

ETG Congress 2017 – Die Energiewende

Tuesday, November 28, 11:10 - 13:10

E1: Expertenforum 1 - Systemaspekte

Assisting Renewable Energy Integration by Price Based Load Shifting using Heat Pumps with Thermal Storage

Stephan Röhrenbeck and Anes Benzarti (TU Kaiserslautern, Germany); Wolfram Wellßow (University of Kaiserslautern & Chair for Energy Systems and Energy Management, Germany); Karin Maar (Pflazwerke AG, Germany); Peter Hauffe (Pflazwerke AG, Germany); Joachim Maul (Ait-deutschland, Germany); Matthias Pahn, Tillaman Gauer, Kamyar Nasrollahi, Angele Tersluisen, Klara Bauer and Nadine Lebong (TU Kaiserslautern, Germany); Stefan Jäger (Geomer GmbH, Germany)
pp. 1-6

Coupling electricity and gas distribution networks: applications and further steps in the concept development

James Garzon-Real (Bergische Universität Wuppertal, Germany); Sefa Kilicsoy and Benedikt Dahmann (University of Wuppertal, Germany); Tobias Kornrumpf, Marcus Stötzel and Markus Zdrallek (Bergische Universität Wuppertal, Germany)
pp. 7-12

Neural Network-based Load Forecasting in Distribution Grids for Predictive Energy Management Systems

Patrick Sauter, Philipp Karg, Martin Pfeifer, Mathias Kluwe, Martin Zimmerlin and Thomas Leibfried (Karlsruhe Institute of Technology, Germany); Sören Hohmann (Karlsruhe Institute of Technology & Institute of Control Systems, Germany)
pp. 13-18

Bewertung der Spannungshaltungsmaßnahmen in Niederspannungsnetzen mittels probabilistischer Ansätze

Heiner Früh (Universität Stuttgart, Germany); Pascal Wiest (Universität Stuttgart & IEH, Germany); Krzysztof Rudion (Universität Stuttgart, Germany)
pp. 19-24

Control strategies for a fully RES based power system

Dirk Westermann (Ilmenau University of Ilmenau, Germany); Martin Wolter (Otto-von-Guericke-Universität Magdeburg, Germany); Przemyslaw Komarnicki (Fraunhofer IFF, Germany); Steffen Schlegel and Robert Schwerdfeger (Ilmenau University of Technology, Germany); André Richter (Otto-von-Guericke-Universität Magdeburg, Germany); Bartłomiej Arendarski (Fraunhofer IFF, Germany)
pp. 25-30

Assessment of the Structural Characteristics of Electrical Transmission Systems Using a Graph Theoretic Measure

Oliver Scheufeld, Lukas Kalisch and Andreas Moormann (Forschungsgemeinschaft für Elektrische Anlagen und Stromwirtschaft e. V., Germany); Simon Krahl and Albert Moser (FGH e. V., Germany)
pp. 31-36

Investigation of the interaction between peak capping and usable ampacities of overhead lines for system planning purposes

Ralf Puffer (RWTH Aachen, Germany); Johannes Schmiesing and Wencke Wenzlaff (Avacon AG, Germany)
pp. 37-42

Impact of Large-Scale Integration of E-Mobility and Photovoltaics on Power Quality in Low Voltage Networks

Sascha Müller (Technische Universität Dresden, Germany); Friedemann Möller (Technische Universität Dresden, Germany); Matthias Klatt (Technische Universität Dresden, Germany); Jan Meyer (Technische Universität Dresden, Germany); Peter Schegner (TU Dresden, Germany)
pp. 43-48

Balancing control and congestion management with increasing decentralized generation - possible solutions based on TSO-DSO cooperation

Daniel Engelbrecht (Mitteldeutsche Netzgesellschaft Strom mbH, Germany); Anne-Katrin Marten and Harmut Bauer (50 Hertz Transmission GmbH, Germany); Ulf Matthes (Mitteldeutsche Netzgesellschaft mbH, Germany); Marcus Junghans and Andreas Knobloch (TEN Thüringer Energienetze GmbH, Germany); Stefan Dorendorf (E-dis AG, Germany); Torsten Behrens (Stromnetz Hamburg GmbH, Germany); Claus Hodurek (50 Hertz Transmission GmbH, Germany); Tim Evers (E-dis AG, Germany)
pp. 49-56

Reactive Power Management at the Network Interface of EHV- and HV Level

Haonan Wang (Fraunhofer Institute for Wind Energy and Energy System Technology, Germany); Markus Kraiczy (Fraunhofer IWES, Germany); Sebastian Schmidt and Frank Wirtz (Bayernwerk AG, Germany); Christian Töbermann, Bernhard Ernst and Erika Kämpf (Fraunhofer IWES, Germany); Martin Braun (Universität Kassel & Fraunhofer IWES, Germany)
pp. 57-62

Automated Network Reinforcement including a Model for an Asset Management Strategy

Daniel Büchner (Fraunhofer IWES, Germany); Leon Thurner (Universität Kassel, Germany); Tanja Kneiske (Fraunhofer IWES, Germany); Martin Braun (Universität Kassel & Fraunhofer IWES, Germany)
pp. 63-68

Visualization techniques for the on-line monitoring and provision of available operating reserve from massive distributed co-generation in multi-modal power systems

Jonas Hinker (Technische Universität Dortmund, Germany); Nicolas Witte (Universität Duisburg-Essen, Germany); Johanna Myrzik (Technische Universität Dortmund, Germany); Angelika Heinzl (Universität Duisburg-Essen, Germany)
pp. 69-74

Auswirkungen der Spitzenkappung von erneuerbaren Energien auf den Netzausbau im Hochspannungsnetz

Pascal Wiest (Universität Stuttgart & IEH, Germany); Daniel Gross (University of Stuttgart, Germany); Krzysztof Rudion (Universität Stuttgart, Germany); Alexander Probst (Netze BW GmbH, Germany)
pp. 75-80

Energy Transition in Germany: Five consistent scenarios to frame un-certainty up to 2035

Roland Bauer (50Hertz, Germany); Henning Schuster (E-bridge GmbH, Germany); Thomas Köbinger (Hertz Transmission GmbH, Germany)
pp. 81-86

Konzept einer praktikablen, stabilen und übertragbaren Zustandsschätzung für Verteilnetze

Daniel Gross (University of Stuttgart, Germany)
pp. 87-92

A Heuristic Process for an Automated Evaluation of Distribution Grid Expansion Planning Approaches

Christian Wagner, Chris Kittl, Stefan Kippelt and Christian Rehtanz (TU Dortmund University, Germany)
pp. 93-98

Optionen für das Übertragungsnetz nach 2030

Christian Schulz (TSO & TenneT TSO GmbH, Germany); Carsten Siebels (TenneT TSO GmbH, Germany)
pp. 99-101

Simulation environment for investigations of energy flows in residential districts and energy management systems

Christian Reinhold and Bernd Engel (TU Braunschweig, Germany)
pp. 102-106

Impact of Flexible Transmission Assets on Day-to-Day Transmission Grid Operation under Uncertainties

Tobias van Leeuwen (RWTH Aachen, Germany); Albert Moser (RWTH Aachen University, Germany)
pp. 107-112

Vorausschauende Gebäude im intelligenten Verteilnetz

Andreas Schuster (Aspern Smart City Research GmbH & Co KG (ASCR), Austria); Alfred Einfalt and Lukas Krammer (Siemens AG Österreich, Austria); Thomas Baumgaertner and Rudolf Sollacher (Siemens AG, Germany); Daniel Lechner (Siemens AG Österreich, Austria)
pp. 113-118

Tuesday, November 28, 14:00 - 15:45

E2: Expertenforum 2 - Markt, Regulatorischer Rahmen und Akzeptanz

Multi Objective usage of battery storages in distribution grids

Tobias Rott and Stefan Nykamp (Westnetz GmbH, Germany)
pp. 119-124

Cost Impact Simulation of Blackouts within the Electrical Grid

Gerhard Kleineidam (Kompetenznetzwerk Wasser und Energie eV, Germany); Georg Jung (VITO, Belgium); Adrian Woeltche (Institute of Information Systems at Hof University, Germany)
pp. 125-130

Analyse der Wechselwirkung von CO₂-Einsparungen und Strompreismodellen für eine Liegenschaft mit Eisspeicher

Stefan Bschorer (TU Berlin, Germany); Maren Kuschke (Technische Universität Berlin, Germany); Kai Strunz (Technical University of Berlin, Germany)
pp. 131-136

Optimization of retail electricity pricing structures

Michael Hinterstocker (Forschungsgesellschaft für Energiewirtschaft mbH, Germany); Serafin von Roon (Forschungsgesellschaft für Energiewirtschaft mbH)
pp. 137-142

Time-optimized dynamic two-step tariffs for CHP operation

Oliver Lutz (Fraunhofer Institute For Solar Energy Systems, Germany); Raphael Hollinger (Fraunhofer ISE, Germany); Vicente Olavarria (Fraunhofer Institute For Solar Energy Systems, Germany); Christof Wittwer (Fraunhofer Institute for Solar Energy Systems ISE, Germany)
pp. 143-148

Medium- and Low-Voltage Network Planning under Consideration of the German Incentive Regulation

Marius Sieberichs (RWTH Aachen University & Chair and Institute of Power Systems and Power Economics (IAEW), Germany); Robin Ashrafuzzaman and Albert Moser (RWTH Aachen University, Germany)
pp. 149-154

Einsatz von dezentralen Speichern für den kurzfristigen Bilanzkreis-ausgleich

Daniel Unger (Technische Universität Braunschweig, Germany); Bernd Engel (TU Braunschweig, Germany)
pp. 155-160

Amendment of the German Incentive Regulation: Implications on Investment Decisions of Distribution Network Operator

Marius Sieberichs (RWTH Aachen University & Chair and Institute of Power Systems and Power Economics (IAEW), Germany); Lukas Löhr and Albert Moser (RWTH Aachen University, Germany)
pp. 161-166

A New Operation Management Approach to Coordinate Market and Grid Operations

Stefan Klaiber (Advanced System Technology (AST) Branch of Fraunhofer IOSB, Germany); Steffi Naumann (Fraunhofer IOSB, Germany); Oliver Warweg (Fraunhofer Gesellschaft, Germany); Peter Bretschneider (Fraunhofer IOSB & Institutsteil Angewandte Systemtechnik AST, Germany)
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Tuesday, November 28, 15:45 - 18:15

P1: Poster Session - Systemaspekte

Dieselgate - A warning for the "Energiewende"

Frederik Kalverkamp, Jenny Bünger and Stephan Brandt (FGH GmbH, Germany)
pp. 173-175

Development of a 2025 operational Central European transmission system model to investigate grid restoration strategies

Philipp Hinkel and Martin Ostermann (University of Kaiserslautern, Germany); Helge Pluntke (University of Kaiserslautern & Chair for Energy Systems and Energy Management, Germany); Davood Raoofsheibani (TU Kaiserslautern, Germany); Wolfram Wellbow (University of Kaiserslautern & Chair for Energy Systems and Energy Management, Germany); Andreas Gies (DUtrain GmbH, Germany)
pp. 176-181

Supporting Role-based Access Control in the Digital Grid

Steffen Fries (Siemens AG); Chaitanya Bisale, Andreas Güttinger and Rainer Falk (Siemens AG, Germany)
pp. 182-187

Zur Soziotechnik und zur Soziologie der Energiewende

Uwe Pfenning (Universität Stuttgart & Fakultät für Wirtschafts- und Sozialwissenschaften, Germany); Ulrich Nepustil and Doerte Laing-Nepustil (Hochschule Esslingen, Germany)
pp. 188-193

Neue Planungsgrundsätze für ländliche Verteilungsnetze

Philipp Steffens, Sebastian Harnisch and Markus Zdrallek (Bergische Universität Wuppertal, Germany); Julian Monscheidt, Linda Münch and Carsten Böse (Siemens AG, Germany)
pp. 194-199

HVAC/HVDC Control Center - Test and Demonstrator System

Rainer E. Krebs (Siemens Energy Management & Otto-von-Guericke University Magdeburg, Germany); Florian Sass, Christoph Brosinsky, Tom Sennewald and Dirk Westermann (Technische Universität Ilmenau, Germany)
pp. 200-205

Centralized energy management for the optimization of residential districts

Stephan Diekmann, Christian Reinhold and Bernd Engel (TU Braunschweig, Germany)
pp. 206-211

Zuverlässigkeitstechnische Modellierung von dezentralen Energieanlagen in Verteilungsnetzen

Fabian Moehrke, Kristof Kamps and Markus Zdrallek (Bergische Universität Wuppertal, Germany); Philipp Awater and Michael Schwan (Siemens, Germany)
pp. 212-217

A cross voltage-levels simulation approach for interaction analysis in converter-dominated distribution networks

Falk Schaller (Fraunhofer Institut & Fraunhofer Institutsteil Angewandte Systemtechnik, Germany); Steffen Prinz, Michael Malsch and Benjamin Schönfeld (P&M Power Consulting GmbH, Germany); Teng Jiang (Technische Universität Ilmenau, Germany); Steffen Schlegel (Ilmenau University of Technology, Germany); Dirk Westermann (Ilmenau University of Ilmenau, Germany); Benjamin Fischer and Shangdan Yang (Fhg IOSB-AST, Germany); Steffen Nicolai (Advanced System Technology (AST) Branch of Fraunhofer IOSB, Germany); Peter Bretschneider (Fraunhofer IOSB & Institutsteil Angewandte Systemtechnik AST, Germany)
pp. 218-223

Comparison of Different Power Distribution Algorithms in a Scalable Energy Management Concept

Andreas W. Ebentheuer (Technical University of Munich (TUM) & Institute of Energy Conversion Technology, Germany); Markus Herzog (Technical University of Munich, Germany); Taha Lahlou and Hans-Georg Herzog (Technical University of Munich (TUM), Germany)
pp. 224-229

Optimierte Netzentwicklung für EWR Netz

Thomas Singer (EWR Netz GmbH, Germany); Heiko Spitzer and Matthias Hopfensitz (Entellgenio GmbH, Germany); Johannes Dasenbrock (Fraunhofer IWES, Germany); Martin Braun (Universität Kassel & Fraunhofer IWES, Germany)
pp. 230-235

Reducing the Need for New Lines in Germany's Energy Transition: The Hybrid Transmission Grid Architecture

Matthias Hotz, Irina Boiarchuk, Dominic Hewes, Rolf Witzmann and Wolfgang Utschick (Technische Universität München, Germany)
pp. 236-241

Vergleich von Netzoptimierenden Maßnahmen in der Niederspannung

Florian Samweber, Simon Köppl, Alexander Bogensperger and Mathias Mueller (Forschungsstelle für Energiewirtschaft e. V., Germany)
pp. 242-247

Verluste von HGÜ-Umrichtern in der Leistungsflussberechnung

Samuel Schilling and Maren Kuschke (Technische Universität Berlin, Germany); Kai Strunz (Technical University of Berlin, Germany)
pp. 248-253

Markov Chain based Very Short Term Load Forecasting realizing Conditional Expectation

Joachim Staats and Cecil Bruce-Boye (Fachhochschule Lübeck, Germany); Theo Weirich (Stadtwerke Norderstedt, Germany); David Watts (European XFEL GmbH, Germany)

pp. 254-259

Kombinierte Gas- und Stromnetzautomatisierung auf Verteilnetzebene

Benedikt Dahmann (University of Wuppertal, Germany); James Garzon-Real (Bergische Universität Wuppertal, Germany); Marcel Ludwig (University of Wuppertal, Germany); Marcus Stötzel and Markus Zdrallek (Bergische Universität Wuppertal, Germany); Jens Hüttenrauch (DBI-Gastechnologisches Institut gGmbH, Germany); Manfred Lange and Jörn Benthin (Gas- und Wärme-Institut Essen e. V., Germany); Wolfgang Köppel (DVGW EBI, Germany)

pp. 260-265

Consideration of New Electricity Applications in Distribution Grid Expansion Planning and the Role of Flexibility

Stefan Kippelt, Christian Wagner and Christian Rehtanz (TU Dortmund University, Germany)

pp. 266-271

80% PV and wind based energy supply: cross sector advantages for efficient system designs

Richard Eckerle (Universität der Bundeswehr München, Germany)

pp. 272-277

Characteristic Parameters and Reference Networks of German Distribution Grid (LV, MV, and HV) for Power System Studies

Kaveh Malekian and Farhad Safargholi (Chemnitz University of Technology, Germany); Karsten Küch (WindGuard Certification GmbH, Germany); Max Domagk (Dresden University of Technology, Germany); Jan Meyer (Technische Universität Dresden, Germany); Max Hoven (FGH, Germany)

pp. 278-283

SWOT Analysis of an Extended Reactive Power Range of PV-Inverters Serving Smart Electricity Grids

Wolfgang Biener (Fraunhofer Institute for Solar Energy Systems, Germany); Thomas Erge (Fraunhofer ISE, Germany); Bernhard Wille-Hausmann (Fraunhofer Institut für Solare Energiesysteme ISE, Germany); Thorsten Bülo (SMA Solar Technology AG, Germany); Thomas Kumm (EWE NETZ GmbH, Germany)

pp. 284-289

Beteiligung erneuerbarer dezentraler Einspeiseanlagen an erforderlichen Systemdienstleistungen aus Sicht der Netz- und Systemführung

Holger Becker (Fraunhofer IWES, Germany); Alexander Bernhart (DUtrain GmbH, Germany); Johannes Brombach (I4E Innovation for ENERCON GmbH, Germany); Denis Mende (Fraunhofer IWES, Germany); Udo Spanel (DUtrain GmbH, Germany)

pp. 290-295

Effect of a high number of charging stations on low-voltage grids in new residential quarters

Jonas Wussow and Bernd Engel (TU Braunschweig, Germany); Jan Mummel (Technische Universität Braunschweig & Institut für Hochspannungstechnik und Elektrische Energieanlagen, Germany)
pp. 296-300

The European Energy System 2050 - A Review of Current Pathways for Renewable and Conventional Technologies in Europe

Inga M. Müller and Rita Dornmair (Technical University Munich, Germany)
pp. 301-306

Optimierte Engpassbewirtschaftung in Verteilnetzen durch regionale Flexibilitätsnutzung

Christoph Schlenzig and Ulrich Schellmann (Seven2one Informationssysteme GmbH, Germany)
pp. 307-311

Evaluation of synchrophasor use in distribution grids to estimate the regional grid state

Eberhard Waffenschmidt (TH Köln, Germany); Patrick Littau and Christian Pelikan (TH-Köln, Germany)
pp. 312-316

Controlled Charging of Electric Vehicles in Distribution Grids

Marco Mittelsdorf (Fraunhofer-Institut für Solare Energiesysteme ISE, Germany); Arne Groß (Fraunhofer ISE & University of Freiburg, Germany); Jörn Schumann (Fraunhofer Institut für Solare Energiesysteme, Germany); Robert Kohrs (Fraunhofer Institute of Solar Energy Systems ISE, Germany)
pp. 317-323

Time Series Analysis and Forecasts with Holt-Winters-Method based on measured values of the German transmission grid

Hermann Kraus (OTH Regensburg, Germany); Gaby Seifert (University of Erlangen-Nuremberg, Germany); Matthias Luther (University of Erlangen-Nürnberg, Germany)
pp. 324-329

Reference Scenarios for the Evaluation of the Traffic Light Concept in Low-voltage Power Systems

Sebastian Kochannek (Karlsruhe Institute of Technology & Institute AIFB, Germany); Johanna Geis-Schroer, Ingo Mauser and Hartmut Schmeck (Karlsruhe Institute of Technology, Germany)
pp. 330-335

P2: Poster Session - Markt, regulatorischer Rahmen und Akzeptanz

Intraday Redispatch - Optimal Scheduling of industrial processes at day-ahead and continuous intraday market

Jan Meese and Benedikt Dahmann (University of Wuppertal, Germany); Markus Zdrallek (Bergische Universität Wuppertal, Germany); Andy Völschow (WSW Energie & Wasser AG, Germany)
pp. 336-341

Wednesday, November 29

Wednesday, November 29, 08:30 - 10:30

E3: Expertenforum 3 - Technologien & Komponenten

Netzkonzepte zur temporären Verbindung separater NOSPE-Kabelnetze mit dem klassischen 110-kV-RESPE-Freileitungsnetz

Christin Schmoger (EDIS AG, Germany)
pp. 342-347

A Novel Regulator for Meshed Low-Voltage Networks

Stefan Lang (TU Kaiserslautern, Germany); Wolfram Wellßow (University of Kaiserslautern & Chair for Energy Systems and Energy Management, Germany); Haiyan Ma (TU Kaiserslautern, Germany); Ingolf Quint (Pfalzwerke Netz AG, Germany); Peter Hauffe (Pfalzwerke AG, Germany); Stefan Sender (Power Plus Communications AG, Germany); Thomas Walcher and Philipp Wehner (Walcher GmbH & Co. KG, Germany); Marco Werner (Pfalzwerke Netz AG, Germany); Hartmut Walcher (Walcher GmbH & Co. KG, Germany)
pp. 348-353

Time synchronization of protection and SCADA components in power utility systems

Christina Sufke (Westnetz GmbH, Germany)
pp. 354-359

Automation of medium-voltage secondary substations - a systemic approach

Christopher Breuer, Christopher Jonas, Christoph Walgenbach, Ralf Heilemann and Thomas Bley (Westnetz GmbH, Germany)
pp. 360-363

Target Network Planning and Asset Condition Assessment as basis for an integrated Asset Management Approach

David Echternacht and Nils Neusel-Lange (SPIE SAG GmbH, Germany); Rainer Schermuly and Florian Meyer (Stadtwerke Ratingen GmbH, Germany)
pp. 364-368

Unitized reversible PEM fuel cells for flexible electrical energy storage

Philipp Kühne, Michael Wenske and Maik Heuer (Otto von Guericke University Magdeburg, Germany); Martin Wolter (Otto-von-Guericke-Universität Magdeburg, Germany)
pp. 369-374

Modular system architecture for processing of CIM

Benjamin Requardt and Sebastian Wende - von Berg (Fraunhofer IWES, Germany); Thomas Wagner (F&S, Germany); Christian Töbermann (Fraunhofer IWES, Germany); Martin Braun (Universität Kassel & Fraunhofer IWES, Germany)
pp. 375-380

Decentralized Management of Cascaded H-Bridge Multilevel Inverters Based on Cybernetic System Theory

Markus Herzog (Technical University of Munich, Germany); Taha Lahlou (Technical University of Munich (TUM), Germany); Andreas W. Ebentheuer (Technical University of Munich (TUM) & Institute of Energy Conversion Technology, Germany); Hans-Georg Herzog (Technical University of Munich (TUM), Germany)
pp. 381-386

Testbed for interaction analysis of energy systems and components in the low voltage domain

Falk Schaller (Fraunhofer Institut & Fraunhofer Institusteil Angewandte Systemtechnik, Germany); Shangdan Yang and Benjamin Fischer (Fhg IOSB-AST, Germany); Steffen Nicolai (Advanced System Technology (AST) Branch of Fraunhofer IOSB, Germany); Peter Bretschneider (Fraunhofer IITB, Germany)
pp. 387-392

Hybrid Energy Storage System Control for the Provision of Ancillary Services

Bernd Bohnet (Karlsruhe Institute of Technology, Germany); Sebastian Kochanek (Karlsruhe Institute of Technology & Institute AIFB, Germany); Ingo Mauser, Sebastian Hubschneider, Michael Braun, Hartmut Schmeck and Thomas Leibfried (Karlsruhe Institute of Technology, Germany)
pp. 393-398

VEREDELE-FACDS Field Trial: Wide Area Power Quality Assessment With IOT Sensors and Cloud-Based Analytics

Christian Ruester (A. Eberle GmbH & Co. KG, Germany); Thomas Huehn (TU Berlin, Germany); Fabian Haussel (A. Eberle GmbH & Co. KG, Germany); Nadim El Sayed (Technische Universitaet Berlin, Germany)
pp. 399-403

Advanced Application-Oriented Testing for Protection Systems

Dominik Hilbrich and Christian Rehtanz (TU Dortmund University, Germany)
pp. 404-409

Quantifizierung des Einflusses von Umweltbedingungen und bodenphysikalischen Eigenschaften der Bettung auf die thermische Stromtragfähigkeit von Mittelspannungs-Energiekabelsystemen

Constantin Balzer (Fachgebiet Hochspannungstechnik, TU Darmstadt, Germany); Christoph Drefke and Markus Schedel (Fachgebiet Angewandte Geothermie, TU Darmstadt, Germany); Volker Hinrichsen (Technische Universität Darmstadt, Germany); Ingo Sass (Institut für Angewandte Geothermie, TU Darmstadt, Germany); Klaus Hentschel (Bayernwerk AG, Germany)
pp. 410-415

Impact of sub-components on the overall performance of stationary battery systems: Insights on the prototype Energy Neighbor

Cong Nam Truong, Michael Schimpe and Maik Naumann (Technical University of Munich, Germany); Andreas Jossen (Technische Universitaet Muenchen, Germany); Holger C Hesse (Technische Universität München, Germany)
pp. 416-421

From Ac to Dc: Benefits in Household Appliances

Alexander Stippich, Markus Neubert, Alexander Sewergin, Georges Engelmann, Jan Gottschlich, Philipp Schülting, Rafael Goldbeck and Christoph van der Broeck (RWTH Aachen University, Germany); Rik De Doncker (RWTH Aachen, Germany)
pp. 422-427

Digitale Schaltanlagen - neue Lösungen für Energieversorger

Marcus Giese (ABB AG, Germany)
pp. 428-429

Einsatz natürlicher Ester in Verteiltransformatoren

Stephanie Haegele and Stefan Tenbohlen (Universität Stuttgart, Germany); Eric Junge and Martin Konermann (Netze BW GmbH, Germany)
pp. 430-435

Harmonic Network Impedance Measurement and Modelling on the Medium Voltage level

Michael Jordan (Helmut-Schmidt-Universität, Germany); Marc Florian Meyer and Gesa Kaatz (Helmut-Schmidt-University, Germany); Detlef Schulz (Helmut Schmidt University, Germany); Stephan Adloff (WRD Wobben Research and Development GmbH, Germany); Fritz Santjer (UL International GmbH, Germany)
pp. 436-441

SimSES: Software for techno-economic Simulation of Stationary Energy Storage Systems

Maik Naumann, Cong Nam Truong and Michael Schimpe (Technical University of Munich, Germany); Andreas Jossen (Technische Universität München, Germany); Holger C Hesse (Technische Universität München, Germany)
pp. 442-447

Electricity storage with adiabatic compressed air energy storage: Results of the BMWi-project ADELE-ING

Stefan Zunft (Deutsches Zentrum für Luft- u. Raumfahrt (DLR) & Institut für Technische Thermodynamik, Germany); Volker Dreißigacker (Deutsches Zentrum für Luft- und Raumfahrt, Germany); Mathilde Bieber (GE Global Research, Germany); Andreas Banach (ESK GmbH, Germany); Christian Klabunde (Otto-von-Guericke-Universität, Germany); Oliver Warweg (Fraunhofer Gesellschaft, Germany)
pp. 448-452

Wednesday, November 29, 10:30 - 11:30

P3: Poster Session - Technologien & Komponenten

The "Smart-Operator's" gridscreening feature - a required element in the future DSOs toolbox

Stefan Nykamp (Westnetz GmbH, Germany); Stefan Willing (RWE Deutschland AG, Germany); Helmut Lührsén and Andreas Löchte (Westnetz GmbH, Germany)
pp. 453-456

Magnetic Fields in a Medium Frequency Transformer Cascade

Jörg Fröhner (cte Controltechnology Engineering GmbH, Germany); Stephan Voss, Markus Baumann and Michael Heinz (Siemens AG, Germany); Günter Schulz (cte Controltechnology Engineering GmbH, Germany); Detlev Hackstein (FernUniversität Hagen, Germany)
pp. 457-462

Certification of PGUs and PGP's - What's next?

Christian Scheefer, Christoph Lütke-Lengerich and Alina Hoppmann (FGH Zertifizierungsgesellschaft mbH, Germany)
pp. 463-464

Störgrößeneinkopplung auf Schutzsysteme mit Kleinsignalwandlern in Mittelspannungsschaltanlagen

Christian Suttner (Universität Stuttgart & Institut für Energieübertragung und Hochspannungstechnik, Germany); Werner Ebbinghaus (ABB AG, Germany); Stefan Tenbohlen (Universität Stuttgart, Germany)
pp. 465-470

Technologies for High-Voltage Power Transmission

Sabine Keim (Keim Solutions and Engineering Services, Germany)
pp. 471-476

Optimization of Streaming Data Analytics for WAMS

Chris-Oliver Heyde (Siemens AG, Germany); Rainer E. Krebs (Siemens Energy Management & Otto-von-Guericke University Magdeburg, Germany); Martin Mangold (Siemens AG, Germany)
pp. 477-480

New smart approach for a U/I-measuring system integrated in a GIS cast resin partition (NCIT) - design, manufacturing, qualification and operational experience

Wojciech Olszewski and Mark Kuschel (Siemens AG, Germany)
pp. 481-488

Cybersecurity Vulnerability Assessment of Smart Grids

Mariela Tapia, Stefan Goessling-Reisemann and Max Spengler (University of Bremen, Germany)
pp. 489-495

P4: Poster Session - Projekte und Anwendungen

3connect - Decentral optimization for e-mobility and demand management with Renewables

Andreas Berthold and Daniel Gerbracht (ABB AG, Germany); Susanne Schmitt (ABB AG Corporate Research Center Germany, Germany)
pp. 496-501

Erstellung einer Energiemanagementstrategie für produzierende Unternehmen am Beispiel des Lastmanagements

Steffen Nienke and Martin Bleider (RWTH Aachen University, Germany)
pp. 502-507

Intelligenter Einsatz von Mehrpunktautomatisierungen im großstädtischen Mittelspannungs-Verteilnetz

Jan Patrick Linossier, Ulrich Groß and Sigrid Plötz (Rheinische NETZGesellschaft mbH, Germany); Andreas Underbrink (ABB Power Consulting, Germany)
pp. 508-510

Integration of Possible Charging Infrastructures for Electric Vehicles in an Existing Distribution Network

Dominik Maihöfner, Maximilian Vetter and Tim Plößer (Technische Universität Darmstadt, Germany); Jutta Hanson (TU Darmstadt, Germany)
pp. 511-516

Eine sichere Energieversorgung für den Schienennahverkehr: Automatische Analyse und Bewertung des Schutzsystemverhaltens

Maximilian Dauer and Reza Ganjavi (Siemens AG, Germany); Christian Blug (Siemens PTI, Germany); Rainer E. Krebs (Siemens Energy Management & Otto-von-Guericke University Magdeburg, Germany); Lukas Leitner and Katja Elschner (Siemens AG, Germany)
pp. 517-521

Historische Perspektive der selbstgeführten HGÜ

Athanasios Krontiris (ABB AG, Germany)
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Thomas Hempel and Björn Veit (University of Applied Sciences Zwickau, Germany); Daniel Kretz (Westsächsische Hochschule Zwickau, Germany); Sandro Hommel (University of Applied Sciences Zwickau, Germany); Mirko Bodach (Zwickau University of Applied Science, Germany)
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A Virtual Power Plant Demonstration Platform for Multiple Optimization and Control Systems

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(Technische Universität München, Germany); Mathias Schoeneberger
(Forschungsgemeinschaft für Elektrische Anlagen und Stromwirtschaft e. V.,
Germany); Sören Patzack and Hendrik Vennegeerts (FGH e. V., Germany); Michael
Cremer and Marian Meyer (RWTH Aachen University, Germany); Armin Schnettler
(RWTH Aachen, Germany); Ibrahim Berber (Netze BW GmbH, Germany); Thorsten
Bülo (SMA Solar Technology AG, Germany); Johannes Brantl (E. ON Bayern AG,
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