

## ***Company Profile***



**IPSOS Industrial Consulting GmbH**  
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*IPSOS Industrial Consulting is a specialised Consultant and Engineering Bureau for Planning in the fields of network/grid control, supervisory control and data acquisition (SCADA) for gas suppliers, mainly. When the liberalised market for electric and gas energy started in Germany some years ago we extended our knowledge so that we can offer now highly qualified consulting for utility companies in that field. Gas quality tracking by simulation (biogas feedings) and network optimisation is also our special know-how .*

## Competence

For more than thirty years we work as engineers in the field of gas supply, especially gas grids and stations. Starting from planning and realisation our business model has moved over the years towards consulting. This fact mainly results from our contacts and experience with many utility companies (Transport/Distribution/Storage System Operators) and their equipment. This enabled us to acquire detailed knowledge as well as an excellent overview for its possibilities and/or typical problems. Our know-how and potential of experience we use in order to support our customers to realize important projects or to introduce operational or technical changes.

## Our Basis

IPSOS Industrial Consulting acts as an independent partner who consults in neutral way. Based on high technological knowledge, wide expertise in system- and IT-techniques we lead even demanding projects to success.

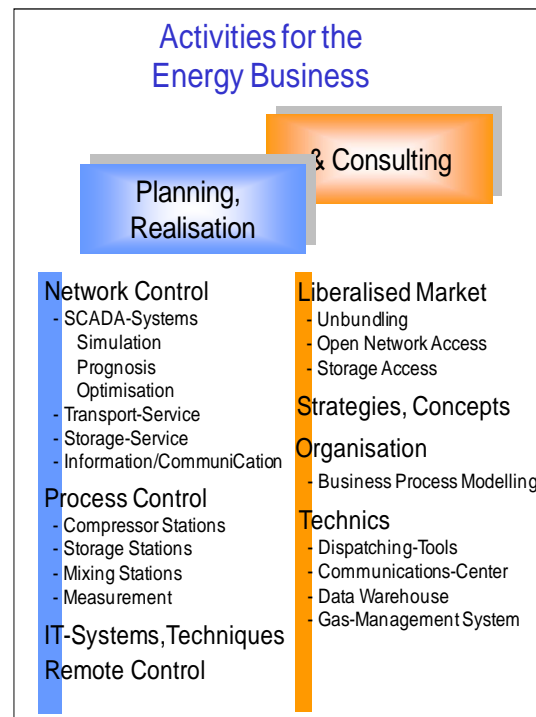
We own an experience of more than thirty years in SCADA systems, simulation and technological applications. There we used initially own developments, actually systems of the technologically leading companies for important projects. Looking back to many different tasks and solutions for the energy community/suppliers we worked on primary concepts, basic engineering, realisation and set to operation and to acceptance test, at home and abroad. Our typical projects are often long lasting; from several month to years.

## Planning Support and Consulting

In the course and as a consequence of many different consulting tasks, especially studies and requirement specifications, we have built a data base of many "standard specifications" which are based on our methods and check lists.

Workflow oriented modelling, objective views for the identification and representation of user/process functions are our preferred working techniques.

Content, structure and work-flow of business processes are key factors and thus responsible for the success of requested operational or technical improvements. We elaborated vertical analysis and studies for the leading companies in the gas supply business which led with respect to the liberalised environment to optimised work-flow and portfolio-management. With our customers we work continuously on innovative solutions of many short and long term questions in order to balance regional energy capacities and achieve open market access under operational and technical aspects. Our solutions have supported the top management always in a long lasting manner.





**Network Guidance and Control**

In the early 80<sup>th</sup> we developed own concepts to apply consumption forecast, simulation (GANESI) and operator guidance tools. These were followed soon by strategic studies and realisations which afterwards had been published in technical magazines and on congresses.

A special reference for our work is an important project from RWE Gas named Eurocontrol Gas which comprised the concept of a supranational integration of all control centres for all affiliated companies.

**Process Control, SCADA**

We have sound knowledge of SCADA-systems for the energy market. This is accompanied by continuous observation of the market and reinforced by tender invitation. The technical spectrum extends from visualisation via communication techniques to PLC and equipment selection which is our core competence. Our expert contacts to both user/operator and manufacturer enable us to objective insight into product performance and weakness beyond advertisement. Excellent reference is proved in all these fields of our expertise: compressor stations, underground storage stations, mixing stations, transport and distribution systems/networks.

**Project Control**

Surveyance and balancing of the key factors technics, time schedule and cost are the base of successful project management and fulfillment.

Originating from our own experience as well as serving our customers we collected and got ample experience for even complex projects. Successful project management means also the sum of correct decisions. This starts at planning and ends at reasonable coordination of the sequence of set to operation steps.

A set of tools at the state of the art for planning and current survey is used and will support us in this work.

**Additional Expertise**

We extended our expertise in the field of logistics and legal framework in order to answer many actual questions concerning the liberalised market and/or open network access in general and detail. Our customers always estimated our solutions/recommendations and elaborated strategies.

IPSOS IC is also a business partner for the network analysis program STANET from Fischer-Uhrig Engineering. Here we model gas networks and execute computations in various ways. A special expertise is gas quality tracking in distribution networks (incl. biogas injection, etc). For large networks (e.g. Berlin, Munic) we developed with our business partners optimisation concepts and action plans.

## Company Profile



### Innovative Thinking

Innovative thinking and reliable engineering is a fundamental understanding of our work aiming to find and design forward-looking solutions. This will be done in close cooperation with our customer to fit smoothly into the economic frame. We do not hesitate to propose unconventional solutions which may be realised according to customer's judgement.

### Our Customer's Confidence and Satisfaction

Satisfaction of our customers grows from technical expertise, thorough work and cost- plus time-reliability. This is proved by the high number of consecutive contracts.

### Highly Motivated Team

Our staff is a team that plays well together. They represent special knowledge as well as wide horizon. This is due to long experience and the ability to learn permanently.

### Scientific Consulting, Competence Network Backup

If required, we cooperate with other experts/scientists of our competence network to cover all necessary tasks.

Relying on our background of long experience for plants/equipment of energy supply, guidance of transport and distribution processes we are best enabled to analyse and solve tasks at your site efficiently, too.



## Contact

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**Personal Profile, References**

<b>Name</b>	Dr.-Ing. <b>Peter Haß</b>	
<b>Education</b>	<p>Abitur (High School Diploma) 1966 Berlin,</p> <p>Study of Flight Guidance &amp; Control and Air Traffic, Technical University Berlin</p> <p>German Master's Degree: Diplom-Ingenieur (Dipl.-Ing.)</p> <p>Thesis: "Optimised Routing in Air Transport based on Simulation of the Traffic Flow"</p> <p>Promotion to Advanced Professional Degree at Technical University Berlin: Doctor-Engineer, (Dr.-Ing.)</p>	<p>_____ <i>Jahr</i></p> <p>'72</p> <p>'79</p>
<b>Languages</b>	<p>German: (native)</p> <p>English: IT-technical, business level, (fluently)</p> <p>French: conversational (fluently)</p> <p>Latin, (AZF, etc..)</p>	
<b>Knowledge, Expertise</b>	<p>Design, planning and solution of tasks in the field of measurement, automatic control and supervision (SCADA)</p> <p>Remote control and protocol formats of communication techniques</p> <p>Flow computation of gas networks/grids and optimisation</p> <p>Elaboration of system concepts, requirement specifications, call for tenders and safety studies</p> <p>Project Leading &amp; Control, Project Organisation and Survey</p> <p>All essential processes in gas and electricity operation, market models for today's and tomorrow's liberalisation.</p> <p>Responsible Manager in guidance and control for automatisisation projects in many foreign countries.</p> <p>Operating Systems, Applications:</p> <p>Unix/Linux, Mac-OS, OS-9, Windows XP,- 7 , EDM, Aris Toolset, MS-Visio, Microsoft Office, MS-Project, Origin</p> <p><i>Special Expertise Gas Technology:</i></p> <p>* Processes in gas markets, market models in gas and electricity, liberalisation requirements today and in future</p> <p>* Project Management.</p> <p>* Network computation, gas quality tracking and reconstruction simulation, network optimisations, storage- and compressor operation</p> <p>* IT-Systems, techniques for automation, gas technology, simulation techniques, communication techniques, software-engineering, navigation,</p> <p>* div. programming languages, Data Bases.</p> <p>- EDM and Unbundling</p> <p>- Q2-2008: coregas-Training</p> <p>STANET- advanced training for experts:</p> <p>Implementing standard load profiles, acquisition of consumption data and its application</p>	
<b>Business Career</b>	<p>Scientific staff member, Technical University Berlin,</p> <p>Institute for Air- and Space -Transportation, FB Verkehrswesen,</p> <p>Section Flight-Simulation</p>	<p>'72-'77</p>

	Scientific staff member, project leader at PSI AG Berlin - Oil-, Energy- and Gas Technique Department - Software-Engineering	'78-'85
	General Manager at IPSOS company for Industrial Process Control and Organisational Systems GmbH in Berlin	'85-'04 '05
	Senior Partner at corporate practice for utilities GmbH&Co.KG in Oldenburg	-12-'08
	General Manager at IPSOS Industrial Consulting GmbH in Berlin	'05 - today
<b>Relevant Projects</b>	Österreichische Mineralöl-Verwaltung, <b>ÖMV</b> AG, Wien : SCADA system for Trans-Austria-Gaspipeline (TAG) (b. PSI)	'80
	Development of a Small Control System for Industrial Microcomputers (M/SCADA/VME)	'85-'95
	Westfälische Ferngas <b>WFG</b> , Dortmund : Installation of consumption forecast system, simulation study	'84, '92
	<b>Maingas / Mainova</b> , Frankfurt/M.: Prognosis and simulation system, advanced guidance features	'83, '88
	<b>Gas-Union</b> , Frankfurt: Simulation studies, gas quality reconstruction, Concept study for a decentralised Geographic-Information-System (GIS)	'89, '96
	<b>VNG Verbundnetz</b> AG, Leipzig : Concepts, 3D-reports, gas-management planning task support	'99
	<b>Inventa-Fischer</b> , Berlin: Concept and of an multi-user graphic user interface for simulations executed via internet (DynamicWeb)	'96, '97, '98
	<b>Bayer</b> AG Leverkusen, Antwerpen, Inventa-Fischer Berlin: System concept of a graphical user interface for the simulation of a plastics production plant, interfaces for the SCADA system	'98
	<b>Ruhrgas</b> AG , Essen : Prognosis, simulation and advanced guidance functions for the new SCADA system of the Dispatching-Centre	'97, '98
	<b>Inventa-Fischer</b> , Berlin: Integration and design of the automation of a plastic production plant, Honam, Korea	'98
	Haase-Automation, Schwerin: Automation of a colour coatings production plant (reinvest)	'01
	Jonas GmbH, Wülfrath <b>Mainova</b> AG, Frankfurt:	'02
	Consulting for advanced functions: planning and dispatching support by SCADA in the liberalised energy market; bidder and product selection and evaluation for a new SCADA system (incl. Gas-Union)	
	<b>RWE</b> Gas AG, Dortmund: EuroControl Gas, Concept of a supranational integration of all control centres for all affiliated companies	'02, '03
	<b>GASAG</b> Berlin: Concept and Surveyance of the integration of the SCADA systems of GASAG and EMB/ NBB	'04-'05
	<b>SWB</b> Stadtwerke Bremen: Capacity estimation of the network in preparation for liberalized markets,	'05
	E.ON <b>Hanse</b> , Quickborn: Analysis of the consumption structures for standard load profile assignments; implementation of a solution in SAP-IS-U (w.corepractice)	'05

E.ON <b>edis</b> , Fürstenwalde: Pre-study for the introduction of energy data management (EDM) and process modelling according to the requirements of GasNZV (w. corepractice)	'05
<b>SWB</b> Stadtwerke Bremen: Capacity calculation for gas storage according to liberalized market	'06
<b>SWD</b> , Delmenhorst: Preparative measures for open gas network access (w. corepractice)	'06
<b>E.ON Energie</b> : New technical concept for energy data management system (EDM), over all	'06
<b>E.ON Thüringer Energie</b> : New technical concept for energy data management system (EDM) and open	'06
<b>Wingas</b> , Kassel: Pilot-project for extended simulation of gas quality tracking and reconstruction for distribution networks (w. Fischer-Uhrig Engineering)	'06, '07, '08
E.ON <b>edis</b> , Fürstenwalde: Technical concept for interfaces between GIS and network computation using	'06, '07
<b>Mainova</b> AG, Frankfurt: Gas quality tracking for essential pipeline segments (STANET)	'06, '07
<b>NMR/EWMMR</b> , Bochum/Herne: Open network access, grid analysis and capacity calculation (w. coreservice)	'07
<b>E.ON Energie</b> , München: Concept for EEA strategy and operative realisation of exit zones (w. corepractice)	'07
E.ON <b>Westfalen Weser Netz</b> , Hameln: Capacity calculation and operation scenarios (w. corepractice)	'07
<b>Rheinenergie</b> Köln: Technical concept for continuous load measurement and processing of consumption figures into IT-systems according to GasNZV (w.corepractice)	'07, '08
<b>SWM Stadtwerke München</b> : Network optimisation (master plan network, part regulators) (w. Fischer-Uhrig, BfR)	'07, '08
<b>SFT Saar Ferngas Transport/CREOS</b> : Network optimisation (master plan network) (w. Fischer-Uhrig, STANET)	'07, '08
<b>Essent</b> , NL: Technological and automation consulting, safety study integrating new storage (caverns) at UGS Epe	08, '09
<b>RWE WVE</b> Dortmund: Project coordinator (deputy) for E-/MSR-reinvest compressor station Hünxe, technologic consulting, safety study and surveyance	'08
<b>Stadtwerke Kassel</b> , Network concept gas network (network optimisation)	'08, '09
<b>RBS Wave</b> Stuttgart: Feasibility Study for CO2-Pipeline Germany-Algeria	'10
<b>Thyssengas</b> , Dortmund: Market Communication of Measured Data	'10
<b>EWE</b> Oldenburg: Planning Handbook for Distribution Networks; Network Calculations, Odor-Tracking (STANET)	10
<b>HNG</b> Kopenhagen: Consulting for network model building and STANET-Training	'10
<b>SwedeGas</b> Göteborg: Consulting for network model building and STANET-Training	'10

	<b>BTC</b> Berlin, Feasibility study and consulting for network-wide gas quality tracking of biogas feedings by online-simulation	'11
	<b>BWB Berliner Wasserbetriebe</b> , Consulting for network model building and simulation (STANET)	'11, '12
	<b>AVE</b> Berlin, Hydraulic Analysis & Simulation for power station and district heating	'12
<b>Publications, Lectures</b>	STANET-Courses/Training: Implementing Standard Load Profiles, Acquisition of Consumer Data and Application	4 * '08 '09
	coregas-Training: Requirements Due to Energy Regulations & Laws	'08
	<i>Div. Short Consulting, Expertises, Lectures in the Field of Gas Technology and SCADA, Simulation ;</i>	<i>lfd.</i>
	Industrial Projects (China, Korea, Indonesia, Canada, USA, UK, [Argentina, Iran], Belgia, Czech Rep.).	
	Haß, P.; Fischer-Uhrig, F. : Statement and results of the expert inquiry to cost drivers in gas transport and distribution, BNetzA, WIK intern, 2.2006	'06
	Haß, P.: Necessary functional changes of SCADA- and dispatching systems in liberalized worlds. Lecture, Oldenburger Gastage, 12.2006.	'06
	Haß, P.: Open network access and the strategy for internal demand orders, Lecture, Oldenburger Gastage, 12.2007.	'07
	Haß, P.: Computation of gas networks and consumption data processing Lecture, Post-Graduate-Student-Seminar, TFH Berlin, 6.07	'07
	Haß, P.: Gasquality computation for intermeshed gas distribution networks, Lecture, Wingas-Energieforum, Gelsenkirchen 28.5.08	'08
	Haß,P.: Gas energy facts and problems, especially biogas impacts– today and tomorrow Lecture, Old-Tablers Berlin, 1.09	'09
	Haß,P., Röttger,S. Gasquality computation for intermeshed gas distribution networks, BWK 6.2009	'09
	Haß,P., Röttger,S. Computing calorific values instead of measuring, emw 6.2009	'09
	Haß, P., Röttger, S.: Gasquality computation and verification in intermeshed gas distribution networks, gwf Gas/Erdgas 9/2009, S.512-519	'09
	Haß, P.: Techniques of gas transportation and network simulation invited lecture, Beuth Technical College, Berlin, 12.2009	'09
	Haß, P.: Techniques of gas supply and related network simulation invited lecture, Beuth Hochschule für Technik Berlin, 12.2011	'11
	Haß, P. , <b>Biogas</b> , -Section "Gas Quality Parameter Computation in Intermeshed Networks", InTech Publication, Rijeka 2012 (Edit. S. Kumar)	'12
	Haß, P., Langer, U., Wutzke, K.: Economic operation of gas-conditioning of biogas plants by tracking of calorific values via online-simulation, gwf Gas/Erdgas 5/ 2012	'12
	<i>other:</i>	



Haß, P.  
Chances and risks of integrated phase-oriented software-tools and concepts (Software-Engineering)  
Compass 85, Conference, Standard- Software, 1985, Berlin

Haß, P., Zientek, J.  
Integrated online contract control and planning support for load balancing in gas grids,  
2nd World Seminar on Computing in the Gas Industry,  
1884, Bordeaux Conf. Proceedings IGU

Results of an Advanced System Based on Forecast and Online Simulation  
for Gas Grid Control  
3rd World Seminar on Computing in the Gas Industry,  
1888, Budapest, Conf. Proceedings IGU

P. Haß  
Efficient Process Monitoring and Control of Fibre Plants  
International Fibre Journal, 1992

P. Haß  
Advanced Model- Based Control of PET Plants  
International Fibre Journal, 1996

P. Haß  
The Dynamic-Web Interface for Model-Based Simulation and Control in  
Large PET Plants (invited paper),  
PSE gPROMS User Conference, London 2001

## Personal Profile

<b>Name</b>	Dipl.-Ing. <b>Klaus Scholz</b>	
		<u>Year</u>
<b>Education</b>	Study of Electrical Engineering , Gauss-Academy Berlin Academic Degree: Diplom-Ingenieur (Dipl.-Ing.)	'67-'71
<b>Fields of Expertise, Special Knowledge</b>	Gas Technology especially underground storage and compressors, IT-Technology, Automation Techniques, Communication Techniques, Programming, Projecting and Engineering of complex stations	
<b>Languages</b>	English	
<b>Professional Career</b>	Scientific staff member, project and department leader at AEG, Daimler-Benz Interservices, Alstom Energie	'71-'01
	Consulting Engineer, ELT Engineering for SCADA and Automation Technology, Berlin	'02
	Managing Partner at IPSOS Industrial Consulting GmbH, Berlin Senior Consulting Partner at corporate practice for utilities GmbH&Co.KG, Oldenburg	'05
<b>Relevant Projects (selection)</b>	<b>AEG-Kanis/Mannesmann</b> for GAZPROM Orenburg-Chust, 10 natural gas transport stations (UdSSR 1) (planning and erection, initial operation)	'74
	<b>GAZPROM</b> , UdSSR 4: Urengoy-Uzgorod, 47 Gas transport stations (planning and erection, initial operation)	'81
	<b>Ruhrigas</b> , Essen: Compressor station Waidhaus , combined process	'84
	<b>VNG</b> Verbundnetzgas AG / Pipeline Engineering <b>PLE</b> : Compressor station Sayda, Turn-key-Project	'87
	<b>GASAG</b> Berlin: SCADA system underground storage Berlin-Pichelsdorf	'92
	<b>Romonta</b> , Halle: Automation of the power plant	'96
	<b>Stadtwerke Brandenburg</b> : Complete SCADA system for the power plant	'97
	<b>von Roll</b> , Zürich: Waste combustion plant MVA Ingolstadt (re-invest acc. to BImSchV, replacement of SCADA system)	'96
	<b>BSR</b> , Berlin: SCADA and Automation system for waste combustion plant MVA	'96 - '99
	<b>Ruhrigas</b> , Essen: Metering and control equipment for compressor station Wildenranna	'00
	<b>Thyssengas</b> , Duisburg: Automation of underground storage Xanten (re-invest)	'01
	<b>VNG</b> , Leipzig: Concept of re-invest for compressor station Saida (offer)	'01

<b>RWE Gas, Dortmund:</b> EuroControl Gas concept study for centralized and supranational SCADA system.	'02,'03
<b>GASAG Berlin:</b> Integration of SCADA systems GASAG-EMB	'04-'05
<b>EMC, Düsseldorf:</b> Planning of the automation and control system of gas turbine (Re-Invest of power plant for Angola)	'05
<b>E.ON edis, Fürstenwalde:</b> Pre-study for the introduction of an energy data management (EDM) system acc. to the demands of GasNZV (w. corepractice)	'05
<b>BS Energy, Braunschweig:</b> Consulting for preparations concerning liberalized market activities (w. corepractice)	'05
<b>E.ON Energie:</b> New technological concept for EDM, overall ReVu's (w. corepractice)	'06
<b>E.ON Hanse:</b> Study for optimal gas storage operation (w. corepractice)	'06
<b>E.ON edis, Fürstenwalde:</b> Technologic concept for coupling GIS -data for network computation STANET (w. Fischer-Uhrig)	'06,'07
<b>Stadtwerke Aachen,</b> New technologic concept for introduction of coregas and IDEX Gas (w. coreservice)	'07
<b>Stadtwerke Trier:</b> New technologic concept for open gas network access (with corepractice)	'07
<b>Rheinenergie Köln:</b> New technologic concept for an EDM-System (w. corepractice)	'07
<b>Essent UGS Epe:</b> Connection of two new UGS- caverns, Security concept (HAZOP), Acceptance Test with Technical Control Board (w. Fa. alpha-messtechnik)	'07
<b>E.ON Energie, München:</b> Concept EEA Strategy and operative realisation of exit zones (w. corepractice)	'07
<b>E.ON Bayern, Regensburg:</b> Konzept EEA Strategie und operative Umsetzung zur Ausspeisozonenbildung (m. corepractice)	'07
<b>E.ON Westfalen Weser Netz, Hameln:</b> Capacity demand calculation and scenarios (w. corepractice)	'07
<b>Rheinenergie Köln:</b> New technologic concept for an EDM-System (w. corepractice)	'07,'08
<b>Stadtwerke München:</b> New technologic concept for acquisition and handling of gas quantity data (w. corepractice)	'08
<b>Essent, UGS Epe:</b> Security and operational concept for storage extensions at Epe (w. alpha)	'08
<b>N-Ergie, Nürnberg,</b> Technologic concept for technical quantity/flow data handling and balancing, coregas (w. corepractice)	'08
<b>RWE WVE, Dortmund:</b> Project coordinator E/MSR-Reinvest compressor station Hünxe, technolog. consulting, security checking, Acceptance tests with Technical Control Board	'08
<b>Enercity, Hannover:</b> Data organisation and concept for balancing management of gas quantities (w. corepractice)	'08,'09
<b>SWB, Bremen,</b> Gas data management for balancing purposes (w. corepractice)	'08,'09
<b>RWE WVE, Dortmund:</b> Project coordinator E/MSR-Reinvest compressor station Ochtrup, technolog. consulting, security checking, acceptance tests with Technical Control Board	'10
<b>RBS Wave Stuttgart:</b> Feasibility Study for CO2-Pipeline Germany-Algeria	'10

**RWE WVE**, Dortmund, **alpha** Neustadt: Project coordinator E/MSR- Reinvest of gas mixing plant Broichweiden, technolog. onsulting, security checking, acceptance tests with Technical Control Board '11

**RWE WVE**, Dortmund: Project coordinator E/MSR-Reinvest underground storage Stassfurt, technolog. consulting, security checking, acceptance tests with Technical Control Board '11, '12

**More**

*Divers short consultings concerning SCADA- and remote control tasks.*

*current*