

Randall Spalding-Fecher

Nationality	USA	
Education	2018	Doctorate in Energy & Development Studies, University of Cape Town, South Africa. Dissertation topic: “Impact of climate change and irrigation development on hydropower supply in the Zambezi River Basin, and implications for power sector development in the Southern African Power Pool”
	1989	Harvard University (BA in Biology, magna cum laude)
	1997	Fletcher School of Law & Diplomacy, Tufts University (Master of Arts in Law & Diplomacy) Concentrations: International Environmental Policy & Development Economics
Languages	English (home language), Japanese (fair)	
Employment record		
2012 – present	Carbon Limits (Norway), based in USA Senior Advisor: Carbon & Energy	
2003 - 2012	Pöyry Management Consulting AS, based in Cape Town Senior Advisor: Carbon & Energy Southern Africa	
1997 - 2003	Energy & Development Research Centre, University of Cape Town Programme Leader: Energy, Efficiency & Environment; & Senior Researcher	
1996	Development Alternatives, New Delhi Policy Analyst	
1991-1994	Boston Consulting Group, San Francisco and Auckland Management Consultant	
Relevant professional experience		
Ongoing	World Bank Validation Guidance for Carbon Partnership Facility (CPF) Develop a guidance manual and report template for the independent third-party assessment of proposed CPF program in Sri Lanka. Includes review of validation and verification manuals for other carbon market standards (e.g. CDM, CAR, JCM, VCS).	
Ongoing	World Bank Review of Mitigation Outcome (MO) Asset Development Cycle & Rating Manual Review process developed by Carbon Markets and Innovation Practice to create carbon assets under the Paris Agreement cooperative mechanisms, including terminology, milestones, and best practices in carbon market standards. Recommend a final cycle by which World Bank can carry out asset development that would be consistent with emerging guidance from the Article 6 negotiations. In addition, review the rating manual created to guide third-party assessments (ex-ante and ex-post) during the asset development cycle, using the Mitigation Action Assessment Protocol (MAAP).	
2018	World Bank Carbon Partnership Facility (CPF) Developing renewable energy sectoral crediting methodology Project leader: Elaborate a new baseline and monitoring methodology for sectoral crediting for grid-connected renewable electricity generation, to be tested in on the Sri Lanka Renewable Energy Program proposal to CPF. Includes incorporating business-as-usual projections and host country NDC commitments into a forward-looking sectoral baseline, as well as an ex-post monitoring approach to calculated emission reductions.	
2018-19	World Bank Carbon Initiative for Development Piloting a standardised crediting framework (SCF) for scaling up energy access programs in Rwanda	



	<p>Project leader: Test application and operationalization of the SCF on the Inyenyeri improved cookstoves program in Rwanda, as part of piloting new crediting mechanisms under the Paris Agreement. The piloting will be done in parallel to the program's CDM registration, inclusion and verification process and compare the two processes (e.g. timelines, governance structure, stakeholder engagement, transaction costs). Includes analysis of options for how Nationally Determined Contributions (NDCs) may affect the crediting baselines.</p>
2017-18	<p>World Bank Carbon Initiative for Development Piloting a standardized crediting framework (SCF) for scaling up energy access programs in Senegal.</p> <p>Project leader: Test application and operationalization of the SCF on the Senegal national rural electrification program, as part of piloting new crediting mechanisms under the Paris Agreement. The piloting will be done in parallel to the program's CDM registration, inclusion and verification process and compare the two processes (e.g. timelines, governance structure, stakeholder engagement, transaction costs). Analyse options for how Nationally Determined Contributions (NDCs) may affect the crediting baselines.</p>
2017-18	<p>World Bank Partnership for Market Readiness (PMR) Preparation of Argentina's Market Readiness Proposal (MRP)</p> <p>Project leader: Analysis of sectoral emissions, capacity and institutional frameworks to develop Argentina's \$3 million grant request to the PMR, covering renewable energy certificates, energy efficiency certificates, transport policy instruments, and a variety of market readiness activities.</p>
2018	<p>Oeko Institute/EC DG Clima Study on Mapping the Development of the International Carbon Market.</p> <p>Crediting expert: part of consortium analysing potential domestic, regional and international markets in tradable emission reductions, and how these systems may evolve under the Paris Agreement. Includes developing a methodology to evaluate the environmental integrity and unit quality of traded units from linked Emission Trading Schemes (ETS) or crediting systems, as well as an assessment of the CORSIA scheme.</p>
2018	<p>World Bank Revising GCF proposal for Regional Off-Grid Electrification Program (ROGEP)</p> <p>Project lead: Developed GHG impact methodology and narrative for GCF proposal, with supporting documentation and analysis, to understand emission reductions from regional climate finance program supporting off-grid solar. Included review of Project Appraisal Document and other technical and policy documentation.</p>
2016-17	<p>UNDP MRV and MACC for Energy Generation and End Use Sectors NAMA project in Sri Lanka.</p> <p>Methodology and financing expert: Present financing options for energy sector NAMA, and concept paper on how NAMA related to NDC commitments for Sri Lanka, as part of larger program assessing mitigation potential, institutional arrangements, and MRV systems across a wide range of renewable energy supply and end-use technologies.</p>
2014-16	<p>Royal Norwegian Embassy Monitoring, reporting, verification and issuance for Off-Grid Electrification PoA in Mozambique</p> <p>Project leader: Supported validation and registration for CDM PoA covering off-grid solar PV and mini-hydropower mini-grids (Ref. 10203). Design and training for CME on monitoring database. Prepare monitoring templates and first monitoring report. Train monitoring team in preparation for verification.</p>
2015	<p>World Bank Climate Initiative for Development Promoting energy access through Results-Based Finance within the framework of the CDM: Assessing business models</p> <p>Project leader: Assess key success factors for energy access programmes, and how different types of results-based financing tied to mitigation could support these programmes. Included a review of energy access CDM programmes, as well as programme outside the climate finance field, review of the use of Emissions Reduction Purchase Agreements, and alternative pricing and business models incorporating non- climate benefits.</p>
2012-2014	<p>Royal Norwegian Embassy</p>

	<p>Programme of Activities for Off-Grid Electrification in Mozambique Project leader: As part of capacity building programme, develop PoA CDM documentation and analysis for renewable off-grid electrification programme for National Energy Fund (FUNAE).</p>
2014-2016	<p>Programme of Activities for Rural Electrification in Senegal UNFCCC CDM Loan Scheme Project leader: Support the Senegal Rural Energy Agency (ASER) in developing a CDM PoA for off-grid solar, hybrid mini-grids, grid extension, and solar lanterns. Includes extensive financial analysis of carbon finance impact on programme, and carbon financing options, as well as marketing the programme to a carbon fund.</p>
2016-2017	<p>World Bank (sub-contractor to Stockholm Environment Institute) Baseline setting for scaled-up crediting programs in the context of broader policy development, including the (i)NDCs. Mitigation expert: Technical note for the Partnership for Market Readiness (PMR) to provide an overview of the emerging approaches to the setting of scaled-up or aggregate baselines in context of broader energy and climate policies, consistent with national and sectoral approaches, facilitating demonstration of expected contribution of crediting programs to implementation of (i)NDCs and avoiding double counting. CL is a subcontractor to Stockholm Environment Institute.</p>
2015	<p>World Bank Carbon Finance Unit Consolidated methodology for rural electrification Project leader: Analyse and consolidate the various small scale CDM methodologies addressing rural electrification (AMS I.A, AMS I.F, AMS I.L, AMS III.BB) to develop submission to the Small-Scale Working Group of the UNFCCC. Included preparation of draft PoA documentation for Senegal rural electrification programme.</p>
2015	<p>Oeko Institute Results-based climate finance through carbon markets Climate finance expert: Identify and assess concrete options how programmes using carbon markets for results-based climate finance could be designed to effectively achieve additional and long-term emission reductions. Explore and road-test the options in the context of specific project types which are considered under current programmes for results-based climate finance.</p>
2013-2014	<p>UNFCCC Assessing the Impact and Benefits of the CDM Project leader: Lead an international team of consultants in updated analysis of sustainable development, technology transfer, and compliance cost savings impacts of CDM, as well as mitigation costs and post-2012 CER supply and demand scenarios. Includes new analysis of PoA pipeline and forestry projects, as well as detailed data analysis in collaboration with UNFCCC Secretariat team.</p>
2015	<p>World Bank Pilot Auction Facility – Review of applications in oil and gas sector Methodology expert: Review of analysis of major oil and gas mitigation project potential, and how result-based financing through auctions would be applied to the technologies in this sector. Review of suitability of gas flaring reduction for a PAF-type of instrument.</p>
2014-2015	<p>World Bank/University of Cape Town Climate Change Assessment of Energy-Water Nexus in Zambezi River Basin and Southern African Power Pool Project director for multi-centre research initiative to develop integrated water and power scenarios for the Zambezi River Basin in order to engage stakeholders and inform decision makers, through an assessment of potential climate change impacts on water availability and energy security in the Zambezi River Basin and the Southern African Power Pool. Includes developing a regional Long Range Energy Alternatives Planning (LEAP) model for SAPP and linking this to the Zambezi River Basin WEAP Model (see CDKN project in 2012-2014), as well as economic analysis of proposed Batoka Gorge hydropower plant</p>

2012-2014	<p>Climate Change and Upstream Development Impacts on New Hydropower Projects in the Zambezi Climate & Development Knowledge Network/University of Cape Town</p> <p>Project director for the development of water supply and demand scenarios for the Zambezi River Basin using Water Evaluation And Planning (WEAP) model. Analysis of implications of different climate futures and regional irrigation development strategies on the availability of existing and planned hydropower plants.</p>
2016	<p>World Bank Carbon Initiative for Development Innovative standardized crediting framework for scaling up energy access programs</p> <p>Identify new approaches to crediting emission reductions that go beyond the current CDM PoA model to reduce transaction costs and incentivize various stakeholders for energy access programs implemented under a coherent framework for channelling carbon and climate finance. Includes analysis and stakeholder interviews on how to address barriers that increase complexity, transaction costs, and uncertainty for energy access programs seeking carbon and climate finance.</p>
2008-2011	<p>Mitigating the Impact of Climate Change on Vulnerable Livelihoods in Southern Africa: Implementation Phase. DFID/One World Sustainable Investments</p> <p>Strategic planning and analysis role in consortium implementing a 5-year, £7 million programme to assist the region in responding to climate change. Roles include: analysing links between energy and the Millennium Development Goals and how climate change will impact these links.</p>
2011	<p>OneWorld Sustainable Investments/ DFID Vulnerability of energy resources to climate change in southern Africa</p> <p>Energy resources expert: Synthesis of findings of Regional Climate Change Programme for Southern Africa study on transboundary climate change vulnerabilities, with a focus on hydropower in Southern Africa.</p>
2011	<p>OneWorld Sustainable Investments Climate change implications for South African Power Pool (SAPP) long term planning</p> <p>Energy resources expert: Analysed how climate change impacts on drivers of hydropower supply could impact technical and economic viability of planned hydropower investments in the Southern African Power Pool. Proposed stakeholder dialogue process and future integrated modelling analysis to support better understanding of these impacts and “climate-proof” major investments.</p>
2014-2016	<p>Oeko Institute How additional is the Clean Development Mechanism? Analysis of the application of current tools and proposed alternatives</p> <p>Crediting methodology expert: Analysis of energy efficient lighting project pipeline in the CDM, with assessment of additionality of this project type. Review of wide ranging analysis on all aspects of additionality testing across 10+ sectors and technologies.</p>
2003-2016	<p>UNFCCC Desk Review of CDM baseline and monitoring methodologies</p> <p>Methodology expert: Review of more than 40 new baseline and monitoring methodologies, as part of roster of experts for Executive Board of Clean Development Mechanism. Sectors: biomass, hydro and wind power generation, district heating, natural gas fired power, industrial energy efficiency, cement manufacturing, SF₆ mitigation, chemical manufacturing, flare reduction, hydrogen production, waste management, food & beverage manufacturing, metals production and industrial heat and power.</p>
2012	<p><i>Confidential Client</i> CDM development of the 240 MW Kaléta hydropower project in Guinea</p> <p>Develop draft PDD for large scale hydropower plant that will supply power to Guinea, Senegal, The Gambia and Guinea-Bissau for the Gambia River Basin Development Organisation (OMVG). Includes testing of applicability of ACM2 and “Tool to calculate the emission factor for an electricity system” to new renewable plants exporting to multi-country grid.</p>

2010	<p>Pegasus Strategy & Development Economics of climate change for Zambia</p> <p>Climate economics expert: As part of larger study, analysed impacts of climate change on the energy sector in Zambia, and how this would in turn affect key economic sectors and development. Case studies on Zambezi river and hydropower.</p>
2014-15	<p>German Federal Environment Ministry/Perspectives Climate Change Strategies for Carbon Market Development in Least Developed Countries (LDCs)</p> <p>Methodology expert: Development and review of case studies of standardised approaches to rural electrification in the carbon market, including review of overall strategy development.</p>
2014	<p>World Bank/Partnership for Market Readiness Review of Market Readiness Proposal (MRP) from Vietnam</p> <p>Expert reviewer As part of expert team, review all aspects of MRP including analysis of country readiness, sectoral choices, institutional and organisational issues, and detailed sectoral plans.</p>
2013-2014	<p>UNFCCC Assessing the Impact and Benefits of the CDM</p> <p>Project leader for international team of consultants in updated analysis of sustainable development, technology transfer, and compliance cost savings impacts of CDM, as well as mitigation costs and post-2012 CER supply and demand scenarios. Includes new analysis of PoA pipeline and forestry projects, as well as detailed data analysis in collaboration with UNFCCC Secretariat team.</p>
2013	<p>Swedish Energy Agency National Policies and the CDM</p> <p>Project leader: Analysis of impact and effectiveness of CDM rules on national policies (E+/E), as well as emerging issues and potential conflicts between national policies and new carbon market mechanisms.</p>
2012	<p>Danish Energy Agency Review of Buseruka Hydropower (Uganda) PDD</p> <p>Expert reviewer: Review of carbon emissions analysis, grid emission factor calculations, and additionality arguments for small scale hydropower PDD (Ref. 5770).</p>
2012	<p>High Level Panel on CDM Policy Dialogue Research on the Impact of CDM</p> <p>Project leader for international team of consultants analysing impact of CDM on cost-effective mitigation, sustainable development, technology transfer, net global GHG emissions, clean energy investment and regional distribution of projects. Included substantial quantitative analysis of CDM pipeline, stakeholder consultations, and development of options and recommendations for the CDM Executive Board, Conference of Parties and other stakeholders. Also include assessment of role of suppressed demand and standardised approached in CDM methodologies.</p>
2012	<p>UNDP Report on UNDP Training on Standardized Baselines under the Clean Development Mechanism</p> <p>Project leader: Drafted synthesis report and recommendations from workshop in Nairobi for African DNAs and experts on standardised baselines, in collaboration with William Battye.</p>
2012	<p>Confidential client CDM development of the 240 MW Kaléta hydropower project in Guinea</p> <p>Methodology expert: Development of draft PDD for large scale hydropower plant that will supply power to Guinea, Senegal, The Gambia and Guinea-Bissau for the Gambia River Basin Development Organisation (OMVG). Includes testing of applicability of ACM2 and “Tool to calculate the emission factor for an electricity system” to new renewable plants exporting to multi-country grid.</p>
2011-2012	<p>Carbon Limits/African Development Bank</p>

	<p>New methodology for cross-border transmission projects As part of AfDB CDM support programme, develop a new baseline methodology for transmission interconnector projects, using Ethiopia-Kenya interconnector for draft PDD (approved as AM108). Includes analysis of CDM EB rejections of NM255, NM269, NM272, NM318 and NM342.</p>
2011	<p>myclimate Review of grid emission factor for Madagascar Analysis of different methodological approaches to electricity grid emission factors in Madagascar, and review of data and outputs for voluntary carbon market project application.</p>
2011	<p>Statkraft & EVN Review of Devoll Hydropower Albania PDD Analysis of grid emissions factor calculations for Albania, review of off-grid power study for grid emissions factor, and assistance with validation queries from DOE (Ref 5577)</p>
2011	<p>DFID Piloting greater use of standardised approaches in Clean Development Mechanism (CDM) Part of consortium developing specific practical examples of performance standards and default factors for the CDM, particularly in LDCs and Low Income Countries. Developed standardised methodologies for rural electrification, which was tested in Tanzania, Benin and Cambodia. Provided inputs on methodologies for water purification and charcoal production. With Perspectives, South Pole Carbon Asset Management, and GERES. Methodologies approved as AMS I.L and AMS III.BB.</p>
2010-11	<p>Royal Norwegian Embassy Mozambique CDM Capacity Building in Mozambique Build capacity for CDM project development skills among local consulting and research organisations, and support the Designated National Authority with training and materials.</p>
2010	<p>Royal Norwegian Embassy Mozambique CDM Action Programme for SADC Energy Sector Developed detailed proposed action plan for CDM capacity building in SADC Energy Sector, including outputs, activities, budgets and timeframe, for presentation to SADC Energy Ministers Meeting.</p>
2010	<p>Royal Norwegian Embassy, Mozambique Scoping study on SADC energy sector carbon market potential Review of CDM institutional frameworks, CDM project pipeline, CDM project potential and CDM capacity building programmes in all SADC countries.</p>
2010	<p>UNFCCC Technical report on standardised baseline options Prepare technical analysis of issues relevant to the development of modalities and procedures for the development of standardized baselines, based on submissions to the UNFCCC and relevant literature. Evaluate options for addressing issues and gaps that must be addressed. In collaboration with Axel Michaelowa, Perspectives CC.</p>
2010	<p>Private client Scoping study on CDM opportunities in sugar in South Africa Analysed sugar cogeneration project potential eligibility and additionality in the context of current national policies, technical project characteristics, and current CDM guidelines.</p>
2009-2010	<p>World Bank GHG Methodology Review and Recommendations for World Bank Transmission and Distribution Projects Review methodologies for GHG accounting of transmission and distribution investments. Recommend and/or develop methodological approaches and tools that provide simple and reasonable estimations of net emissions impacts at the project level, taking into consideration relevant project boundary issues and the impact of transmission lines on the operation of power plants in one or more connected grids.</p>
2009	<p>Royal Norwegian Embassy, Mozambique</p>

CDM introduction for SADC Energy Sector

Project lead: Presented CDM concepts and a regional action agenda for SADC Energy Ministers Meeting and SADC Energy Thematic Group Meeting.

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Publications (selected, relevant)

- 2018 Spalding-Fecher, Randall. "Inside or outside? Article 6.4 crediting outside of NDC commitments: issues and options" *Carbon Mechanisms Review*, 2018(01):33-39, February. <https://www.carbon-mechanisms.de/en/publications/details/?jiko%5Bpubuid%5D=539>
- 2018 Rahman, Shaikh M., Randall Spalding-Fecher, Erik Haites, and Grant A. Kirkman. "The Levelized Costs of Electricity Generation by the CDM Power Projects." *Energy*, February 2018. <https://doi.org/10.1016/j.energy.2018.01.144>.
- 2017 Spalding-Fecher, Randall. Article 6.4 Crediting Outside of NDC Commitments under the Paris Agreement: Issues and Options. Stockholm: Swedish Energy Agency, October. <http://www.energimyndigheten.se/en/cooperation/international-climate-cooperation/climate-policy-research-programme/results-from-the-climate-policy-research-programme/#Randall>.
- 2017 Broekhoff, Derik, Juerg Fuessler, Noemie Klein, Lambert Schneider, and Randall Spalding-Fecher. Establishing Scaled-Up Crediting Baselines under the Paris Agreement: Issues and Options - PMR Technical Note 15. Washington, DC: World Bank Partnership for Market Readiness, October. <https://openknowledge.worldbank.org/handle/10986/28785>
- 2017 Spalding-Fecher, Randall, Francois Sammut, Derik Broekhoff, and Jürg Füssler. Environmental Integrity and Additionality in the New Context of the Paris Agreement Crediting Mechanisms. Stockholm: Swedish Energy Agency <http://www.energimyndigheten.se/contentassets/2600659ecfa54ec995b835a4c99d75fb/environmental-integrity---final-report-2017.01.24.pdf>.
- 2017 Spalding-Fecher, Randall, Brian Joyce, and Harald Winkler. Climate Change and Hydropower in the Southern African Power Pool and Zambezi River Basin: System-Wide Impacts and Policy Implications. *Energy Policy* 103: 84–97. doi:10.1016/j.enpol.2016.12.009.
- 2017 Spalding-Fecher, Randall, Mamahloko Senatla, Francis Yamba, Charles Heaps, Arthur Chapman, Gilberto Mahumane, Bernard Tembo, Biness Lukwessa, Imasiku Nyambe, and Grayson Himunzowa. Electricity Supply and Demand Scenarios for the Southern African Power Pool. *Energy Policy* 101:403-414. DOI: 10.1016/j.enpol.2016.10.033
- 2016 Comes, Martin, Ralph O Harthan, Juerg Fuessler, Michael Lazarus, Carrie Lee, Peter Erickson, and Randall Spalding-Fecher. 'How Additional Is the Clean Development Mechanism? Analysis of the Application of Current Tools and Proposed Alternatives. CLIMA.B.3/SER12013/0026r. Berlin: Oeko Institute, March 2016. https://ec.europa.eu/clima/sites/clima/files/ets/docs/clean_dev_mechanism_en.pdf.
- 2015 Hoch, Stephan, Stefan Wehner, Randall Spalding-Fecher & Søren Lütken. Linking CDM PoAs and NAMAs in Ethiopia: Potential and feasibility for rural electrification. Zurich: Perspectives Climate Change. November.
- 2014 Spalding-Fecher, Randall, Arthur Chapman, Francis Yamba, Hartley Walimwipi, Harald Kling, Bernard Tembo, Imasiku Nyambe, Boaventura Cuamba. The vulnerability of hydropower production in the Zambezi River Basin to the impacts of climate change and irrigation development. *Mitigation and Adaptation Strategies for Global Change* 21(5): 721-742. DOI: 10.1007/s11027-014-9619-7
- 2014 Erikson, Peter, Michael Lazarus and Randall Spalding-Fecher. Net Climate Change Mitigation of the Clean Development Mechanism. *Energy Policy* 72: 146-154. DOI: 10.1016/j.enpol.2014.04.038
- 2011 Chapman, R A, S J E Midgley, S Chesterman, R Spalding-Fecher, and C von der Heyden. Climate change and the Millennium Development Goals: Case Studies for Southern Africa, a synthesis report. For the Regional Climate Change Programme (RCCP), UK Department for International Development. Cape Town: OneWorld Sustainable Investments. November.