

Electrical and Electronic Engineer, with a Master of Science in Electrical Engineering with an emphasis in Smart Grids at Politecnico di Milano. Strong technical background, creativity, curiosity, and research abilities. Experience working in teams and delivering results under pressure. Excellent written and oral communication skills, with experience in both academic and professional environments. Interests in decarbonization, electrification of final energy processes, renewable energy, demand response, electricity markets, and carbon pricing. Eager to work toward a clean energy system that helps society to overcome global warming while achieving sustainable development for all.

EDUCATION

Politecnico di Milano –GPA: 110 Cum Laude

M.Sc. Electrical Engineering – Smart grid (September 2018 – April 2021)

Thesis: TSO-DSO Coordination Schemes for Flexibility Markets

Universidad de los Andes – GPA: 4.34/5

B.Sc. Electrical Engineering (August 2012 – December 2016)

Thesis: Reliability mechanism: 2015-2016 El Niño crisis and future integration of renewable generation technologies

B.Sc. Electronic Engineering (August 2012 – December 2016)

Thesis: Social SCADA and Microgrid Prototype La Guajira

ACADEMIC EXPERIENCE

European Institute of Economics and Environment

Visiting Researcher – 40 hours/week (August 2023 – Present)

- Analyze and propose electricity market designs enabling efficient, reliable, and secure decarbonization trajectories.

Universidad de los Andes – Codensa/Enel

Project assistant – 24 hours/week (January 2018 – August 2018)

- Participated in a model's development to evaluate the technical and economic feasibility of energy storage systems for reliability improvements in distribution grids.

Fedesarrollo

Project assistant – 8 hours/week (March 2018 – August 2018)

- Developed a game theory model to assess the impact of a forward market in the Colombian electrical market.

Universidad de los Andes – ISAGEN

Project assistant – 48 hours/week (February 2017 – December 2017)

- Reviewed international auction experiences for renewable generators and proposed changes to auctions proposed by the regulator.
- Developed a model to estimate possible increments in system reliability caused by complementary renewable energy with hydropower.

Universidad de los Andes – ISAGEN

Project assistant – 24 hours/week (March 2016 – January 2017)

- Designed and built an educational Microgrid prototype and its Android interface for indigenous communities.
- Analyzed the effects of renewable energy in the day-ahead electricity market.

PROFESSIONAL EXPERIENCE

Colibri Energy

Project Manager – 48 hours/week (September 2022 – July 2023)

- Led and Contributed to Consultant projects in the Electricity market in Colombia, in topics related to Offshore Wind Development, Solar Wind Development, and Onshore Wind Development, in addition to technical and economic regulation for electricity generation.
- Advised three agents with Renewable Energy projects for their participation in the 2023-2024 Reliability Auction.
- Participated in activities for project development in a Renewable Energy Portfolio amounting to 1.5 GW of installed capacity (in different stages of development).

Acolgen (Association of Colombian Power Generation Companies)– Policy and regulatory affairs

Regulatory affairs professional – 48 hours/week (July 2020 – August 2022)

- Contributing to Regulatory Impact Analysis for the energy and electricity sector, including I.) technical, economic, and environmental regulation applicable to power generation companies, and II.) technical and economic regulation applicable to emerging and disruptive technologies like energy storage, hydrogen, and smart grids.
- Co-leading and moderating the Policy and Regulatory affairs committee in Acolgen, that monthly gathers representatives from all major Colombian energy companies to discuss current affairs in the energy and electricity sector.
- Monitoring and analyzing national and international political and policy discussions, with direct and indirect effects in power generation companies.
- Concerting the Association position and presenting it both in written and oral form to Government Agencies and interested third parties during the consultation processes of administrative acts.
- Participated in the construction of guidelines for the new Colombian Capacity Market, including incentives for variable renewable energy technologies, while reinforcing the required adequacy in the Colombian hydro-thermal electricity mix like.

Enel Holding Italy – Low carbon and Energy policies unit

Internship – 40 hours/week (July 2019 – September 2019)

- Contributed to internal position documents for the Energy Transition Roadmaps of Colombia and South Africa.

TECHNICAL SKILLS AND PROGRAMMING

VBA, Matlab, Java, Python
Neplan, DIGSILENT, ETAP, ATP, Android Studio,
SDDP, OrCAD
Advanced Excel, Office packet, LATEX

Relevant Courses

Energy Markets III – Hydrogen, Geothermal Energy, Storage, and Regional Integration (ICH – 2021)
Renewable Power-to-X Training (GIZ - 2022)

HONORS

Cum laude graduation - M.Sc. Electrical Engineering
– Politecnico di Milano (2021)
Invest your Talent in Italy scholarship (2018)
Best Student Paper Award CCAC-IEEE (2017)
Highest GPA Electrical Engineering (2017)

LANGUAGES

Spanish (native)
English (112/120 TOEFL – 2017)
Italian (B1)

PUBLICATIONS AND CONFERENCES

- **J.J. Gonzalez**, Cristian Bovo, Valentin Ilea, TSO-DSO Coordination Schemes for Flexibility Markets, Master Thesis, Politecnico di Milano, 2021, available at <https://www.politesi.polimi.it/>
- J. Benavides, A. Cadena, **J.J. Gonzalez**, et al. Mercado eléctrico en Colombia: transición hacia una arquitectura descentralizada. Bogotá: Fedesarrollo, 150 p. Cuadernos de Fedesarrollo. No. 68, 2018
- **J.J. Gonzalez**, C. Lozano, N. Quijano, “Social SCADA and Microgrid Prototype La Guajira”, CCAC, October 18-20, 2017
- **J.J. Gonzalez**, A. Cadena, “Reliability mechanism: 2015-2016 El Niño crisis and future integration of renewable generation technologies”, ISDRS, June 13-16, 2017
- Pineros, **J.J. Gonzalez**, A. Cadena, J. Rodriguez, L. Posada, A. Ramirez, “Assessing the impact of a wind farm in the Colombian Power System”, ISDRS, June 13-16, 2017

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