

| RESEARCH LINE 8A | |
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| COMPANY | Iberdrola |
| PhD THESIS SUPERVISOR (UPM) | Prof Dr. María Jesús García Martínez <i>Mining and Energy Engineering School Energy and Fuels Department</i> |
| PhD THESIS CO-SUPERVISOR (COMPANY) | Ms. Mónica Oviedo <i>Sustainability Development and 2030 Agenda, Iberdrola Group</i> |
| DESCRIPTION OF THE PhD THESIS PROJECT | <p>Metrics and SDGs. SDG ambition needed for the next 10 years to achieve the targets 7 and 13. Study of the interconnection between SDG 7.1, 7.2, and 7.3 with the SDG 13 and its social impact.</p> <p>The goal of the PhD Thesis is to show how the Social Life Cycle Assessment (S-LCA) interconnects among SDG 7.1, 7.2, and 7.3 with the SDG 13 and its social impacts. As well as demonstrate if renewable energy companies are making substantial progress toward the SDGs, mainly the SDGs 7 - Affordable and Clean Energy and 13 - Climate Action.</p> <p>A set of science-based metrics could allow corporations and interested investors to meaningfully align their actions with the SDGs in locations around the world where they can make the greatest positive impact. Using existing data on country-level electricity generation and land transportation, a set of simple-to-implement and user-friendly metrics can be developed to evaluate the benefits that investments in renewable electricity generation and improvements in land transportation can make toward reducing CO2 and air pollutant emissions and the health impacts of air pollution.</p> <p>The first step of this work would be to review common methods to measure SDGs performance, not by reviewing all the existing approaches, but highlighting crucial weaknesses and identifying the main methodological challenges that should be addressed when answering the call for analytical tools to evaluate SDGs performance and their interconnections.</p> <p>A new set of metrics to track progress toward the SDGs, mainly to explicitly measure how progress on SDG 7 (Affordable and Clean Energy – in all its targets) consequently makes progress on SDG 3 (Good Health and Well-Being) Target 3.9 “By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination” Indicator 3.9.1 “Mortality rate attributed to household and ambient air pollution” and emissions reductions aligned with SDG 13 (Climate Action) and 9 (Industry, Innovation, and Infrastructure) of the United Nations.</p> <p>A social life cycle assessment (S-LCA) would be done to identify the main social hotspots related the SDGs and the main stakeholder groups (e.g., [i] worker, [ii] consumer, [iii] local community, [iv] society and [v] value chain actors).</p> |
| Tentative SECONDMENT(S) | -UCL Energy Institute, University College London, London, UK. -European Commission, Joint Research Centre (JRC), -Centre for Environmental Policy (Imperial College) |
| TRAINING ACTIVITIES | -Workshops on SDGs, sustainability, social LCA -MOOCs and UPM courses about paper writing and statistics |
| REQUIREMENTS FOR CANDIDATES | MSC on environmental sciences, Life cycle assessment |