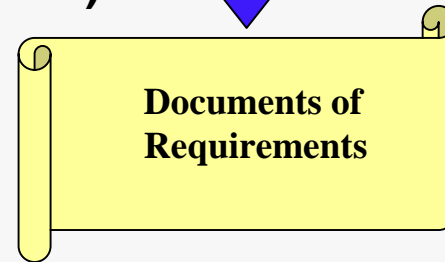


Project Organization

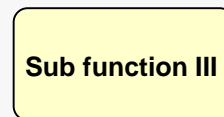
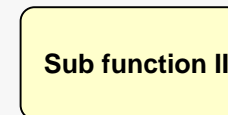
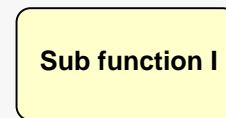
OEM (Original Equipment Manufacturer) :

- Allocation of the guidelines (norms, tools, systems)
- Definition of the project management
- Quality management

GC (General Contractor):



Sub suppliers:



Project Organization

Organize and Control
Technical Projects

Support for strategic or
critical projects

Our way within this industry
sector...

AUCOTEC's - Energy
Competence Center

Energy References

Customer advantages

Industry – Sector – Specific
Standard

The Components

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Product Choice




Organize and Control technical projects – Support for strategic or critical projects

	OEM	GC, Sub supplier, designer
Engineering	Conception (specifications, rules)	
Construction/ Commissioning		engineering, construction, commissioning, documentation
Operating Mode	checking, acceptance, maintenance, upkeep of the documentation	



Our way within this Industry Sector ...

- AUCOTEC's Energy Competence Center was founded by the company AEG
- AEG was one of the important General Contractors in the Energy market place
- **Initial situation:**
 - Each company in the Energy market place had its own standard
 - This resulted in increased engineering and co-ordination costs as well as insoluble Quality Control problems
 - Additional outlay for the GCs and the Sub suppliers

Contracting of AEG for the development of an industry – specific - standard in the Energy market place, under control of **Preussen Elektra** - today 

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AUCOTEC's Energy Competence Center

Today we are increasing the goodwill of our customers with:

- Innovative, custom - tailored industry – sector - specific solutions for Power Generation, Transmission and Distribution
- System continuity, modularity and control over the entire process chain
- Reduction of the „Cost of Ownership“ along the entire process chain
- Collaboration in standardization committees (e.G. **IG EVU***)
- International market presence with comprehensive „Know How“
- On a long - term basis and trustworthy partnerships and contracts
- Solution and cost consciousness with the AUCOTEC employees

* = Interessengemeinschaft der Energieversorgungsunternehmen
(Community of interests of companies in the Energy market)

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AUCOTEC's Energy References

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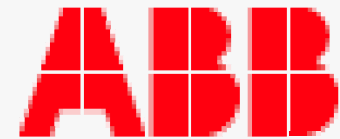
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Customer Advantages because of AUCOTEC's Energy Competence Center

- Faster and easier Engineering, Documentation and Quality Control because of standardization
- Shorter project processing times and less OEM costs throughout commissioning and maintenance
- Flexibility during installations of add – on units
- Continuous and consistent flow of information from the field level to ERP
- World wide available services
- Assurance of investment because of continuity and compatibility

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Industry – Sector - Specific Standard for the Energy industry

- Acceptable standard for all bigger Power suppliers and System integrators in Germany, Austria, Switzerland, Czech Republic and Slovakia
- Approved for more than 15 years
- Permanent further development with documents of requirements from OEMs, system integrators and engineering companies
- Long - term data security because of upward compatibility
- Integration of the new international norms

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The Components of AUCOTEC's Industry – Sector – Specific solution for the Energy market place

Requirements for an Industry – Sector – Specific standard:

- Global Acceptance in the market
- Continuous system of rules
- High functionality and flexibility
- Standardized documentation – Look & Feel
- Convenient bulk data editing
- Automated engineering and design

Guideline for the System Documentation

CAE – System with basic functionalities

Uniform database for symbols, devices, applications

Quality control tools for quality protection and verification

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Benefits to the customer with an Industry – Sector – Specific Solution for the Energy Industry

OEM (Power plants or Power networks):

- Uniform suitability for further processing of sets of documents from all suppliers
- Ultimate quality standard
- Consistent and comprehensive documentation
- Cost savings because of error avoidance
- Time savings because of fully automatic checks

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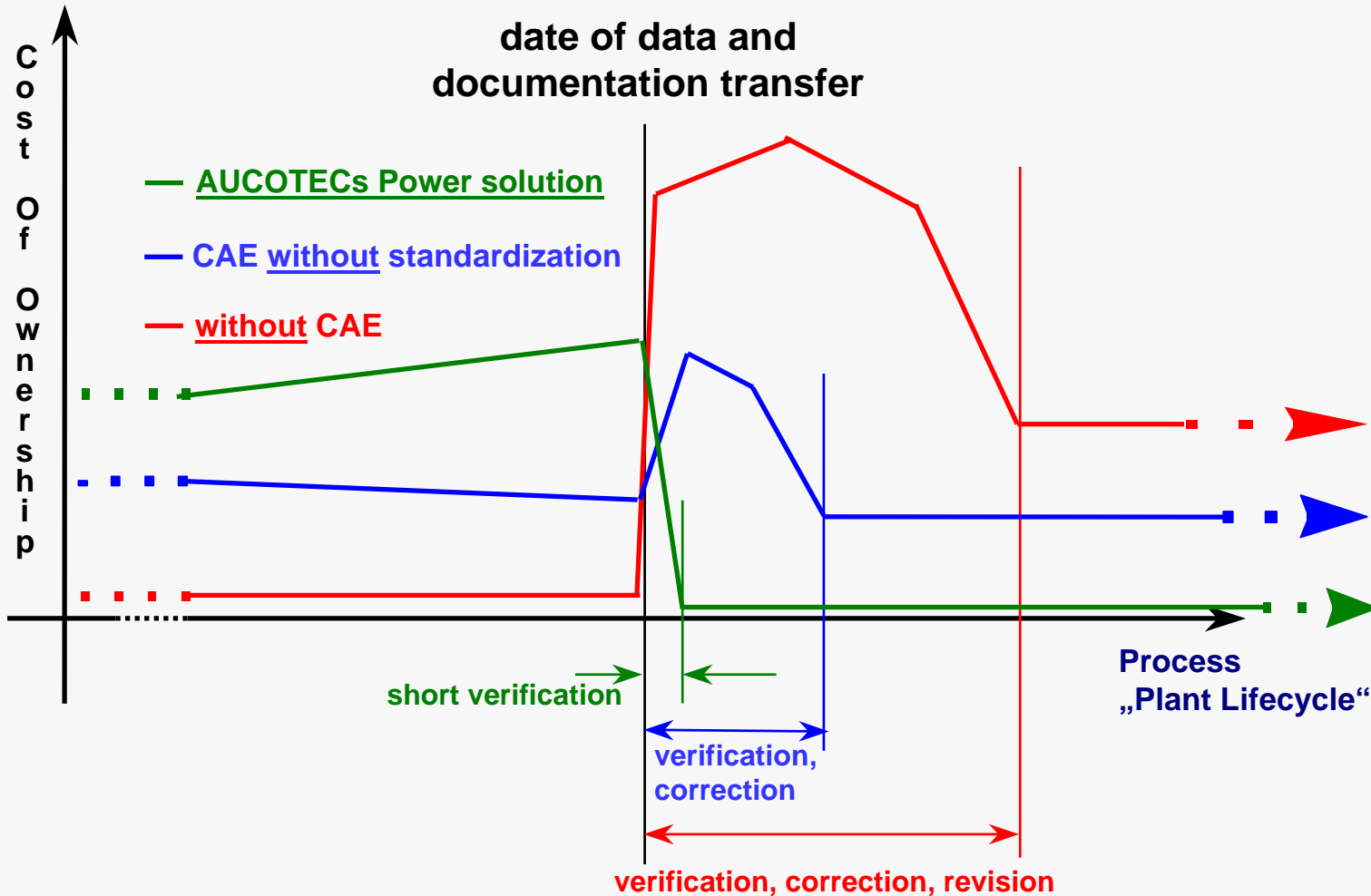
Tool Set requirements

Product Choice



Cost situation for OEM

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Benefit to the customer with an Industry – Sector – Specific solution for the Energy Industry

System integrators:

- Uniform default specifications in all tenders
- Extensive automated generation of documentation
- Cost savings because of avoidance of special solutions
- Simplified acceptance because of automated pre - checks

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Industry – Sector – Specific functionalities

- Standardized documentation for different norms:
 - DIN 40719, 6779, 60900 .
 - KKS (Power Plant specific numbering system)
 - IEC 61345, IEC 61355, IEC 60617, ...
- Resource scheduling
- Wiring diagram for multiple connections
- Integrated function chart editor
- Integrated planning guideline from IG EVU
- Detailed default data to create the documentation
- Automated and comprehensive quality control system

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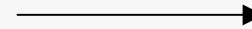
Tool Set requirements

Product Choice



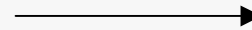
Our Range of Goods and Services

Guideline for the
System Documentation



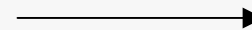
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CAE – System with
basic functionalities



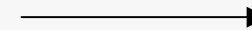
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Uniform database for
symbols, devices, applications



description..

Quality control tools for
quality protection and verification



description..

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Tool Set Requirements

- Processor \geq 500 MHz
- RAM \geq 256 MByte
- Operating Systems
 - Windows 2000
 - Windows XP Professional
 - Windows 2003
- Network protocol TCP/IP
- Hard disk \geq 1 GByte
- Graphics screen 19", 256 colors, resolution \geq 1024 * 768
- Internet Explorer \geq V 5.0

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Product Choice – Influencing Factors

- Legal requirements
- Delivery instructions
- Future - oriented
- Technical requirements
- Standardization level
- Engineering flexibility
- Integration capabilities

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Product Choice – Decision Matrix

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	Italy Spain Russia		Czech Republic	Germany Austria Switzerland
RUPLAN Power				
Engineering Base				


Standardization level

United Kingdom, Sweden, Poland, Denmark, Finland, etc.



AUCOTEC's ENERGY COMPETENCE CENTER

- AT A GLANCE -

Rolf Schwanecke

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 **AUCOTEC**





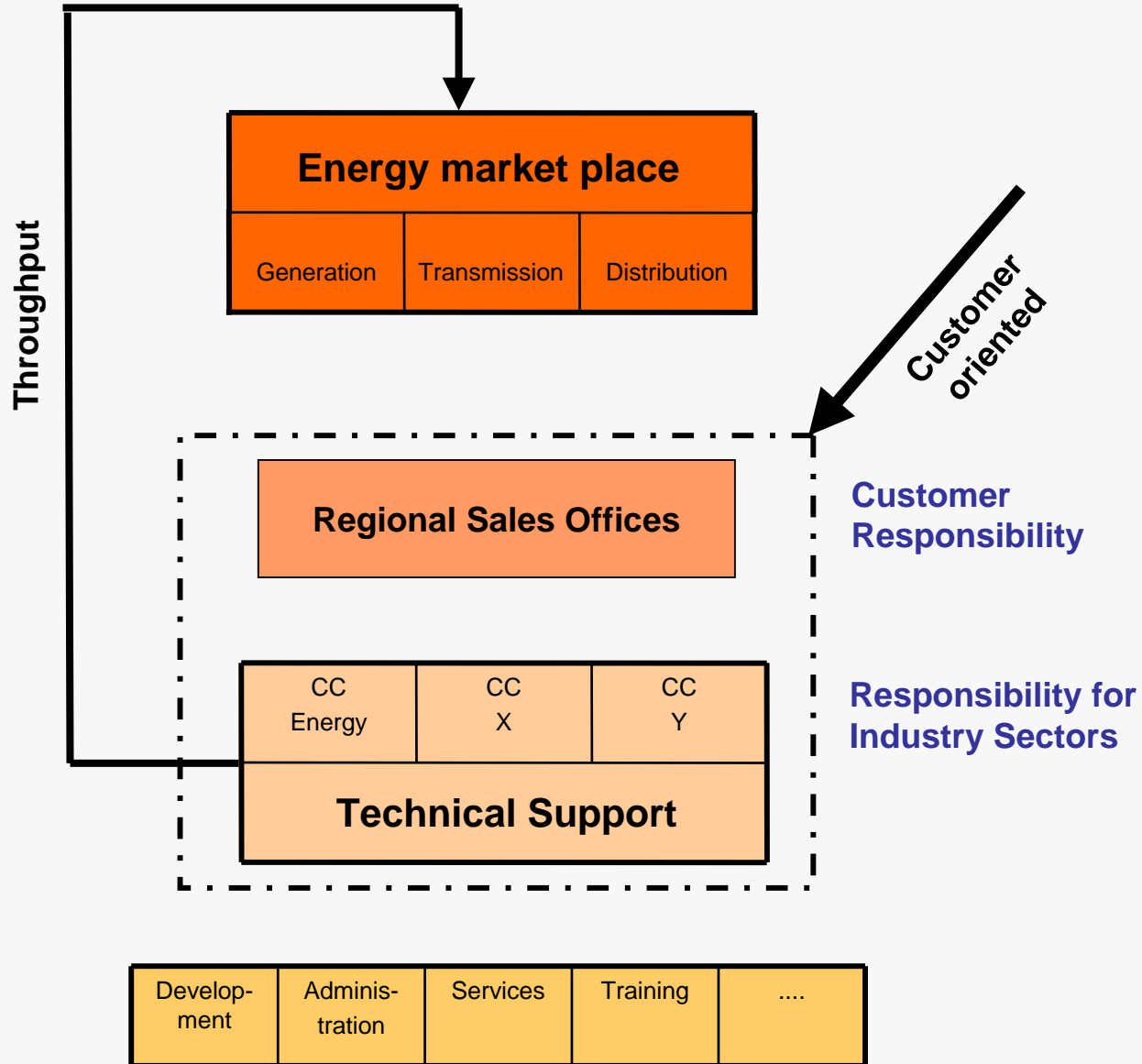
Organization

Our strengths

Customer advantages

Energy references

CAPEX figures





AUCOTEC's - Energy Competence Center

Our strengths:

- Complete product and system range with a world wide operating support, service and partner network
- „Easy to Use“ - products
- Comprehensive technical „Know how“
- Complimentary, customer oriented training possibilities
- Excellent market position
- Future and investment security
- Competitive delivery conditions

Organization

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CAPEX figures

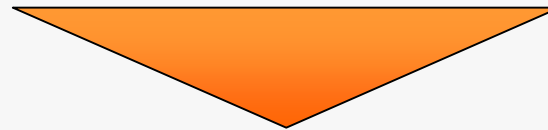


AUCOTEC's - Energy Competence Center

- Customer advantages because of future orientation -



Higher economic efficiency - optimized investment



- Faster and easier engineering because of standardization
- Shorter project processing times and less costs
- Flexibility during installations of add – on units
- Fully integrated supply chain management because of standardized quality supervision

- Consistent flow of information from the field level to ERP
- Availability of world wide services
- Investment security because of continuity and compatibility

Organization

Our strengths

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CAPEX figures



AUCOTEC`s Energy References

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CAPEX figures

EnBW

badenova

PFALZWERKE

EWE

SIEMENS

OVGAG
Energie und Wasser

e-on

RWE

ESAG

ABB

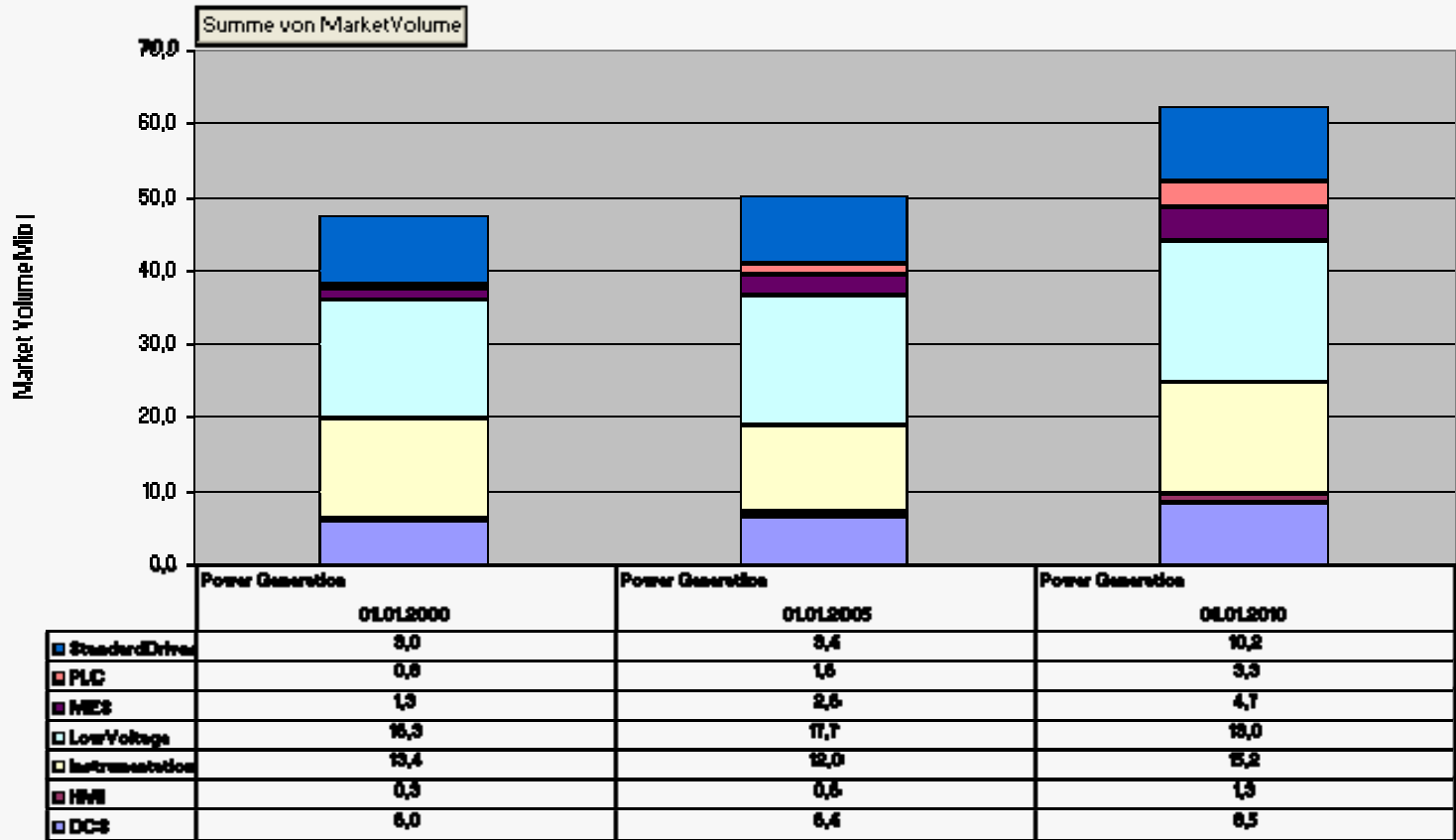
VATTENFALL



AREVA



World Market Investments in the Power Industry market place



Organization

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