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## Federico Pontoni

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Sex M | Date of birth 07/10/1982 | Nationality: Italian

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### Research appointments

Since 2021	<b>Program Director – Technologies for Energy Transition</b> FEEM – Fondazione ENI Enrico Mattei, Milan – Italy
Since 2007	<b>Research Fellow</b> GREEN – Centre For Research on Geography, Resources, Energy, Environment and Networks - Bocconi University, Milan – Italy
2014	<b>Visiting Postdoc fellow</b> Venice International University, Venice – Italy
2010 - 2013	<b>Research fellow</b> EconomiX - Université Paris Ouest Nanterre La Défense, Nanterre – France

### Professional experience

Since 2018	<b>Senior advisor for Power Africa – partnership agreement with the Tony Blair Institute for Global Change</b>
Since 2007	<b>Independent consultant</b> <u>Activities</u> <i>Energy and environmental sectors:</i> economic and welfare analysis of energy projects; financial models and business plans for investments in renewable energies and in infrastructures; economic assessment of environmental damages and ecosystem services. <i>Other sectors:</i> corporate finance; intangible asset evaluation and financial plans.

### Education

2009 - 2014	<b>Ph.D. in Economics</b> (double Ph.D. program) – <i>Mention très honorable avec les félicitations du jury</i> Université Paris Ouest Nanterre La Défense, Nanterre – France Thesis title: Essays on Water Economics
2009 - 2014	<b>Ph.D. in International Law and Economics</b> (double Ph.D. program) Bocconi University, Milan – Italy
2014	<b>Advanced Short Course in Sustainability Science</b> Harvard University – course organized in Venice, Italy
2013	<b>Advanced Short Course in Mathematics of Bio-economics</b> Institut Henri Poincaré, Paris – France
2004- 2007	<b>Master of Science in Economics and Management of Innovation and Technology</b> Bocconi University, Milan – Italy
2001 - 2004	<b>Bachelor's in business administration</b> Bocconi University, Milan – Italy

**Selected recent academic projects**

2018 - 2020	<p><b>Determinants of customer satisfaction and brand awareness in the electricity distribution and retail sector</b></p> <p><u>Topic and aim of the project</u> The project investigates the determinants of customer satisfaction in the electricity sector. The project identified the main attributes of the electricity service and the determinants of a successful customer service by means of a Delphi analysis combined with a survey of 5,000 consumers. These two analyses allowed also the understanding of the drivers of brand awareness. The results also provided useful insight for a regulatory reform of the quality of service.</p> <p><u>Role</u> Principal Investigator</p> <p><u>Approach</u> Theory of consumer behaviour; Delphi analysis; surveys.</p>
2016-2017	<p><b>Heron - Forward-looking socio-economic research on macroeconomic impacts of Energy Efficiency in EU countries (Project funded by the EU Horizon 2020 program)</b></p> <p><u>Topic and aim of the project</u> The project investigates the impact of socio-economic and institutional factors on the implementation of energy efficiency policies, in order to allow policymakers to adopt policies aimed at overcoming social, cultural and economic barriers on the path towards decarbonisation. It also aims to contribute to energy modelling by incorporating social and cultural factors to reflect the end-user behaviour in the adoption of efficient heating, cooling and electric technologies.</p> <p><u>Role</u> Principal Investigator for the elaboration of sector-specific energy efficiency scenarios for Italy</p> <p><u>Approach</u> Use of a specific dispatching and energy modelling software named LEAP</p>
2015-2016	<p><b>The evolution of the European Gas Market</b></p> <p><u>Topic and aim of the project</u> Critical assessment of the current European market design model, the impact of US shale gas and shale oil on the EU market and the evolution of LNG supplies.</p> <p><u>Role</u> Investigator</p> <p><u>Approach</u> Theoretical and empirical analysis on the structure of the market and the expected impact on prices of possible market reforms.</p>
2013-2015	<p><b>MOSIRI: Monitoring economic and labour impacts of renewable energies</b></p> <p><u>Topic and aim of the project</u> Research project, funded by GSE, the Italian public company responsible for the payment of RES subsidises, to set up a detailed and regionalized monitoring system to assess economic and labour impacts of renewable energies investments and operations.</p> <p><u>Role</u> Investigator</p> <p><u>Approach</u> Detailed economic and value chain analysis of all renewable technologies. Developed specific input/output – based tools to perform the estimations.</p>

### **Selected recent advisory projects**

2019 - 2020	<p><b>Electricity market reforms in West and East Africa and transaction support (on-going)</b></p> <p><u>Description</u> High level economic and political advisory for the integration of electricity markets in West Africa (WAPP) and East Africa (EAPP); Transaction support for OMVG deal (elaboration of draft PPA and TSA and operational structures)</p> <p><u>Role</u> Lead external expert in energy markets and energy modelling.</p> <p><u>Client</u> Power Africa and the Tony Blair Institute</p>
2020	<p><b>Draft of the first Regulatory framework for Distributed Generation and Self-consumption from RES in Saudi Arabia (on-going)</b></p> <p><u>Description</u> Elaboration of the technical and economic regulatory framework for distributed generation and self-consumption from RES in Saudi Arabia</p> <p><u>Role</u> Lead external expert in incentive schemes.</p> <p><u>Client</u> ECRA – Saudi Regulator (subcontractor for CESI)</p>
2019	<p><b>Review and Finalization of the Regional Transmission Pricing Model for WAPP (on-going)</b></p> <p><u>Description</u> Review, testing and finalization of the Regional Transmission Pricing Model elaborated by WAPP. Preparation of a final report to be submitted to ERERA for the final adoption of the tariff model.</p> <p><u>Role</u> Lead external expert in transmission tariffs.</p> <p><u>Client</u> WAPP (subcontractor for CESI)</p>
2018-2019	<p><b>Market and business study for the West Africa Power Pool</b></p> <p><u>Description</u> High level economic and political advisory for the integration of electricity markets in West Africa</p> <p><u>Role</u> External expert on market design and market reforms. Development of an electricity trade model for the Region; Elaboration of guidelines for the reform of National Regulatory Agencies</p> <p><u>Client</u> Power Africa and the Tony Blair Institute</p>
2018	<p><b>Turkey – Transmission Expansion Plan</b></p> <p><u>Description</u> Feasibility study for Turkey’s transmission expansion plan.</p> <p><u>Role</u> Principal Investigator for the economic analysis, performed following ENTSO-E guidelines.</p> <p><u>Client</u> World Bank and TEIAS (subcontractor for CESI)</p>
2018	<p><b>Saudi Arabia – Jordan Very High Voltage Interconnection</b></p> <p><u>Description</u> Feasibility study for the construction of the very high voltage interconnection between Saudi Arabia and Jordan.</p> <p><u>Role</u> Principal Investigator for the financial analysis: definition of market-based remuneration schemes (Private Sector Participation - PSP) and definition of long-term Power Purchase Agreement (PPA) guidelines.</p>

2018	<p><u>Client</u> Saudi Electric Company and Jordan Electric Company (subcontractor for CESI)</p> <p><b>CBA methodology for the requirements for Frequency Containment Reserve (FCR)</b></p> <p><u>Description</u> Elaboration of a complete CBA methodology for the economic valuation of the FCR provided by Limited Energy Reservoirs (LER) in view of the European Primary Reserve Market reform.</p> <p><u>Role</u> Economic expert.</p>
2017	<p><u>Client</u> ENTSO-E (subcontractor for CESI)</p> <p><b>Sudan – Grand Khartoum Ring</b></p> <p><u>Description</u> Feasibility study for the construction of the very high voltage transmission ring around Khartoum.</p> <p><u>Role</u> Principal Investigator for the economic and financial analysis: elaboration of a cost-benefit analysis for phase one and phase two expansion of the high voltage Grand Khartoum Ring. Internalization and monetization of environmental externalities. Definition of the best financing option and detailed risk analysis for risk minimization.</p>
2017	<p><u>Client</u> Sudanese Electricity Transmission Company Ltd (subcontractor for CESI)</p> <p><b>Saudi Arabia – Electricity Generation Expansion Plan and market reform</b></p> <p><u>Description</u> Technical, financial and economic analysis for the 10-year electricity generation expansion plan of Saudi Arabia; impact analysis of market reform.</p> <p><u>Role</u> Principal Investigator for the financial analysis and the impact of market reforms. Elaboration of a financial model for the determination of the best investment strategy and the optimal capital structure for financing capacity additions in a competitive setting.</p>
2016	<p><u>Client</u> Saudi Electricity Company (subcontractor for CESI)</p> <p><b>Ethiopia – Sudan Very High Voltage Interconnection</b></p> <p><u>Description</u> Feasibility study for the construction of the very high voltage interconnection between Ethiopia and Sudan.</p> <p><u>Role</u> Principal Investigator for the economic and financial analysis; definition of market-based remuneration schemes for easing the financeability by the private sector (Private Sector Participation - PSP) and definition of long-term Power Purchase Agreement (PPA) guidelines.</p> <p><u>Client</u> Ethiopian Electric Power &amp; Sudanese Electricity Transmission Company Ltd (subcontractor for CESI)</p>

### **Teaching experience**

Since 2015	<p><b>Lecturer in Energy Economics</b> (Course in English) Graduate program – 1° semester 48 hours Università degli Studi di Milano</p>
Since 2010	<p><b>Assistant professor in Water Economics</b> (Course in English)</p>

2008-2009	Graduate program – 2° semester 24 hours Bocconi University
	<b>Teaching assistant in Industrial Organization</b> (Course in English) Graduate program – 2° semester 24 hours Bocconi University

### **Honours, awards and memberships**

Honours and awards	
2014	Harvard scholarship for the Advanced Short Course in Sustainability Science
2013	Institut Henri Poincaré scholarship for the Specialization in Mathematics of Bio-economics
2012	Fondazione Cariplo Ph.D. Scholarship
2008	Post Graduate Scholarship – sponsored by ENEL
2007	Post Graduate Scholarship – sponsored by ENI
Membership	
2020	Contributing author of the First Mediterranean Assessment Report: "Climate and Environmental Change in the Mediterranean Basin: Current Situation and Risks for the Future".
Since 2015	Referee for the Treasury Department Working Papers collection – Italian Ministry of Economy and Finance
Since 2009	Member of the scientific committee of ANIMP – Italian Association of Industrial Plant Engineering

### **Languages**

Mother tongue	Italian				
Other languages	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C1
	Certificate of Proficiency in English, Cambridge University, EU level C2.				
French	C1	C1	C1	C1	B2
Spanish	A2	B1	A2	A1	A1
	Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user Common European Framework of Reference for Languages				

### **Computer Skills**

General	Proficient skills in Microsoft Office, MAC OS and Apple Software
Statistics	STATA; MAXQDA
Databases	Bloomberg, Bureau Van Dijk and Reuters
Energy Modelling	LEAP (Long range Energy Alternative Planning) – hybrid model

**List of Publications**

Peer reviewed	<p>Cretì, A., Joets, M., Pontoni, F., 2018. Economic and environmental implications of hydropower concession renewals: a case study in Southern France, <i>Revue Economique</i>, 2(69), 241-266.</p> <p>Cai, M., Cusumano, N., Lorenzoni, A., Pontoni, F. 2017. A comprehensive ex-post assessment of RES deployment in Italy: Jobs, value added and import leakages, <i>Energy Policy</i>, 110, 234-245.</p> <p>Pontoni, F., Marangon, F., Tempesta, T., Troiano S., Vecchiato, D., 2016. Choice experiments and environmental taxation: an application to the Italian hydropower sector, <i>Economics and Policy of Energy and the Environment</i>, 3, 99-118.</p> <p>Cretì, A., Pontoni, F., 2016. Natural gas balancing, storage and flexibility in Europe: assessing the recent literature, <i>Current Sustainable/Renewable Energy Reports</i>, 3, 18-22.</p> <p>Ghisetti C., Pontoni, F., 2015. Investigating policy and R&amp;D effects on environmental innovation: A meta-analysis, <i>Ecological Economics</i>, 118, 57-66.</p> <p>Franchini M., Mannucci P.M., Harari S., Pontoni F., Croci E., 2015. The health and economic burden of air pollution, <i>The American Journal of Medicine</i>, 128 (9), 931-932.</p> <p>Massarutto A., Pontoni, F., 2015. Rent seizing and environmental concerns: a parametric valuation of the Italian hydropower sector, <i>Energy Policy</i>, 78, 31-40.</p> <p>Pontoni F., de Carli A., Goltara A., Massarutto A., 2014. Hydropower production and environmental regulation: opting for a performance-based tax approach, <i>Economics and Policy of Energy and the Environment</i>, 2, 137-152.</p> <p>Benedettini S., Pontoni, F. 2013. Italian regulation of electricity distribution and its impact on efficiency, investments and innovation: a qualitative assessment, <i>Competition and Regulation in Network Industries</i>, 14, 363-381.</p> <p>Dorigoni, S., Graziano, C., Pontoni, F. 2010. Can LNG increase competitiveness in the natural gas market?, <i>Energy Policy</i>, 38(12), 7653-7664.</p> <p>Dorigoni, S., Pontoni, F. 2010. Ownership separation of the gas transportation network: theory and practice, <i>Economics and Policy of Energy and the Environment</i>, 2010, 1(2), 57-83.</p> <p>Dorigoni, S., Pontoni, F. 2010. Incentivi alle nuove infrastrutture di approvvigionamento gas: il caso del GNL, <i>Economia e Politica Industriale</i>, 37(1), 87-103.</p> <p>Dorigoni S., Mazzei, L., Pontoni, F., Sileo, A. 2009. GNL, Competizione e sicurezza d'approvvigionamento: il segmento dello shipping, <i>Economia delle Fonti di Energia e dell'Ambiente</i>, 1(1), 137-159.</p> <p>Dorigoni, S., Pontoni, F. 2008. Mercati internazionali dell'energia, <i>Economia delle Fonti di Energia e dell'Ambiente</i>, 1(3), 165-173.</p>
Chapters in books	<p>Vaglietti, G., de Carli, A., Massarutto, A., Pontoni, F., 2021. <i>The Uses and Value of Water in Italy: Evidence from Selected Case Studies in Italy, with a Particular Focus on Irrigation, Industry and Hydropower</i>, in Turrini, P., Massarutto, A., Pertile, M., de Carli, A. (Eds.), <i>Water Law, Policy and Economics in Italy</i>, Springer International Publishing.</p>

Working papers	<p>Poletti, C., Pontoni, F. 2009. <i> Mercati delle materie prime energetiche</i>, in Colombo A., Ronzitti, N. (eds), Annuario ISPI 2009, Il Mulino: Bologna.</p> <p>Pontoni, F. 2009. <i> Domanda e offerta di gas in Europa e in Italia</i>, in Dorigoni S. (ed), <i> Il Gas Naturale Liquefatto per l'Europa</i>, Franco Angeli: Milano.</p> <p>Pontoni, F. 2009. <i> L'Approvvigionamento via GNL e la sua competitività rispetto a quello via Pipe</i>, in Dorigoni S. (ed), <i> ibidem</i>.</p> <p>Pontoni, F. 2009. <i> La Liquefazione</i>, in Dorigoni S. (ed), <i> ibidem</i>.</p> <p>Pontoni, F., Sileo, A. 2009. <i> Lo Shipping</i>, in Dorigoni S. (ed), <i> ibidem</i>.</p> <p>Basoni, A., Carrara, P., Crema, A., de Carli, A., L'Astorina, A., Pontoni, F., Stroppiana, D., Tomasoni, I. 2015. <i> Analisi economica di un servizio da dati telerilevati a scala regionale: il caso del monitoraggio agricolo nel Progetto Space4Agri</i>, XIX Conferenza Nazionale ASITA, Lecco, 29 September.</p> <p>Cai, M., Cusumano, N., Lorenzoni, A., Pontoni, F. 2016. <i> A comprehensive ex-post assessment of the Italian RES policy: deployment, jobs, value added and import leakages</i>, IEFER Working Paper Series n. 88.</p> <p>Bonacina, M., Cretì, A., Mariotto, C., Pontoni, F. 2014. <i> What Determines Efficiency? An Analysis of the Italian Water Sector</i>, IEFER Working Paper Series n. 72.</p> <p>Cretì, A., Pontoni, F. 2014. <i> Cheaper electricity or a better river? Estimating the fluvial ecosystem value in Southern France</i>, Ecole Polytechnique, Département d'Economie, Cahier de Recherche, n. 15.</p> <p>Massarutto, A., Pontoni, F. 2013. <i> Hydropower rent in Northern Italy: economic and environmental concerns in the renewal procedure</i>, DIES Working Paper Series, n. 8.</p>
Research Reports	<p>Croci, E., Colelli, F., Pontoni, F. 2019. <i> Gli Scenari Economici Del Riciclo Dei Rifiuti In Italia In Un'ottica Di Circular Economy</i>, GREEN Research Report n. 1.</p> <p>Croci, E., Camaldo, S., Pontoni, F. 2016. <i> National Report for Italy on Energy Efficiency Policy Scenario Analysis for the Buildings and transport Sectors</i>, IEFER Research Report n. 25.</p> <p>Cervigni, G., D'Arcangelo, F., Polo, M., Pontoni, F. 2014. <i> La regolazione delle reti elettriche in Italia</i>, IEFER Research Report n. 15.</p> <p>Benedettini, S., Bonacina, M., Cusumano, N., Di Castelnuovo, M., Galeotti, M., Iossa, E., Lorenzoni, A., Miriello, C., Polo, M., Pontoni, F., Sileo A., 2012. <i> Consultazione per la Strategia Energetica Nazionale</i>, IEFER Research Report n. 11.</p> <p>D'Orazio, A., Pontoni, F. 2010. <i> Investimenti all'estero in energie rinnovabili e ruolo delle politiche pubbliche</i>, IEFER Research Report n.7.</p> <p>Poletti, C., Pontoni, F., Sileo, A., 2009. <i> L'Incentivazione della produzione di energia elettrica da fonti rinnovabili e assimilate attraverso il provvedimento CIP 6/92: un'analisi economica</i>, IEFER Research Report n.4.</p>

A handwritten signature in black ink, appearing to read 'Federico Pontoni'. The signature is stylized and cursive, with the first name 'Federico' written in a smaller, more legible script than the last name 'Pontoni', which is more fluid and overlapping.