Research outputs:

**Economic value of electric vehicle reserve provision in the Nordic countries under driving requirements and charger losses**
Research output: Research - peer-review › Journal article – Annual report year: 2019

**Large-scale provision of frequency control via V2G: The Bornholm power system case**
Research output: Research - peer-review › Journal article – Annual report year: 2019

**A Market Framework for Enabling Electric Vehicles Flexibility Procurement at the Distribution Level Considering Grid Constraints**
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018

**Analytical Assessment of Voltage Support via Reactive Power from new Electric Vehicles Supply Equipment in Radial Distribution Grids with Voltage-Dependent Loads**
Research output: Research - peer-review › Journal article – Annual report year: 2018

**An Equivalent Time-Variant Storage Model to Harness EV Flexibility: Forecast and Aggregation**
Research output: Research - peer-review › Journal article – Annual report year: 2018

**Core functions of the Web-of-Cells control scheme**
Research output: Research - peer-review › Report – Annual report year: 2018

**Demonstration of decision support for real time operation**
Research output: Research - peer-review › Report – Annual report year: 2018

**Electric Power System Inertia: Requirements, Challenges and Solutions**
Rezkalla, M. M. N., Pertl, M. G. & Marinelli, M. 2018 In : Electrical Engineering. 100, 4, p. 2677-2693
Research output: Research - peer-review › Journal article – Annual report year: 2018

**Influence of V2G Frequency Services and Driving on Electric Vehicles Battery Degradation in the Nordic Countries**
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018

**Recommendations on future development of decision support systems**
**Report on the evaluation and validation of the ELECTRA WoC control concept**

**Response Accuracy and Tracking Errors with Decentralized Control of Commercial V2G Chargers**

**Robust Allocation of Reserve Policies for a Multiple-Cell Based Power System**

**Simulations based evaluation of the ELECTRA WoC solutions for voltage and balance control - Stand-alone Use Case simulation results**

**Suitability of Commercial V2G CHAdeMO Chargers for Grid Services**

**The ACES Project - Large-scale Integration of Electric Vehicles into the Electric Power System**

**A Decision Support Tool for Transient Stability Preventive Control**

**Aggregation of Single-phase Electric Vehicles for Frequency Control Provision Based on Unidirectional Charging**

**Assessing the Energy Content of System Frequency and Electric Vehicle Charging Efficiency for Ancillary Service Provision**

**Comparison between AGC and a tuningless LFC approach based on direct observation of DERs**

**Comparison between Synthetic Inertia and Fast Frequency Containment Control Based on Single Phase EVs in a Microgrid**
Management of Power Quality Issues in Low Voltage Networks using Electric Vehicles: Experimental Validation

Requirements for future control room and visualisation features in the Web-of-Cells framework defined in the ELECTRA project

Robust Multi-Objective PQ Scheduling for Electric Vehicles in Flexible Unbalanced Distribution Grids

Scenario-based approach adopted in the ELECTRA project for deriving innovative control room functionality

Supporting Control Room Operators in Highly Automated Future Power Networks

Supporting involvement of electric vehicles in distribution grids: Lowering the barriers for a proactive integration

Thermostat Controlled Loads Flexibility Assessment for Enabling Load Shifting – An Experimental Proof in a Low Voltage Grid

Transient stability improvement: a review and comparison of conventional and renewable-based techniques for preventive and emergency control

Tuningless Load Frequency Control Through Active Engagement of Distributed Resources

Analysis and Comparison of Voltage Dependent Charging Strategies for Single-Phase Electric Vehicles in an Unbalanced Danish Distribution Grid

A Novel Grid-Wide Transient Stability Assessment and Visualization Method for Increasing Situation Awareness of Control Room Operators
Coordinated voltage control of a decoupled three-phase on load tap changer transformer and photovoltaic inverters for managing unbalanced networks
Research output: Research - peer-review › Journal article – Annual report year: 2016

Designing a master level course from scratch – where to start and how to proceed? Experience from course 31783
Research output: Research › Conference abstract for conference – Annual report year: 2016

Economic Comparison of Electric Vehicles Performing Unidirectional and Bidirectional Frequency Control in Denmark with Practical Validation
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

Enhanced Situational Awareness and Decision Support for Operators of Future Distributed Power Network Architectures
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

Enhancing the Role of Electric Vehicles in the Power Grid: Field Validation of Multiple Ancillary Services
Research output: Research - peer-review › Journal article – Annual report year: 2016

Evaluation of Electric Vehicle Charging Controllability for Provision of Time Critical Grid Services
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

Experimental Testing and Model Validation of a Decoupled-Phase On-Load Tap Changer Transformer in an Active Network
Research output: Research - peer-review › Journal article – Annual report year: 2016

Grey-box Modelling of a Household Refrigeration Unit Using Time Series Data in Application to Demand Side Management
Research output: Research - peer-review › Journal article – Annual report year: 2015

Grid Frequency Support by Single-Phase Electric Vehicles Employing an Innovative Virtual Inertia Controller
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

Grid Frequency Support by Single-Phase Electric Vehicles: Fast Primary Control Enhanced by a Stabilizer Algorithm
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016
Research output: Research - peer-review › Report – Annual report year: 2015

Detailed requirements and constraints for the control of flexibility
Research output: Research - peer-review › Report – Annual report year: 2016

Distribution Grid Services and Flexibility Provision by Electric Vehicles: a Review of Options
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Future control architecture and emerging observability needs
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Identification of observables for future grids – the framework developed in the ELECTRA project
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Identification of Requirements for Distribution Management Systems in the Smart Grid Context.
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Impact of thermostatically controlled loads' demand response activation on aggregated power: A field experiment
Research output: Research - peer-review › Journal article – Annual report year: 2015

Improved Power Quality Monitoring through Phasor Measurement Unit Data Interpretation
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Phase Balancing by Means of Electric Vehicles Single-Phase Connection Shifting in a Low Voltage Danish Grid
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Voltage Control for Unbalanced Low Voltage Grids Using a Decoupled-Phase On-Load Tap-Changer Transformer and Photovoltaic Inverters
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Wind and Photovoltaic Large-Scale Regional Models for hourly production evaluation
Research output: Research - peer-review › Journal article – Annual report year: 2014

A Dynamic Behaviour Analysis on the Frequency Control Capability of Electric Vehicles
Day-Ahead Scheduling of a Photovoltaic Plant by the Energy Management of a Storage System

Domestic Refrigerators Temperature Prediction Strategy for the Evaluation of the Expected Power Consumption

Experimental Testing Procedures and Dynamic Model Validation for Vanadium Redox Flow Battery Storage System

Grey-box Modeling for System Identification of Household Refrigerators: a Step Toward Smart Appliances

Indirect control of DSRs for regulating power provision and solving local congestions

Low voltage microgrid under islanded operation: Control strategies and experimental tests

Overview of Simulation Tools for Smart Grids

Scheduling of Domestic Water Heater Power Demand for Maximizing PV Self-Consumption Using Model Predictive Control

Evaluation of Requirements for Volt/Var Control and Optimization Function in Distribution Management Systems

Experimental validation of control strategies for a microgrid test facility including a storage system and renewable generation sets

Model of a Real Medium Voltage Distribution Network for Analysis of Distributed Generation Penetration in a Smart Grid Scenario
Modeling of DFIG Wind Turbine and Lithium Ion Energy Storage System
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

Transient support to frequency control from wind turbine with synchronous generator and full converter
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

Characterization of wind and solar generation and their influence on distribution network performances
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Modelli Dinamici per la generazione elettrica distribuita da fonte rinnovabile e convenzionale
Research output: Research › Paper – Annual report year: 2009

Modeling of doubly fed induction generator (DFIG) equipped wind turbine for dynamic studies
Research output: Research - peer-review › Article in proceedings – Annual report year: 2008

Modellazione di generatori eolici a velocità variabile equipaggiati con generatore asincrono a doppia alimentazione
Grillo, S., Marinelli, M., Pitto, A. & Silvestro, F. 2008 In : Automazione e Strumentazione. p. 102-113
Research output: Research - peer-review › Journal article – Annual report year: 2008

Projects:

Creating Automotive Renewal
Marinelli, M. & Calearo, L.
01/01/2018 → 31/12/2020
Project: Research

Enhancing the role of electric vehicles for a proactive integration in global power systems
Thingvad, A., Marinelli, M., Hu, J. & Træholt, C.
Samfinansieret - Andet
01/01/2018 → 31/12/2020
Project: PhD

ACES: Across Continents Electric Vehicle Services
Marinelli, M., Træholt, C., Sørensen, T. M., Andersen, P. B., Zecchino, A., Thingvad, A., Pedersen, A. B. & Calearo, L.
01/04/2017 → 30/09/2020
Project: Research

Parker project
Andersen, P. B., Marinelli, M., Sørensen, T. M., Hashemi Toghroljerdi, S., Sousa, T., Zecchino, A. & Træholt, C.
01/08/2016 → 31/01/2019
Project: Research

Electric vehicles in the Nordic countries: Control strategies for coordinated grid services
Zecchino, A., Marinelli, M., Korpås, M., Træholt, C., Mijatovic, N., Grillo, S. & Tjernberg, L. B.
Institut stipendie (DTU)
15/12/2015 → 14/12/2018
Project: PhD
Validation of decentralized and coordinated operation of frequency and voltage control systems in the control room
Rezkalla, M. M. N., Marinelli, M., Bindner, H. W., Heussen, K., Sørensen, P. E., Pilo, F. & Uhlen, K.
Samfinansieret - Andet
01/04/2015 → 15/08/2018
Project: PhD

Observability and decision support for supervision of distributed power system control
Pertl, M. G., Bindner, H. W., Heussen, K., Marinelli, M., Træholt, C., Keane, A. & Turri, R.
Samfinansieret - Andet
15/12/2014 → 05/04/2018
Project: PhD

Enabling Technologies for Smart Grid Integration of Electric Vehicles
Martinenas, S., Træholt, C., Andersen, P. B., Marinelli, M., Gehrke, O., Belver, I. Z. & Putrus, G. A.
Samfinansieret - Andet
01/08/2014 → 07/02/2018
Project: PhD

Control strategies and modelling of electric vehicles in the distribution network
Knezovic, K., Træholt, C., Andersen, P. B., Marinelli, M., Kok, K., Paolone, M. & Korpås, M.
Offentlig finansiering
15/12/2013 → 14/06/2017
Project: PhD

Electric vehicles in the Nordic countries: Control strategies for coordinated grid services
Zecchino, A., Træholt, C., Marinelli, M. & Korpås, M.
15/12/2015 → 14/12/2018
Project: Research

COTEVOS: Concepts, capacities and Methods for Testing EV Systems and their Interoperability within the Smart Grids
Martinenas, S., Træholt, C., Andersen, P. B. & Marinelli, M.
01/08/2014 → 01/08/2017
Project: Research

SANEDI: System adequacy and reserve margins with increasing levels of variable generation
Sørensen, P. E., Marinelli, M., Litong-Palima, M. & Hahmann, A. N.
01/07/2015 → 31/08/2016
Project: Research

Validation of Decentralized and Coordinated Operation of Frequency and Voltage Control Systems
Rezkalla, M. M. N., Bindner, H. W., Marinelli, M. & Heussen, K.
01/04/2015 → 31/03/2018
Project: Research

Nikola: Nikola - Intelligent electric vehicle integration
Marinelli, M., Andersen, P. B., Knezovic, K., Martinenas, S. & Træholt, C.
01/06/2013 → 31/05/2016
Project: Research

PECD: Pan European Climate Data
Marinelli, M., Cutululis, N. A. & Hahmann, A. N.
01/11/2012 → 31/07/2014
Project: Research
**ESVM: Energy Saving by Voltage Management**
Marinelli, M., Bindner, H. W., Hu, J. & Zecchino, A.
01/02/2013 → 31/12/2015
Project: Research

**ELECTRA Top-Up**
Marinelli, M., Bindner, H. W., Pertl, M. G. & Rezkalla, M. M. N.
EUDP
01/11/2014 → 31/10/2017
Project: Research

**RESSIC: Renewable Energy Sources and Storage for Integrated Control in electric distribution system**
Marinelli, M. & Baccino, F.
14/11/2011 → 29/03/2012
Project: Research

**W&S_IC: Wind power and storage modeling and integrated control in electric distribution systems**
Marinelli, M.
01/05/2011 → 13/05/2011
Project: Research

**Activities:**

**KTH - Royal Institute of Technology (External organisation)**
Marinelli, M. (Chairman)
18 Dec 2017
Activity: Membership › Membership in review committee

**Enhancing the role of EVs as grid proactive DER - The Danish experience**
Marinelli, M. (Guest lecturer)
12 Oct 2017
Activity: Talks and presentations › Guest lectures, external teaching and course activities at other universities

**52nd International Universities' Power Engineering Conference (Event)**
Marinelli, M. (Participant)
11 Apr 2017 → 11 Apr 2024
Activity: Membership › Membership of committees, commissions, boards, councils, associations, organisations, or similar

**SINTEF (External organisation)**
Marinelli, M. (Chairman)
7 Apr 2017 → 31 Dec 2024
Activity: Membership › Membership of committees, commissions, boards, councils, associations, organisations, or similar

**Power frequency control provision from electric vehicles in a high voltage system with high wind power penetration**
Marinelli, M. (Participant)
15 Jun 2016 → 15 Nov 2016
Activity: Other

**University of the Basque Country (External organisation)**
Marinelli, M. (Participant)
6 May 2016
Activity: Membership › Membership in review committee

**Enhancing the role of EVs in the smart grid: Resources or threats to power system operation? Trends and research drivers in Europe**
Marinelli, M. (Keynote speaker)
Investigation of stability aspects in a Pan-European interconnected grid with different wind power penetration
Marinelli, M. (Participant)
1 Nov 2015 → 30 Apr 2016
Activity: Other

Ancillary services analysis and provision by Electric Vehicles in a Danish distribution grid
Marinelli, M. (Participant)
1 Sep 2015 → 21 Mar 2016
Activity: Other

Large-scale energy storage in the future Danish power system by means of Vanadium and Li-Ion batteries
Marinelli, M. (Participant)
2 Jan 2015 → 30 Jun 2015
Activity: Other

Single Phase Analysis of an Active Low Voltage Grid with Congestion Management Provided by Electric Vehicles
Marinelli, M. (Participant)
2 Jan 2015 → 30 Jun 2015
Activity: Other

Wind power plants internal distribution system and grid connection - A technical and economical comparison between a 33 kV and a 66 kV
Marinelli, M. (Supervisor)
2 Jan 2015 → 30 Jun 2015
Activity: Examinations and supervision › Supervisor activities

IEEE Denmark (External organisation)
Marinelli, M. (Participant)
1 Jan 2015 → 31 Dec 2018
Activity: Membership › Membership of committees, commissions, boards, councils, associations, organisations, or similar

Modelling and experimental verification of power generation characteristics of different PV technologies under various operation conditions
Marinelli, M. (Supervisor)
Jan 2015 → Jul 2015
Activity: Examinations and supervision › Supervisor activities

Unbalance analysis of a real low voltage Danish network in presence of electric vehicles and small size photovoltaic plants
Marinelli, M. (Supervisor)
1 Oct 2014 → 31 Mar 2015
Activity: Examinations and supervision › Supervisor activities

Decoupled On-Load Tap-Changer Transformer in a Danish Low Voltage Grid with Unbalanced Distributed Generation
Marinelli, M. (Participant)
1 Sep 2014 → 31 Dec 2014
Activity: Other

Electric Vehicle Smart Charging and V2G Service Automation
Marinelli, M. (Participant)
1 Dec 2013 → 30 Apr 2014
Activity: Other