ENERGY KNOWLEDGE FOR YOU

PROGRESS REPORT 2024

KWS Energy Knowledge eG

Foreword

The Progress Report of KWS Energy Knowledge eG (KWS) at hand informs members about basic and advanced training measures conducted, further activities and projects as well as board and panel work during the report period of January 1st, 2024 to December 31st, 2024.

Remodeling the power generation structure to achieve decarbonization continues to be the immutable goal of Germany's federal government. As a consequence of the discontinuation of natural gas deliveries from Russia due to the war of aggression against Ukraine, and the shutdown of Germany's last three nuclear power plants in 2023, various hard coal- and lignite-fired power plants will have to operate longer than heretofore planned. This is the only way of ensuring security of supply, although at significantly higher cost. Fortunately, the expansion of renewable energies has been increasing, yet the necessary political framework for the erection of new gas-fired powerplants remains unclear, so that only a few projects are actually being executed or prepared.

During the report period, enrollment in conventional power plant technology training courses for plant attendant, power plant operator, and power plant shift supervisor was very high. Once again, members, both foreign and domestic, used KWS's simulator courses for lignite-, hard coal-fired, and CCGT power plants to ensure practical, high-quality basic and advanced personnel training in 2024.

For power plants designated systemically relevant by the transmission network operator, KWS conducts simulator training on location for the purpose of personnel skill retention, low operating hours of the real-life plants notwithstanding. To that end, simulated control rooms may be set up to connect online to KWS servers.

Nuclear technology seminars focused on conveying fundamentals, business management, skill retention, and radiation protection.

One of the key activities the field of renewable energies lay in the development of training courses for the use of hydrogen in power generation. Since the expansion of hydrogen usage is a highly important objective of Germany's energy policy, partnerships were founded to help establish KWS as a training provider in this field.

Overall demand in the area of thermal waste treatment was again very high. There is much call for the new training courses specifically adapted to this branch of the power industry. Various members react to market demands by enacting change and optimization measures. KWS assists such measures at the operations and shift crew level with best practice workshops in the areas of social, methodical, and personal skills, for example. These workshops focus on employee workplace behavior, teamwork, communication, decision-making as well as supervision and monitoring.

The International Activities team conducted a skill assessment for an operator in Saudi-Arabia and had further important assignments in Iraq and Libya.

In conclusion, we would like to express our heartfelt gratitude for your trust vested in us. Today and tomorrow, we continue to be your competent service provider for basic and advanced training of operating personnel, for organizational consulting and human resource development as well as for the construction and development of power plant simulators.

Ernst Michael Züfle
Board of Directors

Monika Bartels
Board of Directors

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Performance in 2024

Services of KWS Energy Knowledge eG: An overview

The range of KWS's services is best described with the terms basic training, continuing education, advanced training, qualification and consulting. KWS's training offerings operate within the legal framework of Germany's Vocational Training Act, the Ordinance on Industrial Safety and Health, and the Atomic Energy and Radiation Protection Law. Plant Attendant, Power Plant Operator and Power Plant Shift Supervisor courses are unequivocally designed to provide the entire power industry with qualified and certified personnel of the highest order. The wide range of KWS's advanced training offerings enables companies to maintain, adapt or enhance the professional skills of its operating personnel. This area of services comprises certified training courses, officially approved courses, but also customized instruction measures. KWS's comprehensive training simulator pool permits offering companies a wide range of in-depth training options for power plant operating pers-onnel. Organization development is the latest addition to KWS's training offerings and concerns itself with the topics of management consultation and human resources development.

NUMBER OF PARTICIPANTS, COURSES CONDUCTED, TRAINING MEASURES AND PARTICIPANT DAYS: ALL DEPARTMENTS

January 01 – December 31, 2024	Courses conducted	Number of Participants	Number of Participant Days
Conventional Power Plant Technology	136	1.790	46.542
Nuclear Technology/Radiation Protection	37	314	1.872
Simulator Training	77	323	1.390
Organization Development	4	12	24
Renewable Energies	5	43	103
International Activities	3	382	155
Total	**262**	**2.864**	**50.086**

Conventional Power Plant Technology

Basic and advanced theoretical training comprises all instruction measures designed to amplify, expand or renew the professional knowledge and skills of employees who have already completed a first stage of vocational training. Qualification demands on each individual power plant employee are increasing, as both technical and social skills are cornerstones of the modern requirements profile for employees. The concept of lifelong learning is part of working life, especially in a complex technical environment like a power plant. Many outside forces affect the flexible design of power generation, a fact that is reflected by short- and medium-term personnel demands. KWS conducts professional and practical courses and training for these personnel demands.

NUMBER OF PARTICIPANTS, COURSES CONDUCTED AND PARTICIPANT DAYS:
PPO, POWER PLANT SHIFT SUPERVISORS AND CUSTOMER-SPECIFIC ADVANCED TRAINING MEASURES

January 01–December 31, 2024	Courses conducted	Number of Participants	Number of Participant Days
Power Plant Operators (PPO)	18	388	15.533
Power Plant Shift Supervisors–Production	13	284	16.778
Power Plant Shift Supervisors–Production Electrical and Control Engineering	4	102	660
Thermal Waste Treatment (TWT)	24	273	8.661
Advanced Training Measures	42	549	3.649
Customer-Specific Advanced Training Measures	35	194	1.261
Total	**136**	**1.790**	**46.542**

Among others, the following courses were held during the report period:

Plant Attendants
125th training course (Essen/Germany)
Module Basic with 45 participants
Module Steam Generation with 45 participants
Module Turbines with 49 participants

126th training course (Essen/Germany)
Module Basic with 41 participants
Module Steam Generation with 43 participants
Module Turbines with 45 participants

127th training course
(Modul B online/Modul SG at Sarpi in Marl/Modul T at OQ in Oberhausen)
Module (B) Basic with 12 participants
Module (SG) Steam Generation with 14 participants
Module (T) Turbines with 10 participants

Plant Operator TWT
12th training course with 25 participants
13th training course with 18 participants
14th training course with 16 participants
15th training course with 16 participants

Power Plant Operators
134th training course with 58 participants
135th training course with 30 participants
135th training course with 18 participants (online)
136th training course with 59 participants

Power Plant Shift Supervisors–Production
148th training course with 40 participants
149th training course with 21 participants

Power Plant Shift Supervisors–
Thermal Waste Treatment
6th training course with 11 participants

Nuclear Technology/Radiation Protection

Nuclear Technology training is three-pronged:

1. Nuclear power plant personnel training
2. Nuclear facilities personnel skill retention and instruction, respectively
3. Radiation protection training

The training lineup comprises officially required courses for qualification acquisition of responsible personnel as well as officially approved courses for qualification acquisition and updates in radiation protection. Instruction measures for personnel otherwise employed in nuclear power installations follow the respective guideline of Germany's Federal Environment Ministry. In addition to skill acquisition courses, KWS's training measures also include a wide range of skill retention training options.

NUMBER OF PARTICIPANTS, COURSES CONDUCTED AND PARTICIPANT DAYS:
NUCLEAR TECHNOLOGY / RADIATION PROTECTION

January 01 – December 31, 2024	Courses conducted	Number of Participants	Number of Participant Days
Power Plant Shift Supervisors – Radiation Protection	2	9	380
Nuclear Basics	1	11	576
Skill Retention	3	120	186
Skill Acquisition in Radiation Protection	3	12	87
Special Courses Nuclear Technology/Radiation Protection	28	162	643
Total	**37**	**314**	**1.872**

Simulator Training

The KWS simulators are utilized to practice efficient power plant operations under normal operating conditions as well as handling malfunctions effectively. In addition to safe plant operations, process engineering technology interaction is immersively trained, if so required. The simulators facilitate quick, easy, and safe familiarization with current process engineering systems. By being able to deal with critical plant scenarios in this risk-free simulator environment, operating personnel is enabled to acquire confidence in managing such situations in the real-life installation.Crews from standby or reserve plants receive little exposure to actual operations due to infrequent operating times of their installations. It is therefore challenging to maintain operational practice, safety and skills of such personnel. KWS assists businesses with customized simulator training in all such cases. Aside from operations training, simulator sessions may be used to practice social skills like teamwork, leadership and communication as well as work out and establish decision-making strategies. KWS rich experience of many years in these areas contributes to an ongoing process of improvement in power plant operations. If so desired, simulator training may be conducted on location – at the power plant or the local training center – all around the world.

NUMBER OF PARTICIPANTS, TRAININGS CONDUCTED AND PARTICIPANT DAYS: SIMULATOR TRAINING

January 01 – December 31, 2024	Trainings conducted	Number of Participants	Number of Participant Days
Simulator for Fossile Fired Power Plants	4	17	64
Thermal Waste Treatment (TWT)	1	4	20
Lignite 600/1100 MW	32	121	553
Hard Coal 800 MW	26	111	413
CCGT 750-3 (SPPA-T2000)	2	9	45
CCGT 750-3 (SPPA-T3000)	12	61	295
Total	**77**	**323**	**1.390**

Construction Committee "Simulator for Lignite-Fired Power Plants"

The Construction Committee "Simulator for Lignite-Fired Power Plants" was founded in 2008 for the implementation of the respective simulator. Since then, the committee has been assisting and advising KWS in carrying out and developing the different variants of the lignite simulator.

During the report period, the committee convened for its 37th session on September 2, 2024. The focus is on evolving the BoA 3 simulator variant for the training goal of skill retention. Control engineering upgrades and the integration of existing systems into main control engineering in the reference installations make it necessary to adopt a current control engineering code in the simulator so that future simulator training can be conducted using state-of-the-art automation.

Elements from the area of cybersecurity in power plants are to be incorporated in simulator training to create operator awareness of this topic and to act accordingly when necessary.

Organization Development

The transition from power and heat producers to sustainable energy managers and partners that interact eye to eye with customers and the industry is in full swing at our member businesses.
This process challenges every business to address the transition dynamically and proactively as a "learning organization" so that customer needs may be met dependably and economically both in the short and in the long run.
We assist you in personnel selection, team development, conflict management, leadership coaching, and especially organization development with our services.
We are at your disposal as your partner in organizational change guidance to help your business integrate into the new structures evolving.

NUMBER OF PARTICIPANTS, COURSES CONDUCTED, MEASURES AND PARTICIPANT DAYS: ORGANIZATION DEVELOPMENT (OD)

January 01 – December 31, 2024	Courses/Measures conducted	Number of Participants	Number of Participant Days
OD Consulting and Workshops	4	12	24

Renewable Energies

Hydropower:
Base and immersion courses enjoyed stable demand and were held as planned.
Wind power:
Demand for electrotechnology qualification measures and WindTrainingTower rental have been going up. Cooperation with windhunter academy GmbH has begun, a cooperation agreement has been signed, and a joint training concept is being designed. In addition, practice-oriented qualification measures for the international wind power industry have been conducted incorporating the KWS laboratories, the electrotechnology training workshop and the WindTrainingTower. Wind power training contents are now integrated into seminars like "Power Plant Technology for Engineers".
Hydrogen:
The "Basic Hydrogen Technology Skills" seminar was held several times both at KWS and at customer sites. Hydrogen topics were also integrated into other seminars, such as "Power Plant Technology for Engineers". Work on future projects was particularly intensive. The funding applications for the basic and advanced training center for hydrogen in Duisburg, Germany, required numerous and intensive coordination meetings with project partners.

NUMBER OF PARTICIPANTS, COURSES CONDUCTED AND PARTICIPANT DAYS: RENEWABLE ENERGIES

January 01–December 31, 2024	Courses conducted	Number of Participants	Number of Participant Days
Renewable Energies	5	43	103

International Activities

In 2024, KWS participated in several international activities. A standout assignment was the implementation of an assessment of 355 employees of the Jazan Integrated Gasification and Power Company (JIGPC) in Saudi-Arabia. The participants came from a large CCGT power plant as well as from an installation that converts residual products from a large refinery for subsequent utilization in the power plant and the refinery. The assessment involved operations personnel from the installations (trainees, watchmen, control room operators, shift supervisors) up to management-level employees. The final report contained the specific skill level identified and training recommendations made for each individual participant.
Three six-day Basic Operations Trainings with a total of 62 participants were also conducted for the operations personnel of the Khormala gas turbine power plant in Iraq.
Furthermore, in a collaborative effort with vgbe Service GmbH, seven laboratory technicians from the Misrata power plant in Libya underwent five days of training on the topic of materials and media analysis techniques on the Energy Campus in Essen. This measure encompassed both theoretical modules as well as hands-on training in the vgbe laboratories.

NUMBER OF PARTICIPANTS, COURSES CONDUCTED, MEASURES AND PARTICIPANT DAYS: INTERNATIONAL ACTIVITIES

January 01 – December 31, 2024	Courses conducted	Number of Participants	Number of Participant Days
International Activities	3	382	155

Organization

Board of Supervisors

The Board of Supervisors is tasked with monitoring the Board of Directors' management of KWS. Its job is to examine the annual financial statement, the status report, and the use of the annual net profit and to convey the results of its examination to the General Assembly. The Board of Supervisors directs the General Assembly that approves the annual financial statement and the investment, financial and business plan. Furthermore, the Board of Supervisors appoints and recalls the Board of Directors.

The Board of Supervisors convened twice during the report period:
9th meeting May 14th, 2024
10th meeting November 28th, 2024

Giehl, Martin, (Chairman)
Member of the Board of Directors of Mainova AG and Frankfurt/Germany

Gruber, Karl Heinz, Dipl.-Ing., Dr. (Deputy Chairman)
Member of the Management of VERBUND Hydro Power AG, Vienna/Austria

Bockamp, Stefan, Dr.
Director Growth Engineering Uniper/Managing Director Uniper of Uniper Technologies GmbH, Düsseldorf/Germany
(until June 2024)

Hacheney, Carsten
Director Transformation of RWE Power AG, Essen

Lücker, Guido
Technical Manager
of EEW Energy from Waste Hannover GmbH, Hannover/Germany

Reinhard, Volker
Head of HR Production Department (P-AE),
EnBW Energie Baden-Württemberg AG, Stuttgart/Germany

Waniek, Jörg
Member of the Board of Directors
of Lausitz Energie Kraftwerke AG/of Lausitz Energie Bergbau AG, Cottbus/Germany

Financial and Legal Committee

The Financial and Legal Committee of KWS Energy Knowledge eG assists and advises the Board of Supervisors and the Board of Directors in all financial and legal matters.
The committee discussed the audit report which was compiled by Genoverband e.V. on the financial statement for 2023, the review of operation including the attachment and recommended that the board approve KWS's financial statement for 2023 as is. Consultation of the economic, investment and financial plans for the business year 2025 was carried out by the Financial and Legal Committee. It recommended to the Board of Supervisors that it submit them in the General Assembly in 2024.
The Financial and Legal Committee also concerned itself with with the plans for the construction of an education center for hydrogen and the effects of the liquidation of KSG | GfS..

The following activities took place during the report period:
72nd meeting April 24th, 2024
73rd meeting October 2nd, 2024

Schlingensiepen, Daniel (Chairman)
RWE Nuclear GmbH, Essen/Germany

Becker, Jörn
Lausitz Energie Kraftwerke AG, Cottbus
(from May 2024)

Hauleitner, Andrea
VERBUND Hydro Power GmbH, Vienna/Austria

Pollak, Torsten
EnBW Baden-Würtetemberg AG, Stuttgart/Germany

Schulze-Darup, Martin
Uniper Kraftwerke GmbH, Düsseldorf/Germany

Sous, Martin
Mainova AG, Frankfurt/Germany

Board of Directors

Ernst Michael Züfle Monika Bartels

Training Committee

The KWS Training Committee advises and assists the Board of Supervisors and Board of Directors in their task, such as determining admission criteria for training courses, admission to courses (if so determined in the admission criteria), collaboration during examinations conducted by KWS with regard to examination regulations. Other activities of the committee involve filing applications to the incorporated society upon which KWS is legally based for the procurement of instruction materials and equipment as well as managing various other school- and training-related affairs.
In its sessions during the report period, the Training Committee concerned itself with the results of the admission exams for the 149th and 150th Power Plant Shift Supervisor–Production training course, for the 52nd Power Plant Shift Supervisor–Production Electrotechnology/Control Engineering training course and those of the 6th Power Plant Shift Supervisor–Thermal waste treatment training course.
Other consultations topics during sessions were

- KWS reports on current training activities and new projects,
- Exchange of basic and advanced training program information and experience,
- Quality control of power plant shift supervisor training,
- Impact of the energy crisis on continuing and advanced training.

The Training Committee convened twice during the report period:
141st meeting July 4th, 2024
142nd meeting December 4th, 2024

Bieder, Markus (Chairman)
Stadtwerke Münster GmbH, Münster/Germany

Kurzmann-Friedl, Christof, DI (Deupty Chairman)
VERBUND Thermal Power GmbH & Co KG, Mellach/Austria

Ahmann, Maria
RWE Generation SE, Emsland Power Plant, Lingen/Germany

Dünster, Frank
RWE Generation SE, Industrial Power Stations Duisburg-Huckingen/Gersteinwerk Power Plant, Duisburg/Werne/Germany

Fielenbach, Christian, Dr.
RWE Power AG, Bergheim/Germany

Iven, Franz-Wilhelm
Ministry for the Economy, Industry, Climate Protection and Energy of the State of Northrhine-Westphalia, Düsseldorf/Germany

Kirstein, Klaus-Dieter
KDK Consulting, Düsseldorf/Germany

Klein, Käthe
Chamber of Industry and Commerce, Essen/Germany

Kunz, Christoph
Siemens Energy Global GmbH & Co. KG, Munich/Germany

Lang, Martin, Prof. Dr.-Ing.
University Duisburg-Essen/Germany

Paus, Christoph
UNIPER SE, Essen/Germany

Schuknecht, Michael, Dr.-Ing.
TÜV NORD Systems GmbH & Co KG, Essen/Germany

Stenzel, Oliver
Lausitz Energie Kraftwerke AG, Schwarze Pumpe Power Plant, Spremberg/Germany

Then, Oliver, Dr.
vgbe energy e.V., Essen/Germany

Tschersich, Conrad
AWG Abfallwirtschaftsgesellschaft mbH Wuppertal, Wuppertal/Germany

Volkmann, Peter
KNG Kraftwerks- und Netzgesellschaft mbH, Rostock/Germany

Von Gehlen, Sebastian, Dr.
PreussenElektra GmbH, Emmerthal/Germany

Wagner, Karsten
EnBW Energie Baden-Württemberg AG, Karlsruhe/Germany

Ernst Michael Züfle
KWS Energy Knowledge eG, Essen/Germany

Guest:
Klaus Talleur
KWS Energy Knowledge eG, Essen/Germany

Consultant:
Nina Woydack
KWS Energy Knowledge eG, Essen/Germany

Facts and Figures

Members

KWS Energy Knowledge eG Membership

KWS Energy Knowledge eG is a partnership of power industry companies. It strives to promote and assist the businesses of its members through basic and advanced training events for expert operations and management personnel of installations dedicated to power and/or heat generation and supply, heat extraction and desalination by maintaining locations for holding such events and conducting examinations as well as offering room and board for trainees. The cooperative assists its members within the framework of said vocational training in the area of environmental protection, in pollution control and water conservation, and also in the field of occupational health and safety and accident prevention. Furthermore, it acts as consultant for personnel and organization development.
In order to ensure that the KWS can continue to serve in the long-term it is necessary that all power plant operators and other interested organizations support them by becoming members.
According to the KWS' statutes it differentiates between ordinary members, affiliated members and sponsoring members.
The KWS would be pleased to assist you in any questions regarding the organization and membership as well as its statutes and subscription fee regulations. Further information can be found on the internet at "www.kws-eg.com" or "international.kws-eg.com".

Ordinary Members

3M Deutschland GmbH, Membranes Business Unit, Wuppertal

Abfallwirtschaftsgesellschaft mbH Wuppertal, Wuppertal
AGR Betriebsführung GmbH, Herten
Allessa GmbH, Werk Cassella-Offenbach, Frankfurt am Main
AMK Abfallentsorgungsgesellschaft des Märkischen Kreises mbH, Iserlohn
AVEA Entsorgungsbetriebe GmbH & Co. KG, Leverkusen
AVG Abfallentsorgungs- und Verwertungsgesellschaft Köln mbH, Cologne

Basell Polyolefine GmbH, Wesseling Site, Wesseling
BASF SE, Ludwigshafen
Bayer AG, Berlin (Group Membership)
Berliner Stadtreinigungsbetriebe, Abfallbehandlungswerk Nord, Berlin
BEW Berliner Energie und Wärme GmbH, Berlin
Boehringer Ingelheim Pharma GmbH & Co. KG, Ingelheim am Rhein
Bremerhavener Entsorgungsgesellschaft mbH, Bremerhaven
BS|Energy Braunschweiger Versorgungs-AG & Co. KG, Braunschweig

Cargill Deutschland GmbH, Krefeld
Cerdia Produktions GmbH, Freiburg
CURRENTA GmbH & Co. OHG, Leverkusen

Deutsche Windtechnik X-Service GmbH, Erkelenz
DREWAG Stadtwerke Dresden GmbH, Dresden
DSM Nutritional Products GmbH, Grenzach-Wyhlen

EEW Energy from Waste Helmstedt GmbH, Helmstedt
EnBW Energie Baden-Württemberg AG, Stuttgart
EnBW Kernkraft GmbH, Obrigheim
enercity AG, Hanover
Energie AG Oberösterreich Erzeugung GmbH, Linz/Austria
Energie und Wasser Potsdam GmbH, Potsdam
Energie- und Wasserversorgung Bonn/Rhein-Sieg GmbH (SWB), Bonn
Energieversorgung Oberhausen AG, Oberhausen
Energieversorgung Offenbach AG, Offenbach
Engie, Engie Towers Brüssel, Brussel/Belgium
ENTEGA AG, Darmstadt
Erlanger Stadtwerke AG, Erlangen
Essity Operations Mannheim GmbH, Mannheim
EVN AG, Maria Enzersdorf/Austria
Evonik Operations GmbH, Marl

Fernwärme Ulm GmbH, Ulm
FORTE Energie GmbH & Co. KG, Cuxhaven

Gemeinschafts-Müllverbrennungsanlage Niederrhein GmbH, Oberhausen
GfA Gemeinsames Kommunalunternehmen für Abfallwirtschaft, Olching
GKS-Gemeinschaftskraftwerk Schweinfurt GmbH, Schweinfurt
Grosskraftwerk Mannheim AG, Mannheim

Hamburger Energiewerke GmbH, Hamburg
Hamburger Stadtentwässerung AöR, Hamburg
HEB GmbH, Hagener Entsorgungsbetrieb, Hagen
Henkel AG & Co. KGaA, Düsseldorf

IHKW Industrieheizkraftwerk Andernach GmbH, Andernach
InfraServ GmbH & Co. Gendorf KG, Burgkirchen
InfraServ GmbH & Co. Höchst KG, Frankfurt am Main
InfraServ GmbH & Co. Wiesbaden KG, Wiesbaden

K + S Minerals and Agriculture GmbH, Philippsthal
(Group Membership)
Kämmerer Energie GmbH, Osnabrück
Kernkraftwerk Gösgen-Däniken AG, Däniken/Switzerland
Knapsack Power GmbH & Co. KG, Düsseldorf
Kraftwerke Mainz-Wiesbaden AG, Mainz-Wiesbaden
Kraftwerk Obernburg GmbH, Obernburg
Kraftwerk Schwedt GmbH & Co. KG, Schwedt
Kreis Weseler Abfallgesellschaft mbH & Co. KG, Kamp-Lintfort

Lausitz Energie Kraftwerke AG, Cottbus
Linz Strom Gas Wärme GmbH für Energiedienstleistungen
und Telekommunikation, Linz/Austria

MAINOVA AG, Frankfurt am Main
Group Membership for
Biomasse-Kraftwerk Fechenheim GmbH,
Frankfurt am Main
Mark-E AG, Hagen
Maxauer Papierfabrik GmbH, Karlsruhe
Mercedes-Benz AG, Sindelfingen
MHB Hamm Betriebsführungsgesellschaft mbH, Hamm
MHKW Müllheizkraftwerk Frankfurt am Main GmbH, Frankfurt
MIBRAG GmbH, Zeitz
Mohn media Mohndruck GmbH, Gütersloh
Moritz J. Weig GmbH & Co. KG, Mayen
Müllheizkraftwerk Rothensee GmbH, Magdeburg
Müllverbrennung Kiel GmbH & Co. KG, Kiel
Münchener Stadtentwässerung, Munich
Munksjö Unterkochen GmbH, Aalen
MVA Weisweiler GmbH & Co. KG, Weisweiler
MVV Umwelt Asset GmbH, Mannheim

N-ERGIE Kraftwerke GmbH, Nuremberg
Norske Skog Bruck GmbH, Bruck an der Mur/Austria

OMV Downstream GmbH, Vienna/Austria
Onyx Kraftwerk Farge GmbH & Co. KGaA, Bremen
A member of the ONYX Power Group
Onyx Kraftwerk Wilhelmshaven Betriebs GmbH & Co. KGaA,
Wilhelmshaven, A member of the ONYX Power Group
Onyx Kraftwerk Zolling GmbH & Co. KGaA, Zolling
A member of the ONYX Power Group
OQ Chemicals Produktion GmbH & Co. KG, Ruhrchemie Site,
Oberhausen

Palm Power GmbH & Co. KG, Aalen
Powerplant Rotterdam B.V.,
A member of the ONYX Power Group,
LB Maasvlakte Rotterdam/Netherlands
PreussenElektra GmbH, Hanover
PreZero Energy Bernburg GmbH, Bernburg

Raubling Papier GmbH, Raubling
RheinEnergie AG, Köln
RWE AG, Essen
Group Membership for
- RWE Generation SE
- RWE Nuclear GmbH
- RWE Generation NL B.V., Netherlands
- RWE Generation UK plc, Didcot B CCGT Power Station,
Oxfordshire/Great Britain

Saale Energie GmbH, Schkopau
Salzburg AG, Salzburg/Austria
Salzgitter Flachstahl GmbH, Salzgitter
Sappi Austria Produktions-GmbH & Co. KG, Gratkorn/Austria
Sappi Ehingen GmbH, Ehingen
Schluchseewerk AG, Laufenburg
Seabank Power Ltd., Bristol/Great Britain
SEO Societe Electrique De l´Our S.A.,
Centrale Vianden, Stolzembourg/Luxembourg
Smurfit Kappa Zülpich Papier GmbH, Zülpich
Solvay Chemicals GmbH, Hanover
Spreerecycling GmbH & Co. KG, Spremberg
SRS Eco Therm GmbH, Salzbergen
Stadtwerke Augsburg,
Elektrizitäts- und Fernwärmeversorgung,
Wärme- und Stromerzeugung, Augsburg
Stadtwerke Bielefeld GmbH, Bielefeld
Group Membership for
- MVA Bielefeld-Herford GmbH
- Enertec Hameln GmbH
Stadtwerke Düsseldorf AG, Düsseldorf
Stadtwerke Flensburg GmbH, Flensburg
Stadtwerke Heidelberg Netze GmbH, Heidelberg
Stadtwerke Karlsruhe GmbH, Karlsruhe
Stadtwerke Leipzig GmbH, Leipzig
Stadtwerke Münster GmbH, Münster
Stadtwerke Rosenheim GmbH & Co. KG, Rosenheim
Stadtwerke Rostock AG, Rostock
Stadtwerke Schwerin GmbH, Schwerin
Stadtwerke Würzburg GmbH, Würzburg
Städtische Werke Energie + Wärme GmbH, Kassel
STEAG GmbH, Essen
Group Membership for
- RKB Raffinerie-Kraftwerks-Betriebs GmbH, Essen
- Gemeinschaftskraftwerk Bergkamen A OHG, Bergkamen
swb Entsorgung GmbH & Co. KG,
Müllheizwerk Bremen, Bremen
swb Erzeugung AG & Co. KG, Bremen
SWM Services GmbH,
Strom- und Wärmeerzeugung, Unterföhring
SWP Stadtwerke Pforzheim GmbH & Co. KG, Pforzheim

TEAG Thüringer Energie AG, Erfurt
Technische Betriebe Solingen (TBS), Solingen
Thermische Verwertungsanlage Schwarza (TVS), Eigenbetrieb des Zweckverbandes Abfallwirtschaft Saale-Orla, Pößneck
Thyssen Krupp Steel Europe AG, Duisburg
T-Power Energie Services BV, Tessenderlo/Belgium
TWL Technische Werke Ludwigshafen AG, Ludwigshafen am Rhein

Uniper Benelux N.V., Rotterdam/Netherlands
Uniper Kraftwerke GmbH, Hannover

Vattenfall Europe Nuclear Energy GmbH, Hamburg
Vattenfall Wasserkraft GmbH, Berlin
Venator Germany GmbH, Duisburg
Veolia Industriepark Deutschland GmbH, Heinsberg
VERBUND Hydro Power GmbH, Vienna/Austria
VERBUND Thermal Power GmbH & Co. KG, Fernitz-Mellach/Austria
voestalpine Stahl GmbH, Linz/Austria
Vulkan Energiewirtschaft Oderbrücke GmbH, Eisenhüttenstadt
VW Kraftwerk GmbH, Wolfsburg

WIEN ENERGIE GmbH, Vienna/Austria
WSW Energie & Wasser AG, Wuppertal

ZAK Energie GmbH -Müllheizkraftwerk-, Kempten
Zweckverband Abfallverwertung Südostbayern, Burgkirchen
Zweckverband für Abfallwirtschaft in Nordwest-Oberfranken, Dörfles-Esbach
Zweckverband Müllheizkraftwerk Stadt und Landkreis Bamberg, Bamberg
Zweckverband Müllverwertung Schwandorf, Schwandorf
Zweckverband Müllverwertungsanlage, Ingolstadt
Zweckverband Restmüllheizkraftwerk Böblingen (RBB), Böblingen

Affiliated Members

h2-netzwerk-ruhr e.V., Herten
Kerntechnik Deutschland e.V., Berlin/Germany
Technical University of Munich/Germany, FRM II: Research Neutron Source Heinz Maier-Leibnitz, Garching
vgbe energy e.V., Essen/Germany
VIK Verband der Industriellen Energie- und Kraftwirtschaft e.V., Berlin/Germany

Sponsoring Members

EFLA Consulting Engineers, Reykjavik/Island
GESTRA AG, Bremen
KONRAD Meß- & Regeltechnik GmbH, Gundremmingen/Germany
OffTEC Base GmbH & Co. KG, Enge-Sande
SHE Solution Bergmann GmbH & Co. KG, Enger
Siemens Gas and Power GmbH & Co. KG, Essen (Group Membership)
S.T.E.P. Consulting GmbH, Aachen/Germany
windhunter academy GmbH, Berlin

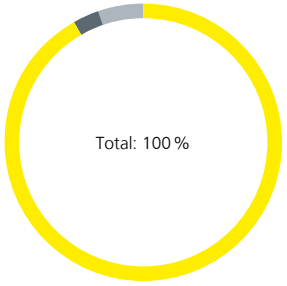
Membership Development

On December 31st, 2024, the KWS Energy Knowledge eG had 159 members, 146 of which were ordinary, five were affiliated and eight were sponsoring members.
During the report period, three companies joined KWS as ordinary members and two companies as sponsoring members. In addition, three members (two ordinary, one affiliated) left KWS. The number of members was reduced by one ordinary member due to the merger of two members to form a group membership.
In accordance with the membership contribution ordinance, individual membership fees are assessed based on net nominal installed electrical capacity in megawatts as listed by the German Federal Network Agency.
The total amount of installed electrical capacity of all ordinary members during the report period stands at 88,480 MW.

19 member companies are based outside of Germany, namely:
- eleven companies in Austria,
- two companies in Belgium,
- one company in Great Britain,
- one company in Island,
- one company in Luxembourg,
- two companies in the Netherlands,
- one company in Switzerland.

The net nominal installed electrical capacity of the foreign member companies adds up to 22,316 MW or approximately 25 % of the total amount of all ordinary members.

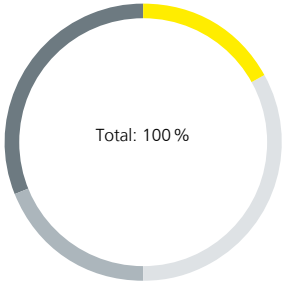
MEMBERS



Ordinary Members:	146	91,82%
Affiliated Members:	5	3,15%
Sponsoring Members:	8	5,03%

Listing of all members (As at December 31st, 2024) Fig. 1

COMPOSITION OF THE GROUP OF ORDINARY MEMBERS



Energy Supply Companies:	17%
Public Utilities:	33%
Thermal Waste Treatmant Companies:	19%
Industrial Companies:	31%

Listing of all ordinary members (As at December 31st, 2024) Fig. 2

BREAKDOWN OF NET NOMINAL ELECTRICAL CAPACITY OF ALL ORDINARY MEMBERS:

	Ordinary Members		Net nominal electrical capacity	
	Number	Percentage %	MW	Percentage %
up to 250 MW	98	67,14	3.696	4,18
251 – 500 MW	17	11,64	5.797	6,55
501 – 1.000 MW	11	7,53	7.491	8,47
1.001 – 2.500 MW	14	9,59	19.697	22,26
2.501 – 5.000 MW	1	0,68	2.780	3,14
5.001 – 8.500 MW	1	0,68	8.271	9,35
above 8.500 MW	4	2,74	40.748	46,05
Total	**146**	**100,00**	**88.480**	**100,00**

KWS in General

20 Years of Hydropower Training at KWS

In 2004, the two-week "Basic Control Room Operator Training" instruction measure was launched. Prior to that, a ten-person group under the patronage of VGB had been formed, composed of operations engineers from VGB members active in hydropower and from KWS. It took five sessions to work out the "Basic Training Control Room Operator" course and to define its duration and contents.
Initial demand was so high that the training course was conducted twice a year. In 2010, enrollment numbers tapered off as expected since the training of the two companies' legacy crews had been pretty much completed and only rookie personnel enrolled. Consequently, KWS adapted to changing customer needs and ran the course once a year, followed by a one-week immersive seminar at year's end. Demand for basic training has been rising significantly since 2022 with courses fully booked and the introduction of a waiting list. So far, 448 individuals have taken part in the "Basic Training Control Room Operator" course and successfully completed their final examinations. The immersive seminar has seen 84 participants. In 2024, 22 individuals completed basic training, eight individuals took part in the immersive seminar.

Renewable Energies

Wind power training at KWS: Qualifying for the energy transformation

In the area of wind power, KWS is intensively engaged in the training of technical personnel for maintenance and operations of wind power installations. Worldwide, wind power will play a central role in the energy mix of the future. Highly qualified specialists are indispensable for tapping this potential and thus ensuring that the climate targets are achieved.
KWS's training programs are designed to give technical personnel practical, hands-on instruction, specifically tailored to the requirements of the industry. The focus is on safety trainings under real conditions and wind-specific electrotechnical qualifications.
In order to better qualify technical experts, KWS increasingly collaborates with partners from the wind power industry like RWE Offshore GmbH, which helps meet the branch-specific demands. Such cooperative efforts enhance the sharing of knowledge and the development of training contents matched to current challenges. Given the shortage of skilled labor in the wind power branch of trade, KWS's advanced training measures set a clear example. By conveying expert knowledge and hands-on skills, KWS contributes to the availability of highly trained individuals and assists the ongoing growth of wind power as a cornerstone of the energy revolution.

Successful wind power instruction for EFLA Consulting Engineers

In 2024, KWS conducted a successful training for EFLA Consulting Engineers, an Icelandic company. Engineers were instructed in a three-day program at the EFLA headquarters in Reykjavik in the areas of planning, erection and operations of wind power installations.
The training measure combined theoretical fundamentals with practice-based contents covering technical requirements, safety standards, and maintenance procedures. The goal of the training was to prepare the participants optimally for their jobs in the growing wind power sector.
This international assignment highlights KWS's ability to offer customized training and thereby contribute to the global energy transformation. At the same time, KWS makes an important contribution to qualifying wind power experts.

WindTrainingTower: Safety trainings & rentals

During the past report period, use of the WindTrainingTower (WTT) grew once again. The number of rentals, e.g. for Mittelmann Sicherheitstechnik GmbH & Co. KG, or high altitude rescue training for firefighters, has risen measurably.

Hydrogen

The year 2024 was marked by critical developments in the hydrogen economy. The approval of the Hydrogen Core Network by Germany's Federal Network Agency broke the ground for the resolute expansion of a nationwide hydrogen infrastructure as well as its intersections with our European partners. Hydrogen has been and continues to be a team effort, the transnational European level included. In July 2024, 23 German, EU-nominated hydrogen projects of important common European interest (IPCEI) received their long-awaited state and federal grant approvals. On the other hand, challenging developments like a more subdued subsidy environment and demanding regulatory scopes of action influenced investments decisions and the current hydrogen market ramp-up.
KWS has been looking intensely into the topic of training requirements in the context of the hydrogen market ramp-up and is currently developing customized instruction offerings in cooperation with and for the benefit of its members. As a result, 2025 will see the introduction of the H2 Technician, a CCI-certified training measure in the field of hydrogen. Furthermore, existing established power plant technology training formats will be gradually augmented and adapted to new

technical developments. Cases in point are our CCGT training offerings that will take H2 readiness into greater account as it is being discussed by lawmakers.
The "Basic Hydrogen Technology Skills" seminar gives participants comprehensive insight into the topic of hydrogen and was conducted several times in 2024, both in-house at KWS and on location with customers. There were also many inquiries for the next scheduled seminars.
A comprehensive requirements analysis has been conducted within the framework of the "transformation booster" project on the use of hydrogen technologies in a variety of industries. Its goal was to identify the specific training and qualification demands in the fields of energy, steel, chemistry, and mobility and to devise strategies for an efficient transformation toward a hydrogen-based economy.

Activities included:
- Interviews with branch experts: Talks with stakeholders from industry, research, and politics in order to determine challenges and opportunities
- Data analysis: Evaluation of market studies, technological developments and statutory structures
- Workshops: Conducting workshops with members of consortiums designed to identify requirements for training concepts and necessary infrastructure

Results reveal that there exists considerable demand for qualification, particularly in the areas of H2 safety and plant operations. Based on this analysis, customized instruction offerings will be developed to assist the transformation in a sustainable manner.

Networking

KWS Energy Knowledge eG positions itself as an innovative instruction provider and is actively engaged in supraregional networks in order to also address non-affiliated businesses. As a associate of the h2-netzwerk-ruhr e.V., one of Germany's oldest and most renowned hydrogen initiatives with more than 90 members, KWS is scheduled to host a special event at Deilbachtal in 2025.
In order to safeguard future competitiveness, the Renewable Energies team thoroughly dedicates itself to the hydrogen market. KWS showcases its manifold training activities and planned qualification measures at various events including trade fairs, high school senior recruitment and other networking events.

On top of that, the network keeps expanding: Membership in Rhein Ruhr Power e.V. and scheduled entry into Verband für Anlagentechnik und Industrieservice e.V. (VAIS) and Wasserstoff Hub Rhein-Kreis Neuss/Rheinland e.V will further increase KWS's visibility and create valuable opportunities to make new contacts and cultivate long-term partnerships.

Simulator Training

Simulator training for Engie Thermique France – DK6 Power Plant (Dunkirk, France)

For the first time in 20 years, KWS welcomed guests from France for simulator training at Deilbachtal. Courses were held in French. The instructor in charge speaks French fluently and has been training participants from the Walloon region of Belgium, among others, at the simulator for years. For these training courses, the simulator is switched to French. The simulator chosen for this training belongs to the 300 MW class with drum boiler and gas firing. The DK6 power plant itself uses blast furnace gas supplied by the neighboring Arcelor Mittal steelworks.

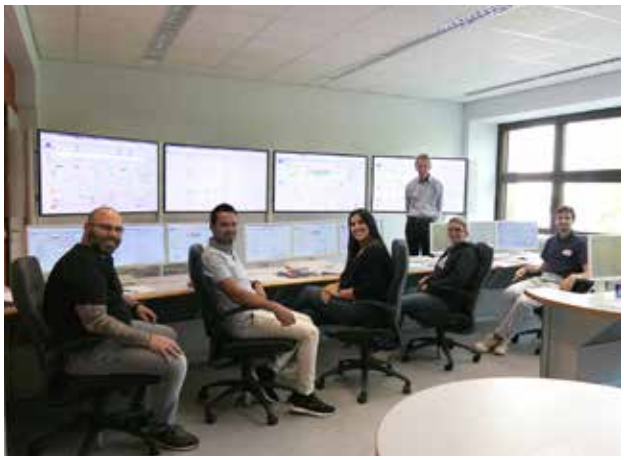
Course participants and KWS staff

Preparations for the simulator training began as early as January 2024 at the DK6 power plant. The KWS instructor visited the premises and got an overview of the plant and the control room so that training contents could be perfectly adapted to the needs of the participants. Training exercises were subsequently finalized in collaboration with the local operations manager.
The training focused on malfunctions management covering all power plant components.

Prior to the conclusion of the training measure, the DK6 operations manager returned the KWS visit to personally scrutinize our training.
More training measures are planned for 2025.

Simulator training for Engie Electrabel – CCGT power plant at Flemalle, Belgium

Belgium's largest CCGT power plant is currently erected at Flemalle near Liège at the Maas River. Preparations are underway there for the shutdown of three nuclear power plants scheduled for 2025. Two nuclear technology installations have already been shut down in recent years. The new installation is designed to close the control energy gap created by the shutdowns in the Belgian power grid. It features a combined gas and steam turbine (Siemens) and can provide an output of 875 MW.
KWS takes pride in assisting Engie Electrabel in the advanced training of new operations personnel with simulator instruction. Due to the linguistic proficiency of the KWS instructor and the fact that the simulator employed is multilingual, training was conducted in French, the native language of the participants.
All in all, four groups with five trainees each underwent instruction. Training contents were coordinated in close collaboration with the customer's training department and local plant management. The diversity of pre-existing skills of the participants was taken into account. The simulator training focused on handling the new Siemens SPPA-T3000 control technology, process engineering, and safe malfunctions management.
More training measures are planned for 2025.



Course participants and trainer

Training Committee

This year, both sessions of the Training Committee took place outside KWS.
The location for the 141st session was EnBW's Rudolf Fettweis power plant in Germany's Black Forest. Located in the Murg Valley near Forbach, this pump-storage plant has been in operation for more than a century.
The participants had the opportunity to learn about the history of the power plant during a guided tour. The plant was erected between 1914 and 1918, during the First World War. Beginning in 1919, it has been feeding power into the 110 kV grid. From 1922-24, the Schwarzbach dam was built and turbines 6 and 7 added to the plant. By the standards of the day, these were outstanding technological feats accomplished under the most severe working conditions.
Currently, construction is under way to convert the installation into a state-of-the-art underground hydroelectric plant. The 50 MW Francis turbine permits storage of the energy generated by 50 wind power installations, for example. Conservation and environmental protection play a major role here, of course. There are two fish elevators, for example, designed to facilitate the recolonization of the river with salmon.
A complete inspection round of the Schwarzbach dam completed the guided tour.

Training Committee

The 142nd session took place at Stadtwerke Münster by invitation of a member of the committee.
Before the actual session, a visit to the Fraunhofer Research Institution for Battery Cell Production FFB in Münster suggested itself to the committee. There, the visitors got an overview of the infrastructure necessary for the production of modern energy storage media and rounded out their visit by attending a lecture on the topic. Subsequently, the group leisurely repaired to the local Christmas market and to an exhibition titled "Man, where are you?" by the artist Aron Demetz in the Liebfrauen-Überwasserkirche cathedral. It was a welcome introduction to a productive session.

Training Committee

Transformation Project

The transformation project comprises further development in a variety of areas. One of them is the restructuring and complementation of topical training offerings regarding the needs of the industry. This includes heat networks as an optional key area of future power plant operator advanced training, CCGT turbines using different fuels, as well as basic training modules for modern technologies like cogeneration units, for example. Another area is the modularization and optimization of the training lineup so that even power plant operators may receive comprehensive basic knowledge in a variety of disciplines like, for example, energy management, IT management, or the energy economy. This will help to better prepare trainees for a changing and more extensive workplace reality. Thanks to continuing positive feedback from trainees, training offerings continue to be designed primarily for in-class instruction, however, digital elements like web-based training or digital conference tools (Vitero) are already being developed and tested in order to complement the learning experience through these media. A next step will be the integrative further development of training contents, training methodology towards a blended learning concept. This approach accommodates the desire of the industry to create a flexible location offering that makes training in Essen optional rather than mandatory. From KWS's perspective, the same scaling options already available in other branches because of digitization are also beginning to emerge in the power industry. Finally, the modular training concept forms the basis of interconnected learning of various interest groups. While prospective power plant operators and shift supervisors go through the modules consecutively in linear fashion, outside interested parties may book and attend specific modules for advanced training at KWS. This creates additional flexibility that primarily attracts individuals who have already attended KWS training measures and now seek additional knowledge as part of their personal further and advanced training. This concept thereby offers maximum agility and openness so that future power industry training demands may be met in a timely fashion. It also promotes interconnected cooperation between experts in different specialties within KWS's departments as well as from external businesses. Finally, the transformation project takes into account the consecutive and content-related links between associated training contents within the overall training lineup of all KWS teams. This creates long-term sustainable business options closely aligned with the needs of the members of the power industry, which maintains and enhances KWS's high regard in this field.
Thanks to a uniform background organizational setup, this concept also offers organizational agility. Working out training course contents or developing new modules follows a consistent logic by means of the so-called "idea master". Using 15 key factors, this document incorporates the technical, legal, and operational framework into developing comprehensive training contents. This ensures that curricula are consistently devised that can be handed in to examining or certifying bodies e.g. CCI or TÜV, and provide a clear overview of crucial subject matter to be examined in a specific area of knowledge. In turn, these curricula form the pattern for creating a didactically well-founded master training plan that lays out the contents to be taught transparently and intersubjectively, which includes the media to be employed and precise learning goals to be pursued. Training master plans facilitate optimized substitute trainer arrangements because all training contents are detailed for skilled individuals. The need for an exclusive lectureship and the resultant bond between department and

consultant can thereby be optimized to a certain degree. Finally, modern instruction media are created whose contents are topical (e.g. instruction manuals) and linked to further modern training media (e.g. web-based training/tutorials/ additional material/ Moodle).

Participants of the meeting in February 2024

Currently, a six-person team covering various key areas is working on the implementation of the project. Its present focus is on the collaboration with experts from power industry businesses as well as from within KWS in order to identify the contents of the training modules and subsequently develop them further through said structures (general framework – master training plan – instruction media). The greatest benefit is achieved by prioritizing the development of such modules that are in high demand in the industry but not yet part of the KWS portfolio and may be distributed via assorted channels. This approach also leads to optimized networking within the KWS team since contents can be developed jointly and established structures and procedures can be shared and improved. The working group regularly reports its progress to the Board of Directors and thereby receives feedback and support for its work process so that the scope and benefits of its efforts are steadily optimized.

Quality Management at KWS

First-class quality all around is what we strive for every day. One important component in that strife is our quality management system. To make sure that the system does not gather dust on the shelf, but determines and sustainably assists our actual workplace efforts, it was designed by KWS itself and is constantly evolving. While the management provides a general framework and concept, a multitude of staffers worked out concrete processes and procedures. This lays the groundwork for high acceptancy and sustainable application.
The third monitoring audits in accordance with DIN EN ISO 9001:2015 standard and AZAV license (Accreditation and Licensing Ordinance for the Promotion of Employment) took place from September 30th – October 2nd, 2024.
The audit criteria derive from quality management system requirements, the AZAV Accreditation and Licensing Ordinance, the recommendations from the accreditation advisory board on the AZWV of May 23rd, 2011, and the recommendations of the board in accordance with Sec. 182 SGB III in its respective current version. The scope of application encompasses advanced training in the field of power plant technology, simulator training, and organization development.

The audits conducted pursued the following objectives:
- Assessment of conformity of the management system of the client in full or in part with the audit criteria listed above
- Assessment the fitness of the management system, ascertainment of meeting applicable legal, regulatory, and contractual requirements, albeit the audit does not rate compliance with legal provisions
- Evaluation of the effectiveness of the management system with regard to making sure that the client's organization meets its stated goals lastingly and
- where applicable, identifying areas for possible management systems improvements
- Revision of compliance with AZAV requirements

Audit result:

- The audit found no deviation from the ordinance- and handbook-compliant implementation status of DIN EN ISO 9001:2015 as well as the AZAV ordinance.
- Potential points of improvement were identified.
- The QM documentation is well-regulated and available to all parties involved.
- Acceptance of the QM system by all parties involved is a fact.
- The QM system is developed further and consistently applied with regard to its implementation.
- Management processes, quality management, occupational safety, the power plant operator training course, simulator training, team IT, the AZAV service process, and the nuclear technology/radiation protection team were all audited. The selection of the individuals audited reflects a representative overview of business processes in the respective locations.

Improvements suggested will be evaluated and implemented in 2025.
The AZAV audit result confirms that KWS consistently continues to meet the requirements for government- sponsored training courses.

Impact of the liquidation of KSG and GfS

The liquidation of KSG Kraftwerks-Simulator-Gesellschaft mbH and GfS Gesellschaft für Simulatorschulung GmbH decided in September 2023 impacted KWS in a variety of ways in 2024.
KSG operated a canteen that had been used by KWS staffers and course participants since 1995. Since KWS continues to require a canteen and a kiosk, the school has taken over canteen operations following the cancellation of the respective contract by KSG. Therefore, a new contract with the legacy caterer has been signed and the canteen building leased.
For decades, KSG has performed all human resources department tasks for KWS for decades. Due to the termination of the existing HR contract, KWS has set up an in-house HR team.
KSG owns properties adjacent to KWS's premises. Approx. 2000 m² of these properties have been purchased by KWS, leaving space for future expansion.
KSG's well-established HPO (Human Performance Optimization) service has been taken over by KWS, including a technical installation.

HPO training is aimed at improving communication and cooperation in order to prevent hazards and errors as much as possible.
KWS is in need of skilled personnel. A total of seven individuals transferred from KSG to KWS.

HPO training module for practical exercises to avoid errors

HPO training module for practical exercises to avoid errors

European student internship at KWS

Megan and Max from Penta College in Hellevoetsluis, Netherlands, were part of our team in October 2024 for a week. Using a 360-degree camera, they documented all relevant sites on the Energy Campus of KWS Energy Knowledge eG. From this footage, the interns created virtual tours of the campus, which serve as early concepts for the development of immersive information materials that our training participants may use for intensive preparation for their courses in our institution. The results of the interns' efforts and the workflow they developed have been beneficial to us. Beyond that, we also enjoyed the time we spent with them, their openness and their curiosity. We are looking forward to working with international interns in the future.

Megan, Max und Axel Bürgers (f. l. t. r.)

Public Appearances

Trade fairs are an important communication platform for exchanging information and one of the most vital marketing tools for a company. For KWS, trade fairs and conventions offer the opportunity to cult~~ivate existing contacts, make new ones and get fresh impulses for ist ongoing evolution.

During the report period, KWS Energy Knowledge eG was present at the following trade fairs and conventions:

- E-world energy & water, Essen/Germany
- VGB Conference "Steam Generators, Industrial and Cogeneration Plants 2024", Garmisch-Partenkirchen/Germany
- 06th Hydrogen Industry Day, Vienna/Austria
- IFAT 2024, Munich/Germany
- 16th North Rhine-Westphalia Wind Energy Industry Day (Branchentag Windenergie NRW), Gelsenkirchen/Germany
- WindEnergy, Hamburg/Germany
- 56th Colloquium on Power Plant Technology (Kraftwerkstechnisches Kolloquium), Dresden/Germany
- 36th VDI-/ITAD-Symposium "Thermial Waste Treatment", Würzburg/Germany
- 32nd Wind Energy Days, Linstow/Germany
- 09th Hydrogen Industry Day, Neuss/Germany

Apartment Building

The apartment building with its 55 modern furnished apartments of approx. 21 square meters each enables residents to live and study in the immediate neighborhood of KWS's training center.
Generously equipped kitchens on each floor, gyms and leisure areas as well as group study chambers complete with audiovisual equipment round out accommodations on the premises.
Spacious outer premises offer plenty of diversion thanks to a variety of leisure time activity options.
Featuring an innovative energy concept, this architecturally successful object blends in perfectly with its Deilbachtal surroundings and complements the Energy-Campus Deilbachtal.
An occupancy rate of 88,41% in 2024 shows that living facilities, space to relax and proximity to the training center are important components for the time spent learning at KWS Energy Knowledge eG.

Apartment building of the KWS

KWS Conference Center

KWS has been offering all members an option of using the training center facilities as a convention center. Convention and seminar rooms are available for up to 130 participants and equipped with all modern media and optional videoconferencing. Meals may be supplied by the staff restaurant. During the report period, KWS's facilities were booked once by external hosts of seminars or conventions.

Inside view of conference room

KWS Energy Knowledge eG

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