
Curriculum Vitae

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Contact Information

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Education

- 1997 **PhD in Electrical Engineering** (wind turbine technology). School of Electrical and Computer Engineering, National Technical University of Athens (NTUA).
- 1991 **Diploma in Electrical and Computer Engineering**, major in Power Engineering, with distinction (GPA 9.25/10), National Technical University of Athens (NTUA).

Professional Experience

- 1992- **Consultant to renewable energy and storage projects** (on- and off-shore wind, PV, solar thermal, hydroelectric and hybrid stations, pumped, thermal and battery energy storage), transmission & distribution, electricity market and smart grid projects. Indicative list of projects provided below.
- 2002- **Full Professor in NTUA**, Electric Power Division, School of Electrical and Computer Engineering. Director of the Postgraduate Programme “*Energy Production and Management*” of NTUA.
- 2002- **Advisor to the Greek energy authorities** (Ministry of Environment & Energy, Regulator, Transmission and Distribution System Operators) on legal, regulatory, technical and operational aspects of electricity networks, renewable & distributed generation, energy storage, island systems and interconnections, electromobility etc. Activities outlined in more detail in the following sections.
- 2002- **Advisor to the International Olympic Committee (IOC)**, the Olympic Broadcasting Services (OBS) and Olympic Games Organizing Committees on the power supply infrastructure and energy services for the Olympic Games. Auditor of distribution and transmission infrastructure for the Olympic Games in several host cities/countries, collaboration with respective DSOs/TSOs/utilities on design, operation, resilience enhancement and cost recovery:
- Athens 2004 (ΔΕΗ/PPC)

	<ul style="list-style-type: none"> - Beijing 2008 (SGCC/Beijing Power Co.) - London 2012 (UKPN) - Sochi 2014 (FGH) - Rio 2016 (Light) - PyeongChang 2018 (KEPCO) - Tokyo 2020/21 (TEPCO) - Beijing 2022 (SGCC/Beijing Power Co./Jibei Power Co.) - Paris 2024 (Enedis, RTE) - Milano-Cortina 2026 (Terna, E-distribuzione and other DSOs) - Los Angeles 2028 (LADWP, South California Edison) - Dakar 2026 (SENELEC)
2009-2012	Member of the Board of Directors of the Hellenic Transmission System Operator and Market Operator.
2002-2009	Technical consultant to the Distribution Division of the Public Power Corporation (PPC S.A., the Greek generation, transmission and distribution utility).
2000-2002	Electrical engineer for the Network Department of PPC S.A., involved in distribution network design and installation, quality of supply and distributed generation projects.
1990-2002	Researcher in the Electric Power Division of NTUA.

Academic Credentials

- **Director, Postgraduate Programme “Energy Production and Management”** of the National Technical University of Athens.
- **Member of the administrative committee (Deanery)** of the School of Electrical & Computer Engineering of the National Technical University of Athens.
- **Supervision** of 13 PhD dissertations (7 completed) and more than 120 diploma and postgraduate theses, in all fields mentioned above.
- **Teaching experience** in several courses in the field of electric power engineering (including renewable energy sources, distribution networks, electric machines and power electronics).
- **Publications** include 90 articles in international peer-reviewed scientific journals and more than 170 articles in the proceedings of scientific conferences, mainly in the fields of renewable energy and distributed generation, storage, electricity distribution and smart grids.
- Published work has received **more than 12000 citations**.

Areas of Expertise

Expertise in the areas of renewable energy, electricity storage, market and grid integration of distributed energy resources, transmission and distribution networks, autonomous island systems and interconnections, smart grids and electromobility. Engagement in more than **120 research and consulting projects** as contractor/lead/scientific responsible.

Exposure to diverse **international technical and regulatory environments** through collaboration with DSOs, TSOs and utilities around the world.

Specific areas of involvement and expertise:

- **Regulation, grid integration and market participation for renewable energy, electricity storage and distributed energy resources:** legal and regulatory framework for planning, licensing, grid access and market participation of renewables and storage, collocated & hybrid RES-storage stations, integration of behind-the-meter storage in prosumer facilities.
- **State aid schemes in Energy:** advisory support for the design, EC notification & approval and transposition in national legal & regulatory framework of State aid schemes in the areas of renewable energy, storage and network infrastructure, experience with open/competitive schemes and individual support measures, PCI projects.
- **Energy planning:** long-term planning for generation & storage systems to support decarbonization targets, resource adequacy analysis, market analysis. Support to development of National Energy & Climate Plan.
- **Regulatory aspects of electricity networks:** network codes, connection and use-of-system tariffs, integration of distributed energy resources, hosting capacity analysis, congestion management etc.
- **RES projects** (on/offshore wind, PV, solar thermal, hydro): feasibility analysis, sizing and technical design, licensing, grid interconnection, State aid auctions, market participation, PPAs, specialized technical studies (RfG compliance, power quality, short circuit analysis etc.).
- **Energy storage projects** (merchant storage, colocation with RES & integration in hybrid RES-storage entities, deployment in prosumers): licensing, technical design, grid access, CBA studies, investment feasibility analysis, market participation, support schemes, Experience with **pumped hydro, batteries and thermal energy storage solutions**.
- **Interconnection projects (islands, offshore wind, cross-border):** HVAC and HVDC solutions. Feasibility studies, cost-benefit analysis, dimensioning, analysis of regulatory, technical, economic and operational aspects.
- **Green H₂:** investment feasibility analysis, project sizing, operation & management studies, integration with RES facilities, synergies with electricity storage, support schemes.
- **Autonomous islands and very high renewable penetration systems (“green islands”):** Regulatory aspects, electricity market issues, optimal planning, security of supply, PSO aspects, system management, operational and technical aspects, integration of RES and storage. Feasibility analysis and technical design for “green” islands and off-grid systems.
- **Transmission and distribution:** Equipment selection, sizing and specification, standardization, short circuit calculations, power quality measurements and analysis, electric and magnetic field measurements, earthing, losses, dynamic and transient analysis of networks & systems with high RES penetration.
- **Smart grid technologies:** active distribution networks, energy control centres, smart metering infrastructure, FACTS-HVDC, microgrids etc.
- **Electromobility:** Development, operation and grid integration of electric vehicle charging infrastructure. Institutional and regulatory aspects of electromobility.
- **High resilience networks:** Design and analysis of special purpose & high resilience electricity distribution networks and user facilities.
- **Temporary power solutions:** Deployment of conventional and innovative & sustainable temporary power solutions (generation, storage, distribution, UPS).

Additional Information

- **Coordinator of the Task Force on RES curtailments, congestion and grid access** established by the Greek Ministry of Environment and Energy, responsible to recommend legal and regulatory solutions.
- **Chair of the Coordination Committee for the development and grid interconnection of offshore wind projects** established by the Greek Ministry of Environment and Energy.
- **Member of the Inter-ministerial Committee for Energy and Climate** of the Greek Government; scientific support to the latest National Energy and Climate Plan (NECP) of Greece.
- **Coordinator of the Energy Storage Task Force** established by the Greek Ministry of Environment and Energy, responsible for the development of the legal and regulatory framework for storage in Greece.
- **Member of the Greek Electromobility Committee**, established by the Greek Ministry of Environment and Energy; **coordinator of the Recharging Infrastructure and Electromobility Market Group**.
- Secretary of CIGRE Greek National Committee.
- Secretary of the CIRED Greek National Liaison Committee.
- Recipient of the CIGRE Technical Committee Award (2013). Distinguished member of CIGRE (2020).
- National representative to the CIGRE Study Committees C1- Power system development and economics and C6 – Distribution Systems and Dispersed Generation. Convenor of CIGRE WG C6.24 “Capacity of Distribution Feeders for Hosting DER”. Participation in several CIGRE Task Forces, dealing with distributed generation and storage.
- Senior Member of the IEEE (Power Engineering, Industry Applications, Industrial Electronics and Power Electronics Societies).
- Reviewer for prestigious journals in electric power & energy (IEEE Transactions, IET Proceedings, Elsevier Journals etc.), as well as for several conferences in the field. Recipient of Reviewer Certificate of Excellence from the Elsevier Journals *Electric Power Systems Research* and *Renewable Energy*.
- Evaluator of research, development and demonstration proposals and projects for national and international programmes.
- National representative to the Mirror Group of the Technology Platform «Electricity Networks for the Future – SMARTGRIDS» of the European Union.

Selected Consulting and Research Activities

- Support to the Greek authorities in the **development of the regulatory framework for storage** in Greece, in his capacity as Coordinator of the Storage Task Force in the Ministry of Environment and Energy.
- Support to the Greek authorities in the **development of legal and regulatory framework for RES production curtailments and congestion management**, in his capacity as Coordinator of the High RES Penetration Task Force in the Ministry of Environment and Energy.

- Inception of **State aid schemes for renewable and storage projects**, support studies and notification to EC, transposition to domestic legal and regulatory framework, in collaboration with the Greek authorities. Successfully completed cases:
 - Support scheme for pure storage projects in the mainland power system (competitive tenders for BES projects and individual aid to a 680 MW pumped-hydro facility)
 - New framework for the establishment and remuneration of hybrid RES-storage plants in non-interconnected islands (competitive tenders and individual aid)
 - Support scheme for large-scale PV+storage projects in the mainland power system.

Additional cases of State aid are currently in progress, concerning storage facilities and offshore wind farms.
- **Consultant to major RES and storage projects in the mainland system.** Feasibility analysis, licensing, technical design, grid interconnection and market studies for:
 - RES projects (wind, PV and solar thermal)
 - Storage projects in the mainland system (pumped hydro and batteries)
 - RES+storage projects in the mainland system (collocated PV/wind + batteries)
 - Hybrid power stations in the non-interconnected islands (PV/wind + pumped hydro or batteries)
- **Consultant to Hybrid Power Station projects** in operation or under development in Greek islands:
 - Ikaria Hybrid Power Station (PPC Renewables - wind-pumped hydro)
 - Tilos island Hybrid Power Station (Eunice - wind-PV-batteries)
 - Aghios Efstratios Green Island project (CRES, TERNA Energy as contractor - wind-PV-batteries & district heating)
 - Astypalaia Smart & Sustainable Island (RAE, PPC Renewables selected as hybrid PV+battery producer to supply local demand and electromobility load)
- **Selected consulting and research activities:**
 - “Support in developing and approving support framework for emergency capacity reserves procurement in interconnected islands” (IPTO, 2025-).
 - “Revision of the Distribution Network Code” (for HEDNO, in collaboration with PwC, 2024-).
 - “Short circuit studies for the Greek 20 kV network and determination of solutions to upgrade the fault level and the RES hosting capacity of the network” (HEDNO, several projects 2022-).
 - “Determination of RES hosting capacities for Non-Interconnected Island Systems” (HEDNO, several projects 2013-2025).
 - “Cost-benefit analysis of the Great Sea Interconnector project (Crete-Cyprus and Cyprus-Israel segments)” (IPTO, 2024-2025).
 - “Scoping of Distribution Network Code revision – Identification of thematic areas and maturity analysis” (HEDNO, 2024).
 - “Feasibility analysis and target capacity determination for RES-storage plants with export restrictions” (IPTO, 2024).
 - “Requirements and algorithms for the energy management system of the hybrid RES-storage station in Astypalaia island (PPC Renewables, 2024).

- “Evaluation of expected RES energy curtailment levels in the Greek interconnected system from 2025 to 2035” (IPTO, 2022 & 2024).
- “Methodology to identify generation capacity needs of autonomous island systems and principles for the procurement and remuneration of new conventional capacity” (HEDNO, 2022).
- “Tender preparation for the selection of the hybrid (RES-storage) producer for the “Astypalaia: Smart and Sustainable Island” pilot project” (RAE, 2021-2022).
- “Support scheme for electricity storage projects under RRF, identification of additional services by storage facilities and framework for RES integration” (for the Ministry of Environment and Energy and the Greek TSO IPTO S.A., 2021-22).
- “Distribution Control Centre operational concept and expansion planning” (for the Albanian DSO (OSHEE), through Fichtner GmbH – 2021-2022).
- “Just clean energy transition of Diapontia Islands (JEDI)” (action EL-181-2021-023 under the NESOI EU Project, for DAFNI, 2021-2022).
- “Wind turbine repowering in Kythnos (WiRe-K)” (action EL-177-2021-022 under the NESOI EU Project, for DAFNI, 2021-2022).
- “Capacity adequacy analysis of the power system of Cyprus in 2021-2026” (for the Cyprus Regulatory Authority for Energy - CERA, 2021).
- “Development of a regulatory framework for connection and use of network charges in Cyprus”, (for CERA, 2020-2021).
- “Identification of needs, market participation rules and quantitative analysis of a State-aid support mechanism for electricity storage projects in Cyprus” (for CERA, 2020-2021).
- “Renewable energy generation integration study in the distribution grid of Kosovo” (subcontract within a World Bank Project for the Kosovo Energy Regulatory Office, 2020).
- “Kythnos - Smart Island” (Siemens, 2019-2022).
- “Capacity adequacy and evaluation of solutions (diesel/LNG/renewable generation and storage) for the system of Crete, in its current autonomous and future interconnected state” (for the Greek Regulatory Authority for Energy – RAE, 2019).
- “Support for the development of a regulatory framework for publicly accessible EV recharging infrastructure in Greece” (RAE, 2018-2019).
- “Support for the establishment of operational electricity markets on the Greek non-interconnected islands – TADNI” (awarded by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), 2018-2019).
- “Algorithms for energy metering, billing and instruction deviations for hybrid RES-storage stations operating in island systems” (for the Greek DSO - HEDNO S.A., 2018).
- “Support in the development of the Distribution Network Operating Code and content for Code Manuals” (different projects for HEDNO, 2014-2017).
- “Development of a new pricing framework and tariffs for hybrid power stations in Island Systems” (RAE, 2017).
- “Management of Rhodes generation system following its capacity expansion” (HEDNO, 2017).

- “Technical and economic evaluation methodology for island interconnection projects - Technical support to the Regulator Committee evaluating the feasibility of Aegean Sea island interconnections” (RAE, 2017).
- “Anticipated benefits, feasibility and alternative deployment paradigms of electricity storage in island systems” (TERNA Energy S.A., 2016).
- “RES penetration potential in the non-interconnected islands of the Aegean Sea” (Siemens S.A., 2016).
- “Development of a strategic plan for the implementation of the Island System Management Code, including the development of Energy Control Centre infrastructure” (HEDNO, 2015).
- “Analysis of wind and PV penetration margins in the power system of Cyprus” (Cyprus Energy Regulatory Authority -CERA, 2013-2014).
- “Development and evaluation of alternative proposals for the operation and pricing of pumped storage plants in the Hellenic interconnected power system” (RAE, 2013).
- “Maximizing RES penetration in the electricity generation mix of Rhodes over a midterm horizon” (Heinrich Böll Stiftung and The Green Institute, 2012-2013).
- “Development of a technical evaluation framework for the interconnection of small wind turbines to the network” (HEDNO, 2012-2013).
- “Development of a National Programme for the Exploitation of the Off-Shore Wind Potential in the Aegean Sea – Design of HVDC and HVAC sub-sea interconnections” (GSRT, 2012-2015).
- “Technical support to the Implementation of Smart Grid Infrastructure in Aegean Sea islands” (DAFNI Island Network, in the framework of the EIB ELENA Programme, 2012-2014).
- “Development of new SiC transistors and application to a PV inverter” (General Secretariat of Research and Technology – GSRT, 2011-2014).
- “Parametric Investigation of RES Penetration Potential and Management of RES Stations in the Islands of Crete and Rhodes” (RAE, 2011-2012).
- “Evaluation of PV and Wind Penetration Potential in the Non-Interconnected Islands on a 5-year Horizon” (PPC S.A., 2010-2011).
- “MERGE: Mobile Energy Resources in Grids of Electricity” (FP7-ENERGY-2009-7.3.3 Project, 2010-2011).
- “Investigation of applicable Tariffs for Hybrid Power Stations in Non-Interconnected Islands” (RAE, 2010).
- “Analysis of PV Station Energy Loss Factors” (PPC Renewables S.A., 2009).
- “Strategic Study for the Interconnection of Autonomous Island Networks to the Mainland Power System –Preliminary Investigation” (RAE, 2006-2007 & 2007-2008).
- “PV Penetration Potential to the Non-Interconnected Island Systems” (RAE, 2006-2007).
- “Grid-Code Technical Requirements for the Wind Power Stations” (RAE, 2006-2007).
- «MICROGRIDS - Large Scale Integration of Micro-Generation to Low Voltage Grids» (FP5, ENK5-CT-2002-00610, 2003-2005) & «MORE MICROGRIDS - Advanced Architectures and Control Concepts for More Microgrids» (FP6, SES6-CT-2005-019864, 2006-2009).

- “Design and construction of a floating, RES powered water desalination unit” (GSRT, 2003-2007).