

# Alessandro Cascioli

ENERGY ENGINEER · PHD

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*“Be the change that you want to see in the world.”*

## Summary

With a Ph.D. in Sustainable Energy and extensive experience in energy consulting, ESG strategy development, and sustainability analysis, I bring strong technical expertise to market analysis roles. My background spans both academic and commercial settings, where I have contributed to innovative projects such as the FRONTSH1P Horizon project and optimized ESG strategies by evaluating impacts, risks, and opportunities. I have developed a deep understanding of green fuels through my research in the Bioenergy and Biofuels lab. Additionally, as a sustainability consultant, I gained in-depth knowledge of European energy regulations, sustainability trends, and the drivers of renewable energy markets. This is complemented by robust data analysis skills and expertise in stakeholder engagement, particularly through the application of double materiality principles. Furthermore, my experience in information security management has broadened my perspective, enabling me to recognize the interconnectedness of various knowledge fields. I am seeking a role that leverages my diverse skill set and innovative thinking to accelerate the energy transition while ensuring cybersecurity and data privacy are maintained.

## Work Experience

### Syntex GreenTech

Perugia, Italy

SUSTAINABILITY CONSULTANT

Oct. 2023 - Present

- Developed an innovative ESG strategy, driving sustainability while reducing financial risks through data-backed decision-making.
- Conducted comprehensive sustainability impact assessments, identifying key risks and opportunities for business growth.
- Developed Sustainability reports following both the GRI and EFRAG frameworks.
- Developed autonomously a platform to speed up the collection of information and monitoring of KPIs.

### Free University of Bozen-Bolzano

Bozen, Italy

POSTDOCTORAL RESEARCH AND TEACHING ASSISTANT

Nov. 2022 - Present

- FRONTSH1P project - A FRONTrunner approach for the transition to a circular and resilient future: deployment of systemic solutions with the support of local clusters and the development of regional community-based innovation schemes.
- Performed techno-economic analysis to optimize process conditions and reduce costs.
- Developed simulations and models to foster the understanding of thermochemical processes.
- Applied data analysis techniques to experimental datasets, such as peak de-convolution and curve fittings.
- Developed a machine learning model to predict the biocrude oil yield.
- Teaching assistant for the course Energetics of the B.Sc. in Industrial and Mechanical Engineering, and M.Sc. in Energy Engineering.
- Support in the supervision of PhD and Master students.

### SGS

Italy

ISO 27001 AUDITOR TRAINEE

Aug. 2021 - Present

- ISO/IEC 27001:2013 - Information Security Management lead auditor training.
- ISO/IEC 27001:2022 - Information security, cybersecurity and privacy protection.

### SGS

Italy

CONSULTANT

Oct. 2018 - Oct. 2019

- Dealer training for stock audit on assignment from a certifying organization for a leading heavy machinery manufacturer.
- Audits held in Italy.

### Qualitas S.r.l.

Perugia, Italy

CONSULTANT AND AUDITOR

Jul. 2018 - Present

- ISO/IEC 27001:2013/2022 - Information Security Management internal audits for a consulting company.
- Provided strategic recommendations to improve data protection protocols and ensure regulatory compliance.

### SGS

Europe

AUDITOR

Apr. 2017 - Oct. 2019

- 2<sup>nd</sup> party compound audit on assignment from a certifying organization for a leading automobile manufacturer.
- Audits held in Italy and abroad (Austria, Germany, Finland, Poland, Portugal, Sweden).

### Baruffaldi S.r.l.

Perugia, Italy

CONSULTANT

Oct. 2016 - Oct. 2019

- CE homologation processes of motorcycle helmets, goggles and gloves.
- Management of relationships with suppliers, mainly not Italian (China and Pakistan).

Skills

Programming	SQL, Python, JavaScript, TypeScript, C, Bash, Dart, LaTeX, Matlab
Scientific computing	NumPy, SciPy, Sympy, Pandas, LMFIT
Machine learning	TensorFlow, Keras, PyTorch, scikit-learn, XGBoost
Data visualization	Tableau, Matplotlib, Seaborn, Plotly, Altair, Sigmaplot
Dashboards	Streamlit, Dash
Database management	PostgreSQL, MySQL, SQLite, MongoDB, SuperbaseDB
Microsoft Office	Excel, Word, Powerpoint, Outlook
DevOps	AWS, Docker
Back-end	Django, Flask, REST API
Front-end	React, React Native, NextJS, AstroJS, Flutter, PySide, TKinter

Certificates

2023	Specific course for ESG-SDGs Auditor/Lead Auditor and Consultant related to the ESG-SDGs Rating:2022©	CERTIFICATION S.r.l.
2023	ISO/IEC 27001:2022 Transition Course	SGS
2023	DeepLearning.AI TensorFlow Developer Specialization,	Coursera
2023	Google Project Management: Specialization	Coursera
2020	State examination for the qualification to practice as an Energy and Nuclear Engineer	University of Trento
2019	ISO/IEC 27001:2013 - Information Security Management Systems Auditor/Lead Auditor Training Course	SGS

Education

Free University of Bozen-Bolzano	Bozen, Italy
PHD IN SUSTAINABLE ENERGY AND TECHNOLOGIES	Oct. 2019 - Oct. 2022
<ul style="list-style-type: none"><li>Thesis: Hydrothermal liquefaction of biomass and biocrude upgrading: fundamentals, experimental analysis and modelling.</li><li>Spent 5 months as a visiting PhD in the Advanced Biofuels Lab of Aalborg University, Denmark.</li><li>Developed and commissioned a pilot plant for the production of biocrude oil to be upgraded to SAF (Sustainable Aviation Fuels).</li><li>Process modelling through optimization algorithms to find thermodynamic equilibrium.</li><li>Performed techno-economic analysis to optimize process conditions and reduce costs.</li><li>Support in the supervision of master students.</li><li>Preparation of technical reports, visualizations, and presentations.</li></ul>	
Free University of Bozen-Bolzano	Bozen, Italy
M.SC. IN ENERGY ENGINEERING	Sep. 2017 - Oct. 2019
<ul style="list-style-type: none"><li>Thesis: Valorization of residues from parapharmaceutical and herbal medicine production: a case study.</li><li>Performed techno-economic analysis to optimize process conditions of a parapharmaceutical company.</li></ul>	
University of Perugia	Perugia, Italy
B.E. IN MECHANICAL ENGINEERING	Sep. 2013 - Apr. 2017
<ul style="list-style-type: none"><li>Erasmus + of 6 months at the FAU Erlangen-Nürnberg, Germany.</li></ul>	

Publications

Bioresource Technology	
V. BENEDETTI, A. CASCIOLI, M. PECCHI, M. BARATIERI	2023
<ul style="list-style-type: none"><li>Fast screening of catalyst performances in hydrothermal processes for biofuel production using differential scanning calorimetry</li><li>DOI: <a href="http://dx.doi.org/10.2139/ssrn.4747557">http://dx.doi.org/10.2139/ssrn.4747557</a></li></ul>	
Fuel Processing Technology	
M. PECCHI, A. CASCIOLI, A. R. MAAG, J. L. GOLDFARB, M. BARATIERI	2022
<ul style="list-style-type: none"><li>Uncovering the transition between hydrothermal carbonization and liquefaction using differential scanning calorimetry</li><li>DOI: <a href="https://doi.org/10.1016/j.fuproc.2022.107349">https://doi.org/10.1016/j.fuproc.2022.107349</a></li></ul>	
Fuel	
A. CASCIOLI, M. BARATIERI	2021
<ul style="list-style-type: none"><li>Enhanced thermodynamic modelling for hydrothermal liquefaction</li><li>DOI: <a href="https://doi.org/10.1016/j.fuproc.2022.107349">https://doi.org/10.1016/j.fuproc.2022.107349</a></li></ul>	

## Honors & Awards

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### INTERNATIONAL AWARDS

2022 **Springer Nature's Best Oral Flash Award**, WasteEng2022 Conference

*Copenhagen,  
Denmark*

## Languages

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**Italian** Native or bilingual proficiency, C2  
**English** Professional working proficiency, C1  
**German** Independent user, B2

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