

CURRICULUM VITAE

Name: Dr. Martin KRUSKA
Profession: Senior Consultant in Energy Efficiency and Climate Change
Date of Birth: 1968
Nationality: German

Key Qualifications:

Dr. Martin Kruska is an energy engineer with experience as advisor, expert, manager and trainer in industrial energy efficiency and climate change projects. He has a strong background of energy engineering with managerial and economical expertise and is author of several publications and books on energy efficiency in the industrial sector and on climate change issues.

Mr. Kruska is a project manager having successfully conducted complex and multidisciplinary energy related projects and programs as well as international training and research projects in the field of energy efficiency, energy supply and energy management.

Since August 2001, Dr. Kruska is Head of the Climate Change Division of EUTech in Aachen, leading consultancy and research projects for industrial clients, governmental bodies and international organizations for technical cooperation. He is expert advisor to several state and federal ministries as well as industry and trade associations in the fields of energy efficiency and climate change.

Education and Professional Training:

1989 - 1996	Student of Mechanical Engineering with emphasis on energy technology at the University of Technology (RWTH) Aachen, Germany
1992 - 1993	Student of Mechanical Engineering with emphasis on energy technology and industrial management at the University of Edinburgh, Scotland, GB
1996	M.Sc. (Dipl.-Ing.) at the Faculty of Mechanical Engineering, University of Technology (RWTH) Aachen, Germany
1/2002	Ph.D. (Dr.-Ing.) at the Faculty of Mechanical Engineering, University of Technology (RWTH) Aachen, Germany (Doctoral Thesis on the Evaluation of Energy Efficiency of Industrial Plants and Processes)

Membership of Professional Organizations:

– German Association of Mechanical Engineers - Society for Energy Technology, VDI-GET

Professional Experience:

Since August 2001

**Head of Climate Change Division
EUtech Energy & Environment, Technology & Management
Aachen, Germany**

- Responsible for business development of the Climate Change Division at EUtech
- Project manager of national and international consultancy and development projects with a special focus on climate change and flexible mechanisms

1996 to 2001

**Research Fellow – Energy Systems Analysis Group
Institute for Technical Thermodynamics
University of Technology (RWTH) Aachen, Germany**

- Implementation of a working group on energy efficiency in industry
 - Coordination and leadership of projects on energy efficiency and energy management in industry
 - Lectures in Thermodynamics and Energy Economics, Laboratories in Energy Technology
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Relevant Project Experience:

since 2003

**Project Manager
Germany: Pre-Feasibility Study for the implementation of
an energy efficiency facility in South-East Europe
Client: KfW Kreditanstalt für Wiederaufbau
Partners: ERM Lahmeyer International, Energiestiftung
Schleswig-Holstein**

- Project Management
- Assessment of the suitability of twelve SEE countries for the implementation of a commercially operating revolving fund for energy efficiency projects

2002-2003

**Technical Project Leader “Evaluation of Emission
Reduction Projects”
Germany: The Hessen-Tender Initiative for Emission
Reduction Projects
Client: Ministry of Environment, Hessen, Wiesbaden
Partners: ERM Lahmeyer International, 500 ppm GmbH**

- Development of the tender’s frame-work
- Development of call for tender, terms of reference and operational guidelines for baseline studies, monitoring and verification of emission reduction projects
- Technical evaluation and validation of project proposals

2002-2003

**Technical Project Leader
Germany: Emission-Trading Simulation “Emissionshandel
Nord”
Client: Energiestiftung Schleswig-Holstein, Kiel
(Energy Efficiency Foundation)
Partners: ERM Lahmeyer International, 500 ppm Inc.**

- Definition of the general framework of the simulation

- Development of project manuals
- Identification and evaluation of emission reduction potentials in eight industrial plants (energy efficiency audits)

2002-2003

Project Team Member

Germany: Development of a business tool for monitoring GHG Emissions in industrial plants

Client: VBW Bayern, München

(Bavarian Business Association)

Partners: ERM Lahmeyer International, 500 ppm Inc.

- Development of the basic tool-specifications
- Definition of the basic structure and the technical implications
- Definition of the technical contents of the tool

2002

Project Coordinator

CUBA: Seminars on Energy Efficiency in the Sugar Industry and the Tourism Sector

Client: Carl Duisberg Association (CDG), Germany

- Design of a series of seminars on energy efficiency in the sugar industry and the tourism sector
- Several speeches on Climate Change and the implication for Cuba's future energy policy

2002

Project Leader

Germany: Conference on Climate Change and Flexible Mechanisms, Düsseldorf, North-Rhine Westfalia

Client: Ministry of Economics, North-Rhine Westfalia

Partners: ERM Lahmeyer International, 500 ppm Inc.

- Organization of the first NRW Congress on Climate Change and Flexible Mechanisms

2001

Project Leader

Germany: Expertise on Flexible Mechanisms and Emissions Trading

Client: Ministry of Environment, North-Rhine Westfalia

Partners: EnConsulting, ERM Lahmeyer International

- Analysis of the national and international status of emissions trading schemes
- Tracing of the actual developments and discussions with a special focus on the EU and Germany

2001

Project Leader

Germany: Concept for a Conference on Climate Change and Flexible Mechanisms for North-Rhine Westfalia

Client: Ministry of Economics, North-Rhine Westfalia

Partners: ERM Lahmeyer International, 500 ppm Inc.

- Development of key issues for a conference with special focus on the participants from NRW
- Definition of a prospective agenda, pre-selection of lecturers and key-note speakers
- Development of a detailed working-plan and project-schedule

2001-2002

Project Coordinator

Japan: Fossil-free Energy Supply Scenarios for Japan
Partners: Greenpeace International (Amsterdam), ISEP (Tokyo), Wuppertal Institut (Wuppertal)

- Analysis of the structure of Japan's actual energy demand
- Analysis of technology based energy efficiency potentials for Japan's economical sectors
- Analysis of the potentials of indigenous renewable energy sources
- Simulation of an energy supply system based on renewable energy sources
- Expertise on the implications of a transition into a non-fossil, nuclear-free energy supply system for Japan

1999-2001

Project Leader

GERMANY: Energy Efficiency Concepts for the German Textile Industry
Partners: Associations of the German Textile Industry, Textile Industry Research Institute
Funding: Ministry of Economics, NRW, Germany

- Detailed analysis of key parameters for the energy balance of the German textile industry
- Development of characteristic indicators and energy ratios
- Detailed analysis of the production processes in the textile industry
- Detailed analysis of enterprise structure and processes in selected enterprises
- Development of general concepts for rational use of energy in the textile industry

2000

Project Leader

CUBA: Capacity Building on Energy Efficiency in the Sugar Industry and the Tourism Sector (Feasibility Study)
Client: Carl Duisberg Association (CDG), Germany

- In depth analysis of the Cuban Energy Economics (Demand and Supply Side)
- Identification of training demand on Energy Efficiency in the Sugar Industry and Tourism Sector
- Identification of training demand on the national Institutional Framework
- Identification of local partner
- Set up of training courses and coaching concept

1998-2000

Project Leader

GERMANY: Energy Efficiency Concepts for the German Food Industry
Partners: German Food Industry Association
Funding: Ministry of Economics, NRW, Germany

- Detailed analysis of key parameter for the energy balance of the German food industry
- Development of characteristic indicators and energy ratios
- Detailed analysis of the production processes in the food industry
- Detailed analysis of enterprise structure and processes in selected enterprises
- Development of general concepts for rational use of energy in the food industry

1998-1999

Project Leader

GERMANY: Implementation of an Energy Management Scheme in a Chemical Industry Plant

Client: Confidential

- Design of an indicator-system to measure the plant's energy efficiency
- Elaboration of a data collection procedure
- Development of EDP tools to carry out evaluations
- Training and Coaching of the staff in charge

1998-1999

Project Leader

PERU: Capacity Building on Energy Efficiency for SME

Client: Carl Duisberg Association (CDG), Germany

- Conceptual design, coordination and implementation of a multi-step training project for prospective advisors on energy efficiency in Peru
- Coordination of the german training staff (five institutions with expertise on energy efficiency)
- Training courses on sustainable development, energy efficiency, integrated energy concepts, energy analysis of industrial plants and energy management
- Practical coaching on energy analysis projects in selected industrial plants
- Coordination of a quarterly magazine on energy efficiency and renewable energy sources
- Editor in charge of a handbook and a CD-ROM for energy advisors

1998

Project Leader

GERMANY: Implementation of an Energy Management Scheme in a Textile Industry Plant

Client: Confidential

- Design of an indicator-system to measure the plant's energy efficiency
- Elaboration of a data collection procedure
- Development of EDP tools to carry out evaluations
- Training and Coaching of the staff in charge

1998

Project Leader

GERMANY: Design and technical and economical Evaluation of Integrated Energy Supply Concepts for a Chemical Industry Plant

Client: Confidential

- Analysis of the plant's energy demand structures
- Simulation of future energy demand scenarios
- Design of different integrated energy supply alternatives (including CHP, absorption chilling, exhaust air treatment etc.)
- Technical and economical evaluation of the alternatives and development of an action plan

1997 **Project Leader**
GERMANY: Feasibility Study on the Implementation of CHP with Heat Storage for a Textile Industry Plant
Client: Confidential

- Analysis and simulation of the plant's energy demand structures
- Simulation of an energy supply system based on CHP combined with a heat storage tank
- Technical and economical evaluation and development of an action plan

1997 **Project Leader**
GERMANY: Energy Efficiency Analysis for a Timber Processing Plant
Client: Confidential

- Analysis of the plant's energy demand structures
- Energy balances and efficiency analyses of the most significant machines
- Technical and economical evaluation of the energy savings potentials
- Development of an action plan

1997 **Project Leader**
GERMANY: Energy Efficiency Analysis for a Chemical Industry Plant
Client: Confidential

- Analysis of the plant's energy demand structures
- Energy balances and efficiency analyses of the most significant machines
- Technical and economical evaluation of the energy savings potentials
- Development of an action plan

1997 **Project Leader**
GERMANY: Pilot-Study on Energy Use and Energy Efficiency in University Research Institutes
Client: University of Technology (RWTH) Aachen

- Analysis of the research laboratories' energy demand structures
- Efficiency analyses of the heating, cooling and ventilating installation
- Evaluation of the energy savings potentials in the institutional framework of research institutes
- Development of proposals for political action towards modification of the legal and institutional framework of research institutes

1997 **Project Leader**
PERU: Capacity Building on Energy Efficiency for SME (Pilot-Study)
Client: Carl Duisberg Association (CDG), Germany

- Lectures on energy efficiency, integrated energy concepts, energy analysis of industrial plants and energy management for energy advisors in Lima, Peru
- Identification of partner for a prospective multi-phase capacity-building project on energy efficiency

1996

Project Leader

GERMANY: Study on Energy Supply Alternatives and Energy Efficiency Potentials for a Rim Manufacturing Plant

Client: Confidential

- Energy balances and efficiency analyses of the most significant machines
- Technical and economical evaluation of the energy savings potentials
- Conceptual Design of an energy supply system based on CHP
- Technical and economical evaluation of the alternatives and development of an action plan

1995-1996

(University Project)

GERMANY: Energy Efficiency Analysis for a Textile Industry Plant

Client: Confidential

- Analysis of the plant's energy demand structures
- Energy balances and efficiency analyses of the most significant machines
- Technical and economical evaluation of the energy savings potentials
- Development of an action plan

1993

(University Project)

SCOTLAND, UK: Feasibility Study on Wind Energy Development for a Farm in Northern Scotland

Client: Highland Regional Council, Scotland, UK

- Analysis of the energy demand profile of the farm
- Infrastructural and environmental considerations
- Wind regime analysis (analysis of long-term measurements, correlation, wind shear and wind distribution analysis)
- Financial appraisal and Development of an action plan

1992

(University Project)

GERMANY: Feasibility Study on CHP for a Hotel

Client: Confidential

- Analysis of the energy demand profile of the Hotel
- Conceptual Design of an energy supply system based on CHP
- Technical and economical evaluation of the alternatives and development of an action plan

Experiences Abroad:

South-East Europe, Japan, Cuba, Peru, Great Britain

Languages:

German	:	mother tongue
Spanish	:	second mother tongue
English	:	excellent

Publications in Spanish and English:

- Barzantny, K., Hahn, M., Kruska, M., Klein, M., *Emission Trading North – Benefits for the Economy and the Environment, A Pilot Project of the Energy Foundation Schleswig-Holstein in Co-operation with the Association of the Chambers of Industry and Commerce in Schleswig-Holstein and the Union of Employers' Associations in Hamburg and Schleswig-Holstein*. Proceedings of the eceee 2003 Summer Study
 - Meyer, J., Kruska, M., Trautmann, A., *International energy efficiency benchmarking for plants and installations – Combining strategic energy management and enhanced energy efficiency*. Proceedings of the eceee 2003 Summer Study
 - Kruska, M., Meyer, J., Schubert, A., *The Clean Development Mechanism – Opportunities for Technology Export*. Proceedings of the CDM Round Table, Munich (2001)
 - Kruska, M., Lehmann, H., Valdivia, S. (Edts.), *Uso Racional de Energía – Eficiencia Energética y Energías Renovables* (Handbook for Energy Advisors). Ministry for Energy and Mining, Peru (1999)
 - Kruska, M., *El Análisis de Integración Térmica – Un Poderoso Instrumento para Evaluar Procesos Industriales*. Eficiencia Energética y Energías Renovables 1 (1999) 3
 - Kruska, M., Meyer, J., Schenuit, J., Tippkötter, R., *A Branch-Wide Approach to Energy Efficiency in the German Textile Industry*. Proceedings of the International Conference on Industrial Ecology and Sustainability, Troyes (1999)
 - Kruska, M., *Experiencias con Programas URE en Alemania*. Eficiencia Energética y Energías Renovables 1 (1999) 1
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Publications in German:

- Kruska, M., Hahn, M., Klein, M., Barzantny, K., *10 Forderungen an einen Nationalen Allokationsplan*, Energiewirtschaftliche Tagesfragen **53** (2003) 7
- Barzantny, K., Hahn, M., Kruska, M., Klein, M., *Der Emissionshandel – Anforderungen an den nationalen Allokationsplan. Zwischenbericht zum Pilotprojekt „Emissionshandel Nord“* (2003) <http://www.emissionshandel-nord.de>
- Kruska, M., Meyer, J., Pauksztat, A., Schubert, A., *Die Bedeutung des Europäischen Emissionshandels für das strategische Energiemanagement in der Industrie*, VDI-Berichte 1761 „Betriebliches Energiemanagement“ (2003)
- Kruska, M., Meyer, J., Trautmann, A., Bonczek, P., *Branchenenergiekonzepte in Nordrhein-Westfalen: Wenn ganze Branchen den Energieeinsatz rationalisieren*, VDI-Berichte 1761 „Betriebliches Energiemanagement“ (2003)
- Meyer, J., Kruska, M., *Die Bedeutung der industriellen Energiesystemtechnik vor dem Hintergrund der aktuellen energie- und klimapolitischen Entwicklungen*, VDI-Berichte 1746 „Fortschrittliche Energiewandlung und -anwendung“ (2003)
- Kruska, M., Meyer, J., Steinbrecher, N., *Bewertung der aktuellen politischen Diskussion zum Emissionshandel und zu den flexiblen Instrumenten vor dem Hintergrund der Erfahrungen in Pilotprojekten in Hessen, Schleswig-Holstein und Bayern*, VDI-Berichte 1725 „Flexible Mechanismen zur CO₂-Minderung“ (2002)
- Meyer, J., Kruska, M., Schubert, A., Steinbrecher, N., Puhl, I., *Was kostet schlechte Luft?* Marktplatz Energie (2002) 2, 36-40
- Kruska, M., *Bewertung der Energieeffizienz von Industriebetrieben am Beispiel der Milchverarbeitung*. Dissertation RWTH Aachen (2002)

- Becker, G., Blüm, S., Boneschky, A., Kruska, M., Lewen, B., Schmid, C., Wieland, H., *Nutzung energetischer Kennziffern*. BWK 54 (2002) 5, 79-82
- Meyer, J., Kruska, M., Schubert, A., *Standardisierung zur Senkung der Transaktionskosten*. In: Arbeitsgemeinschaft für Umweltfragen (Hrsg.): Sachverständigengespräch 2001: CO₂-Emissionshandel, Berlin (2002) 99-116
- Kruska, M., Meyer, J., Schubert, A., *Die Bedeutung der internationalen Klimaschutz-Vereinbarungen für die Unternehmen des produzierenden Gewerbes*, VDI-Konferenz „Energiemanagement für Unternehmen und öffentliche Einrichtungen“ (Tagungsband). Essen, Februar 2002.
- Trautmann, A., Kruska, M., Meyer, J., Schreiber, M., *Internationales Energieeffizienz-Benchmarking von Industriebetrieben - Methodische Ansätze und Fallbeispiele*, VDI-Konferenz „Energiemanagement für Unternehmen und öffentliche Einrichtungen“ (Tagungsband). Essen, Februar 2002.
- Kruska, M., *Innovative Energietechnologien und -systeme – Industrieprozesse (Energieeinsparung, neue Technologien)*, Stellungnahme an die Enquete-Kommission des Deutschen Bundestages „Nachhaltige Energieversorgung unter den Bedingungen der Globalisierung und der Liberalisierung“ (November 2001)
- Meyer, J., Kruska, M., Schubert, A., Steinbrecher, N., Puhl, I., Schweer, R., *Das hessische Planspiel zum Emissionshandel*. Energiewirtschaftliche Tagesfragen 51 (2001) 10, 630-633
- Kruska, M., Meyer, J., Elsasser, N., Trautmann, A., Weber, P., Mac, T., *Rationelle Energienutzung in der Textilindustrie – Leitfaden für die betriebliche Praxis*. Vieweg Verlag (2001)
- Meyer, J., Kruska, M., Schubert, A., Steinbrecher, N., Puhl, I., Schweer, R., *Das hessische Planspiel zum CO₂-Emissionshandel*. Energiewirtschaftliche Tagesfragen 51 (2001) 10, 630-633
- Knoche, K.F., Kruska, M., Weber, P., Kuperjans, I., *Energiemanagement*. In: Schulz, W., Burschel, C. et al. (Edts.), *Lexikon Nachhaltiges Wirtschaften*. Oldenbourg Verlag (2001)
- Kruska, M., *Zur Problematik der Bewertung der Energieeffizienz industrieller Prozesse und Betriebe*. Betriebliches Energiemanagement, VDI-Berichte 1593 (2001) 129-141
- Kruska, M., Meyer, J., Bonczek, P., *Rationelle Energienutzung in der Ernährungsindustrie – Ein branchenübergreifender Ansatz*. Betriebliches Energiemanagement, VDI-Berichte 1593 (2001) 59-71
- Meyer, J., Kruska, M., Elsasser, N., Trautmann, A., Mac, T., Weber, P., *Branchen-Energiekonzept für die Textilindustrie – Befragungen von Textilbetrieben und textilen Maschinen- und Anlagenherstellern*. DWI Reports 124 (2001)
- Meyer, J., Kruska, M., Elsasser, N., Trautmann, A., Mac, T., Weber, P., Sturm, M., *Branchen-Energiekonzept für die Textilindustrie – Betriebs- und Prozessanalysen*. DWI Reports 124 (2001)
- Meyer, J., Kruska, M., Kuhn, H.-G., Sieberger, B.-U., Bonczek, P., *Rationelle Energienutzung in der Ernährungsindustrie – Leitfaden für die betriebliche Praxis*. Vieweg Verlag (2000) ISBN 3-528-03173-5
- Meyer, J., Sturm, M., Trautmann, A., Kruska, M., Weber, P., Elsasser, N., Mac, T., *Branchen-Energiekonzept zur Senkung der Energiekosten in der Textilindustrie – Teil II*. Melliand Textilberichte 81 (2000) 6, 532-535
- Meyer, J., Sturm, M., Trautmann, A., Kruska, M., Weber, P., Elsasser, N., Mac, T., *Branchen-Energiekonzept zur Senkung der Energiekosten in der Textilindustrie – Teil I*. Melliand Textilberichte 81 (2000) 5, 419-422
- Kruska, M., Meyer, J., Bonczek, P., *Nahrungsmittelindustrie*. In: Energieagentur NRW (Hrsg.), *Energiever(sch)wendung, Handbuch zum rationellen Einsatz elektrischer Energie*. Klartext Verlag, Essen (2000) 310-324

- Kruska, M., Meyer, J., Elsasser, N., Mac, T., Trautmann, A., Weber, P., *Ein branchenweiter Ansatz zur Reduzierung des Energieeinsatzes und der CO₂-Emissionen in der deutschen Textilindustrie*. DWI Reports 123 (2000) 513-520
- Meyer, J., Sturm, M., Kruska, M., *Energiekosten senken – Konzept für Branchen der Ernährungsindustrie*. Lebensmitteltechnik 31 (1999) 5
- Meyer, J., Sturm, M., Kruska, M., *Diät-Kur für eine Branche*. Umwelttechnik (1999) 5
- Weber, P., Kruska, M., *Integriertes Energiekonzept für ein Unternehmen der chemischen Industrie – Bedarfsmodellierungen unterstützen die Planungssicherheit*. Fortschrittliche Energiewandlung und -anwendung, VDI-Berichte 1457 (1999)
- Knoche, K.F., Kuperjans, I., Kruska, M., *Rationelle Energieverwendung in der Industrie – Bedeutung des rationellen Umgangs mit Energie für das zukunftsorientierte Unternehmen*. In: Tagungsband Innovationsforum Niederberg „Die Wirtschaft im Dialog mit der Forschung“ (1998)
- Knoche, K.F., Kruska, M., *Optimierung der betrieblichen Energiewirtschaft als Beitrag zum Umweltschutz*. DWI Reports 121 (1998) 150-164
- Haug, M., Kruska, M., Schreiber, M., *Systematische Aufdeckung und wirtschaftliche Bewertung von Energieeinsparpotentialen in Industrie und Gewerbe*. Fortschrittliche Energiewandlung und -anwendung, VDI-Berichte 1321 (1997)