Etienne RÜBBERS

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Email: etienne.rubbers@renew-e.com

Sex: Male

Nationality: South African Age: 52 years

LANGUAGES

Language	Reading	Speaking	Writing
English	1 (C2)	1 (C2)	1 (C2)
Dutch and Afrikaans	3 (B1)	2 (C1)	3 (B1)
French	3 (B1)	2 (C1)	3 (B1)

1 = Excellent, 5 = Basic; CEFR levels

QUALIFICATIONS

May 1999 - Sept 2001: Chartered Financial Analyst (CFA®) charterholder

CFA Institute, Charlottesville, USA (Member: 52224).

Jan 1998 - Jan 2000: BCom (Hons) (Business Management)

University of South Africa.

Sept 1994 - Sept 1995 : MSc Industriële Bedrijfskunde (MSc Industrial Management)

magna cum laude, KU Leuven, Leuven, Belgium.

Jan 1990 - Dec 1993: **BSc Engineering (Chemical)** cum laude

University of the Witwatersrand, Johannesburg, South Africa.

Committee memberships

- DFFE (Department of Forestry, Fisheries, and the Environment) Advisory Forum advising the Minister regarding Eskom's emissions and the resulting air pollution challenges on communities.
- NACA (National Clean Air Association) Member (2023 present)
- SANEA (South African National Energy Association) Board Member (2022 present).
- BUSA Energy Sub-Committee member (2020 present).
- SAIPPA (South African Independent Power Producers Association) Management Committee Member (2019 - present).
- SAIPPA 'Transmission and Grid Access' working group chair (2023 present)
- SAWEA and SAPVIA Member (2022 present)
- IDoSA (2023 present)

Voluntary Community Work

- Fundraising for the Rainbow Children's Village (an orphanage and place of safety for children from broken homes) in Johannesburg.
- Pro-bono marking of the June 2023 CFA[®] III exam papers for the CFA Institute.

Certificates and Licences

- PLEXOS training for gas system modelling, 2023.
- Sasol Executive Development Program, GIBS Business School, 2007.
- CFA Charterholder (Chartered Financial Analyst), 2001 (Member: 52224).
- University of Pretoria Certificate in Comparative M&A law & regulation, 2000.
- ESCA Professional Engineer, 1998 lapsed in 2000 (Registration number: 980765).

Publications

• "Distillation reboiler start-up can pose challenges: future designs can benefit from the lessons that were learned via a well-planned investigation of this start-up problem", Chemical Engineering (Vol. 111, Issue 2).

WORK EXPERIENCE

Mar 2018 - present:

Managing Partner (Renew-e: South Africa, Senegal, Mozambique, Botswana, DRC)

- Co-founder of Renew-e which specialises in the renewable power, PPPs, electricity transmission, gas and hydrogen. We provide techno-commercial and M&A advisory services in support of the 'Just Energy Transition'.
- Power system modelling and air quality:
 - Member of the DFFE Advisory Forum advising the Minister on possible pragmatic actions taking a holistic view regarding the challenges facing ESKOM's aging coal-fired stations. The challenges addressed included environmental, socio-economic, energy security, and cost of electricity; and a pragmatic balance of these parameters had to be found.
- Environmental and climate change advisory:
 - Advised the PCC (Presidential Climate Commission) on the energy transition with a particular focus on strengthening SA's electricity transmission grid and energy storage.
 - Analysis for the GIZ of the Regulations Codes and Standards required to promote South Africa's green hydrogen economy.
- Electricity transmission:
 - Advised NECOM (National Electricity Crisis Committee) on the transmission workstream.
 - Advised IPPs regarding the wheeling of electricity across SAPP (Southern Africa Power Pool) members' transmission grids.
 - Chair of SAIPPA's 'Transmission and Grid Access' working group.
- Gas advisory:
 - Techno-commercial and M&A advisory services for gas pipelines including Sasol's Mozambique-South Africa ROMPCO gas transmission pipeline valued at \$ 600 million, the acquisition of Sasol's entire gas distribution network, and the acquisition of a last-mile spur distribution pipeline supplying gas to a glass producer.
 - Techno-commercial advisory services to a bidder acquiring a major South African LPG supplier.
 - Advised the DBSA (Development Bank of Southern Africa) and Mozambique's National Oil Company (ENH) regarding the infrastructural and gas monetization options for the gas fields in northern Mozambique. The project was funded through grants from the European Commission and was coordinated by NEPAD.
 - Development of the SADC (Southern African Development Community)
 Regional Gas Masterplan, Phase 1.
- M&A, transaction and commercial advisory:
 - Pre-feasibility study for the conversion of the Kelvin 420 MW coal-fired power station to gas.
 - Led commercial negotiations and techno-commercial support for a 200 MW hybrid power station for the RMIPPP program consisting of PV and gas-fired facilities. Costing and technical requirements for the power plant to provide ancillary services were also developed.
 - Preparation for the disposal of loss-making shafts as part of the restructuring of Implats' Rustenburg platinum operations.

- Technical advisory:
 - Technology selection for 20 MW electricity generation from the furnace flue gas from Glencore's Boshoek chrome smelter.
 - Technical advisor to the IPP-Office for REIPPP BW 6 regarding ancillary services.
 - Advised ESKOM on the assessment of two of their coal-fired power stations to evaluate their performance and recommend improvements.
 - o Lender's Technical Advisor for three healthcare facilities in South Africa.
- Project reviews, due diligence and transaction audits:
 - Review of the performance of the Morupule mine's O&M contractor in Botswana to improve operations.
 - Audit to determine the flaws of a RMIPPP project that consisted of a PV plant and a and LPG-fired power plant.
 - o Due diligence of two PV solar acquisition targets for REIPPP BW 5.
- Business and project development:
 - Development of mini-hydro opportunities including a 4.7 MW run-of-river facility supplying a mini-grid in the city of Mbaji-Mayi in the DRC.
 - Commercial advisory, PPA, ancillary services and fuel supply negotiations for the 125 MW Sendou power plant in Senegal; and project development of the conversion of the power station to gas.
 - Development of a utility-scale hydrogen fuel-cell power station at a chlor-alkali plant.
 - Analysis of green hydrogen opportunities in South Africa for AP Ventures (a UK Venture Capital Fund).

Jul 2014 - Mar 2018:

Opportunity Development Manager (Sasol: South Africa)

- Identified and implemented optimisation opportunities for Sasol's energy value-chain which inter alia: reduced capex and opex, increased reliability and assisted to meet environmental and MES regulations.
- CBAs (Cost-Benefit-Analysis) of opportunities.

Nov 2010 – Jun 2014:

New Business Development Manager (Sasol: South Africa)

- Project management lead for the integration of the US gas-to-liquids and Fischer-Tropsch catalyst projects.
- Commercial lead for Sasol's participation in the 1 500 MW Mpanda Nkuwa hydroelectric project which included PPA negotiations.

Dec 2007 - Jun 2011:

Sasol Pension Fund trustee

 Pension fund trustee, and member of the Beneficiaries Trust and Investment Committee.

Mar 2007 - Oct 2010:

Chief Commercial Advisor (Sasol: South Africa, Nigeria, Qatar, China, Mozambique, US)

- Led the team responsible for Sasol Synfuels International's commercial support function and the negotiations for the suite of project agreements with counterparties for Sasol's proposed \$ 10 billion coal-to-liquids project in China.
- CBAs (Cost-Benefit-Analysis) for projects to lobby host countries to provide project incentives.
- Executive Committee member of Oryx (a gas-to-liquids joint venture between Sasol and Qatar Energies).

 Feasibility study and PPA negotiations for the 175 MW Moamba gas-to-power project in Mozambique. Negotiation of the IPPs to wheel the electricity through the existing transmission infrastructure to South Africa through the SAPP network.

Jan 2005 - Feb 2007:

Head: Mergers & Acquisitions (Sasol: South Africa, Germany, Australia)

- Led the team responsible for all of Sasol's M&A activity and corporate finance functions. Transactions included:
 - Disposal of Sasol Servo, a performance chemicals business in the Netherlands (2004, € 49 million).
 - Sasol Explosives' acquisition of Roche Blasting Services in Australia (2005, AUD 8 million), and
 - Evaluation of opportunities that could lead to M&A and refinancing transactions including TotalEnergies' wax business in the EU, Sasol's fertiliser business and Sasol's Escravos gas-to-liquid business in Nigeria.
- Non-executive director of Black Top Holdings (Pty) Ltd.

Jul 2002 - Jul 2011:

Senior Consultant [Part-time] (Trans-Africa Projects: South Africa, Lesotho, DRC)

- Financial modelling and techno-commercial advisor for the following projects:
 - o Inga III and the Western Corridor transmission project.
 - Proposed Budana, Soleniama and Nzoro hydropower projects in north-western DRC.
 - Lesotho wind power and pump storage.

Jul 2000 - Dec 2004:

Principal Corporate Finance Consultant: Mergers & Acquisitions (Sasol: South Africa, US, Germany, Japan)

 Supported Sasol's M&A team in corporate finance on several transactions in the petrochemical and oil sectors in the US, Germany and Japan. The aggregate transaction value was \$ 1 300 million.

Mar 1998 - Jun 2000:

Senior Process Engineer (Sasol: South Africa)

- Techno-commercial evaluation of projects at a pre-feasibility and feasibility stage of development.
- First-line licensor responsibilities for the fast-tracked \$ 17 million high purity ethanol project. The project was completed within budget and ahead of schedule.
- Concept Development responsibilities for the \$ 250 million acrylic acid and butanol projects based on Mitsubishi Chemical Corporation's technology.

Jan 1996 - Feb 1998:

Senior Process Engineer (Dow Chemicals : South Africa)

• Led the process support and process development functions at Dow Chemical's chemical complexes in South Africa.

CERTIFICATION

I, Etienne Rübbers, certify that to the best of my knowledge and belief, this information correctly describes my qualifications, my experience and me.