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Alan Sbravati[1], Chinmay Vaidya[2], Jeffrey VAlmus[1]

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Mauro Salvadori[1], Massimo Pompili[2]

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Karsten ESSER-RANK, Achim KALTER, Florian KESSLER, Roland POHLE

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Joana Faria[1], David Lima[1], Luís Oliveira[2], José Oliveira[2], Francisco Cardoso[1]

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Frank Rene Richter[1], Uwe Schmidt[2], Sven Demmig[3], Bartosz Rusek[4], Edelhard Kynast[5], Matthias Rudolph[6]

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Magnus Backman[1], Thomas Eriksson[1], Tobias Hintzen[2], John Moutafidis[3]

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[1]University of Ljubljana, Slovenia. [2]Universita della Campania, Italy. [3]The University of Edinburgh, United Kingdom

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Cluster Autonomous Optimization of Distribution Networks with High Penetration of Distributed PV Units

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Development of digital twin technology for operation and control in distribution system

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Parmanand Tendulkar, Pramod Jadhav, Christopher Selvin, Santosh Wangde, VT Narayanan, Gajanan Kale

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Eduardo Martinez Carrasco[1], Maria Teresa Villén Martínez[1], Samuel Borroy Vicente[1], David López Cortón[2], Rubén Andrino Gallego[2], Marjan Popov[3], Henri Grasset[4]

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Enabling autonomous reconfiguration of LV networks

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Multi-Agent-Based Grid Automation: Field test experiences of the distributed grid state control

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Ana Aleixo[1], Rogério Paulo[1], Rui Jorge[1], Alberto Rodrigues[1], Pedro Neves[2], José Cabaça[2]

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Micael Simões[1], Gil Sampaio[1], André Madureira[1], Ricardo Bessa[1], Jorge Pereira[1], Diogo Lopes[2], David Fonseca[2], Pedro Matos[2]

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Storm-proof automatic fault isolation and restoration system for medium voltage networks

Jukka Kuru[1], Teemu Väre[1], Heikki Paananen[2], Sami Vehmasvaara[2]

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A study of Model Predictive Control applied to the French Demo of InterFlex

Julien Bruschi[1], Thibault Wagner[1], Christian Dumbs[1], Dominik Mildt[2], Marco Cupelli[2], Antonello Monti[2]

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The Benefits and Design of a Dynamic Protection System for the Distribution Network

Daniel Hardman[1], Neil Murdoch[1], Jonathan Berry[2]

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Design and implementation of an optimal algorithm for urban medium voltage overhead lines preventive Maintenance using neural network and AHP model

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Partial Discharge Assessment with Ultrasound and TEV (Transient Earth Voltage) in Medium Voltage Substation for Power Distribution Systems Reliability of 18th Asian Games 2018

Agik Promento Yahya, Azkia Azkia, Ricky Cahya Andrian

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Ladislav Stastny, Jiri Zaoralek, Bedrich Benes

ModemTec, Czech Republic

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Ivan Goran Kulis, Miljenko Boras

Koncar-KET, Croatia

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luca delli carpini, antonio cammarota, gianluca sapienza, pietro paulon

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Natalia-Maria Zografou-Barredo, Charalampos Patsios, Sara Louise Walker, Peter Davison

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Luc Richaud[1], Rémi Pellerej[2], Clémentine Benoit[2], Michel Clemence[2]

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Improving Distribution Network Maintenance Process with Self-Driven Maintenance Actions by Contractor Partners

Pauliina Salovaara, Otso Karhu, Turo Ihonen, Harri Salomäki

Elenia Oy, Finland

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Analysis of practical issues in the development of voltage control system for Low Voltage DC Distribution System

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DSO- TSO coordination scheme for Reactive Power Management and Network Losses Minimization

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Andreas Kubis[1], Markus Boller[1], Julian Kemper[2], Roman Uhlig[2], Martin Stiegler[2]

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Reactive Power Flow over System Boundaries in the Distribution Grid

Christoph Groiß[1], Paul Zehetbauer[2], Roman Schwalbe[2], Christian Schirmer[3]

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Oscar Rodriguez[1], Pedro Llovera-Segovia[2], Alfredo Quijano[3], Edwin Maurer[4], Javier Ortego[5]

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Javier Ortego[1], Gonzalo Donoso[2], Antonio González[3], Jesús Zubieta[4], Pedro Álvarez[5], Oscar López[5], Fernando Garnacho[6]

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Attila Kovács, Róbert Gaál

Astron Informatics Ltd., Hungary

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Falko Ebe, Jeromie Morris, Gerd Heilscher

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Alexander Hobert[1], Heiko Schroeder[1], Björn Uhlemeyer[1], Marlon Koralewicz[1], Markus Zdrallek[1], Lena Seeger[2], Dirk Aschenbrenner[3], Pascal Biesenbach[4] et al

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Carlos Candido, Joao Filipe Fernanders, Joao Sa, Neuza Gomes

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Mauro Todeschini, Giovanna Dondossola, Roberta Terruggia

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Matthew Watson[1], Gary Swandells[2], Roger Hey[1]

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Dmitriy Sharovatov[1], Andrey Kucheryavenkov[2], Ekaterina Kartasheva[2], Elena Kondrashenko[2]

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Improved Supervision and Control of the LV Portuguese Network

Rita Pires[1], Bernardo Almeida[1], Jaime Guisado[1], Tiago Simões[1], Pedro Nunes[1], Mónica Vaz[2], Hugo Calado[2], Guilherme Pires[2]

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Norwegian University of Science and Technology (NTNU), Norway

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Luleå University of Technology, Sweden

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[1]National Institute of Solar Energy, France. [2]Univ. Grenoble Alpes, CNRS, Grenoble INP, G2Elab 38000 Grenoble, France. [3]Univ. Grenoble Alpes, Grenoble INP, IGE, France

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Nicolas Grégis[1], François Cochet[2], Jaume Benoit[1], Nicolas Ravot[1], Gabriel Gobat[2], Philippe Desbats[1]

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Anton Domini Sta. Cruz[1], Michael Angelo Pedrasa[1], Roel Dobbe[2]

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Abdullah Emhemed[1], Kyle Smith[1], Graeme Burt[1], Paul Black[2], Ali Kazerooni[2], Anthony Donoghue[3]

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Asma Zgolli[1], Christine Collet[2]

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Katharina Volk, Linda Rupp, Christian Lakenbrink, Kilian Geschermann

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Multi-Agent Based Strategy for Controlled Islanding and Reconnection of Distribution Grids

Manswet Banka, Daniel Contreras, Krzysztof Rudion

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Analysis of the potential uncertainty in accommodation of TSO dispatched services in DSO controlled networks

David Tuffery, Stephen Quinn, Oliver Spink, Clive Goodman

Western Power Distribution, United Kingdom

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Black Start from Distributed Energy Resources

Colin Foote, Neil Miller

SP Energy Networks, United Kingdom

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Architectures for optimised interaction between TSOs and DSOs: compliance with the present practice, regulation and roadmaps

Andrei Morch[1], Gianluigi Migliavacca [2], Ivana Kockar[3], Han Xu[3], Julia Merino Fernández[4], Helena Gerard[5]

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Reza Bazyar[1], Majid Valizadeh[2]

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Vaclav Vycital[1], Michal Ptacek[1], Petr Toman[1], David Topolanek[1], Jiri Drapela[1], Juan Zamphiropolos[2]

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A Camera-based Tracking System for Distribution Network Inspection Based on Unmanned Aerial Vehicles

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Improving crisis management in the case of blackout by ensuring operational capability of the authorities

Pekka Verho[1], Anniina Takala[1], Ossi Heino[2], Joanna Kalalahti[2], Pirjo Jukarainen[2], Tuula Kekki[3]

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SIEMENS Fault Collector Gateway Test On "ESO Sandbox" – The First Open National Distribution Network Sandbox In Europe

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Use Cases applying machine-learning techniques for improving operation of the distribution network

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Karel Maslo[1], Petr Toman[2], Jan Koudelka[2]

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Novel Substation Intelligence based on the Centralized Protection and Control architecture

Bastian Fischer[1], Maarten van Riet[2], Anders Ekberg[3], Rui Oliveira[4]

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Reliable Rate of Change of Frequency (RoCoF) measurements: use cases, operational parameters and test conditions

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Robert Pollak, Javad Fattahi, Henry Schriemer, Rohit Rana

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Arindam Maitra[1], Gaurav Singh[1], Jane Shi[1], Annabelle Pratt[2], Prabakar Kumaraguru [2], Christian Jecu[3], Loic Auguste[3]

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Ali Hamdan, Florent Cadoux, Christine Collet

Grenoble INP, France

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Improve your SAIDI with Advanced Fault Passage Indication

Jean-Yves Pocthier, Ludovic Lamberti, Yves Chollot

Schneider Electric, France

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Pablo Eguia, Esther Torres, Javier Garcia, Agurtzane Etxegarai, Inmaculada Zamora

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Stochastic Generation of Aggregated Charging Profiles of EVs for the Operation Analysis of Low Voltage Networks

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Hierarchical Optimal Charge and Discharge Control of Plug-in Hybrid Electric Vehicles in a Smart Gird

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Grid friendly operation of a hybrid battery storage system

Lukas Held, Nicolas Gerhardt, Martin Zimmerlin, Michael R. Suriyah, Thomas Leibfried

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Hannu Laaksonen[1], Katja Sirviö[1], Samuli Aflecht[1], Petri Hovila[2]

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Electric Vehicle Charging Algorithm to Reduce Unbalance in Low-Voltage Distribution Grids

Julia Merino[1], Roberto Álvaro-Hermana[2], Jesús Fraile-Ardanuy[3]

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Distributed Storage and Solar Study

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Johan Morren, Maarten Berende

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Lukas Specht, Kalle Rauma, Christian Rehtanz

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Technical Performance Enhancement of Distribution Systems via Optimal DG Deployment

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Henning Wilms[1], Roxana Pohlmann[1], Marco Cupelli[1], Antonello Monti[1], Inko Elgezua Fernandez[2]

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David Kröger, Kalle Rauma, Alfio Spina, Christian Rehtanz

TU Dortmund University, Germany

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From Flexible Connections to Enabling Flexibility: The Evolution of Active Network Management at SP Energy Networks

Euan Norris[1], Laura Kane[2], Euan Davidson[2]

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Recommended DER Modeling Practices in North America

Ryan Quint[1], Dmitry Kosterev[2], Irina Green[3], Jens Boemer[4], Pouyan Pourbeik[5], Deepak Ramasubramanian[4], Anish Gaikwad[4], Mohamed Osman[1]

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SPORE multifluid microgrid tests and results in the tropics

Jean Wild[1], Xiaoyong Peng[2], Antoine Ballereau[2], Lilia BOUCHENDOUKA[3], Slawomir PIETRASZ[3], Quentin ANTOINE[4], Laurie PAZIENZA[4]

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Mathematical Operational Model of Battery Swap Station for Demand Response Application

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Reasonability of “Fit and inform” for sources up to 50 kW within LV networks

Josef Hrouda[1], Frantisek Kysnar[1], Zdenek Pavlovic[2], Jan Petrasek[1], Karel Prochazka[1]

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A novel scheme of under frequency load shedding for a microgrid integrated with renewable energy resources

Ahmed Elzawawy[1], Mahmoud Ali[1], Saeed Mekhemer[2], Fahmy Bendary[1], Wagdy Mansour[1]

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The generalized load model considered lithium-ion battery

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Optimal Capacity Design for Solar-assisted CCHP System Integrated with Energy Storage

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MPPT and Dead-Beat Control for Power Management of Hybrid Micro-Grid Applications

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Flexibility for congestion management: An operational decision making process

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Regionalized Aggregation of Distributed Energy Resources and Distribution Grids for Large-scale Dynamic Simulations

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Economic Feasibility Study of the Implementation of PEVs Charging Stations at a Brazilian University

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Chenjie Ma[1], Simon Ruben Drauz[2], Roman Bolgaryn[3], Jan-Hendrik Menke[4], Florian Schäfer [4], Johannes Dasenbrock[2], Martin Braun[2]

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Matthias Buchner, Simon Eberlein, Krzysztof Rudion

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Irina Oleinikova[1], Luciano Martini[2], Emilio Rodriguez[3]

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Ricardo Santos[1], André Neves[1], António Araújo[1], Miguel Marques[2], Filipe Guerra[2], Clara Gouveia[3], José Damasio[4]

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Andres Cortes, Aditie Garg

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Nathaniel Bottrell[1], Simon Terry[1], Nick Ash[1], Cliff Walton[1], Alex Jakeman[2]

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Automated Planning of Smart Low Voltage Networks Using an Evolutionary Algorithm

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Large scale agent based simulation of distribution grid loading and its practical application

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Vladimir Cuk[1], Alex Geschiere[2], Erika Piga-Gehrke[2]

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Dimitrios Siagkas, Pavlos Georgilakis

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Barry Hayes[1], Subhasis Thakur[2], John Breslin[2]

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Parvathy Chittur Ramaswamy[1], Pierre Garsoux[1], Loriano Pellichero[2], David Vangulick[2]

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Combined MV and LV simulation to accurately determine the location of Voltage and Current Problems in large Grids

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Assessment of Flexibilities and Smart Grid Technologies in the Planning and Operation of Congested European Distribution Networks

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Increasing resilience against extreme events in distribution networks: the DSO's experience with the new Italian regulatory framework

Riccardo Abbate, Mariacristina Dota, Mariangela Di Napoli

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Advanced Modelling of Complex Networks to Reduce Losses

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EV diffusion in South Tyrol: scenarios and estimation of impacts on the distribution network

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Effects of Distribution System Characteristics on TSO-DSO Ancillary Services Exchange

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Automated Planning of High Voltage Grids for DER Integration Studies

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Analyzing the fractal behaviour of the distribution power grid in the city of Grenoble- France

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Electricity demand forecasting 2030 by decomposition analysis of open data

Otto Räisänen, Juha Haakana, Jouni Haapaniemi, Jukka Lassila, Jarmo Partanen

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Optimal Planning of High Voltage Distribution Grids under a Combined Use of Energy Storage Systems and Dynamic feed-in Management

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Using Big Data analytics to improve flood resilience of the distribution grid

Sébastien Folleville, Jérémie Mérigeault, Odilon Faivre, Olivier Aubujeault, Eric Bugnot, Eric Bordenave, Guillaume Josso

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Electricity demand profile for residential customer 2030

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TLC Pointer – THE USE OF GEOSPATIAL DATA FOR NON TECHNICAL LOSSES DETECTION

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Noah Pflugradt, Urs Muntwyler

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Marco E. T. Gerards, Johann L. Hurink

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Tomislav Baricevic, Minea Skok, Danko Vidovic

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Comprehensive framework for PV integration with an OLTC in a rural distribution grid within the SMAP project

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Cable Replacement Planning Considering Installation of Storage Systems

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Impact of flexibility location in MV distribution – The Nice Smart Valley Case study

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Managing uncertainty in load related investment decisions

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Modelling of Synthetic Distribution Systems in Consideration of the Regional Electricity Supply Task

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BI & Analytics for smart planning in distribution systems

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Alexander Scheidler, Roman Bolgaryn, Jan Ulffers, Johannes Dasenbrock, Daniel Horst, Philip Gauglitz, Carsten Pape, Holger Becker et al

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Karl Axel Sträng, Claude Bouquet, Maxime Dupont, Stéphane Gosswiller, Richard Bavarin

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Maximilian Rose[1], Torsten Dr. Sowa[1], Sonja Spille[1], Wilhelm Cramer[2]

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Julien Le Baut[1], Fabian Leimgruber[1], Tara Esterl[1], Sergio Potenciano-Menci[1], Christoph Gutschi[2]

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Fabian Erlemeyer[1], Dennis Schmid[1], Christian Rehtanz[1], Bengt Lüers[2], Sebastian Lehnhoff[2]

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Wilco Wijbrandi, Jorrit Nutma, Bob Ran, Joost Laarakkers

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Joint Research Centre, European Commission, Italy

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