



Joep Vaessen

BSc OF BUSINESS ENGINEERING
Project Director



Location

Perth, WA, Australia

Experience

18 years

Qualifications/Accreditations

- BSc of Business Engineering, 2003
- MSc of Business Administration, 2007
- Project Finance Accreditation, 2008

Key technical skills

- Decarbonisation Strategies
- PVSyst
- SANDIA Glare modelling (SGHAT)
- Financial Modelling
- Solar Resource Assessments

Relevant experience summary

Joep is a future energy leader and Business Group Manager for GHD based in Perth. His background is in power infrastructure (special focus on renewable energy and hydrogen) projects across Australia, Asia, Europe and North America. Joep has significant experience in the energy sector with specific knowledge in the development and delivery of renewable projects and micro grids. In his current role he provides industry and governments with advice in de-carbonisation strategies, technical support and manages one of Australia's largest Power Engineering groups.

Project experience – Asset De-carbonisation Studies and Lead

Manager of GHD's multi-discipline de-carbonisation service offerings which includes a focus on emission reduction strategies and hands on support to clients. A few projects include:

- Woodside Energy project which includes the use of renewable energy and energy efficiency technologies for low carbon operation.
- Power lead for the Yara Fertilizer Hydrogen project for GHD's services.
- Power lead for the Rio Tinto Greenhouse Gas Abatement initiative
- IPS for BHP including the development of a renewables roadmap to meeting their GHG goals.
- Hydrogen Production Facility technical study project director for a Gas provider in WA.
- Technical advisor for the Renewable Energy option study for Incitec Pivot, QLD.

WA Hydrogen Facility

Role: Project Director

Client: ATCO

Location: Perth, WA, Australia

GHD Project Director for the services provided to ATCO's CEIP project. ATCO is seeking to build and operate a 10 MW commercial scale hydrogen production plant using electrolysis technology to produce pure 'green' hydrogen gas. Services included:

- Pre-FEED including site selection & capital estimating;
- FEED services;
- Concept design; and
- Project Execution Planning.

Future Energy Leader

Role: Future Energy Leader

Location: Perth, WA, Australia

- Leader within GHD's global future energy group that is involved in GHD's multi-discipline de-carbonisation service offerings.
- The future energy group brings together a group of energy and emissions reduction specialists across the globe which provides access to in-depth knowledge of new technologies, technical developments and strategies for the inclusion of low carbon energy and de-carbonisation solutions.

Power Engineering Group

Role: Project Director

Location: Perth, WA, Australia

GHD Project Director for the following projects:

- Renewable Lead Pre FEED study on 100MW+ gas, BESS, Solar Farm hybrid plant in the Pilbara
- Yandin Wind Farm – Project Management & Owners Engineer Services
- Badgingarra Solar Farm Owners Engineer
- Greenough River Solar Farm Stage 2 Owners Engineer
- Hedland Terminal Protection Upgrade (Horizon Power)
- Esperance Unserviceable Poles (#500) (Horizon Power)
- MRO Stage 2 Microgrid (Horizon Power)
- Blackwater Solar Farm development (EDL)
- Badgingarra Wind Farm Construction (APA)

Onslow DER Project

Role: Project Director

Location: Perth, WA, Australia

GHD Project Director for the award winning (Project Management Awards 2020) Horizon Power's Onslow DER project which includes the design, tendering and implementation for the Onslow Microgrid including:

- Gas Fired Power Station
- 1 MW Solar Farm
- 1 MW/ 1 MWh Battery Energy Storage System
- 2 MW of Distributed Energy Resources
- Specifications
- SCADA & Control Architecture Design
- System Studies
- Procurement & Tender Evaluation

Renewable Energy

Role: Principal Engineer

Location: Perth, WA, Australia

Leading the renewable initiatives in Western Australia and solar PV project nationally:

- Busselton Water Renewable Energy Consultant
- AEMO – SWIS Healthcheck review
- Study lead for a renewables options study for a large mining company including a detailed assessment of low emission technologies and a

renewables roadmap mapping out future carbon (including offset) for the mining facility.

- Tender Design 250 MW Sunraysia Solar Farm, Decmil, Australia
- Technical Due Diligence, Darling Downs Solar Farm, Confidential Client
- EPC Tender support and ad-hoc technical support on AGL's Solar Farm and Battery initiatives

Leading technical and financial due diligence for renewable energy projects including Solar, Wind, Batteries. Projects include:

- 20 MW Emu Downs Solar Project, APA;
- 30 MW Barcaldine Community Solar Farm;
- 25 MW Cook Shire Solar Farm, Conergy;
- 7 MW NOVA Solar Farm, Zenith;
- 5 MW Normanton Solar Farm;
- Energus Flexible Solar Panel Review; and

Solar Pump Irrigation Systems Review, Bundaburg Irrigators.

Role: Business Group Manager

Location: Perth, WA, Australia

Manager of the Power Engineering Group within GHD which is focusing on the following areas:

- Transmission & Distribution design, studies and installation support;
- SCADA and protection design, PLC configuration and provide site technicians;
- Renewable Energy studies, design (tender and detailed) as well as owners engineer services;
- System modelling (PSSE, PowerFactory), system stability and system sizing studies; and
- Provision of Microgrid and Stand Alone Power System engineering services with specialty in feasibility, procurement, design and construction of Microgrids in Australia.

Solar PV

Role: Market Sector Lead

Location: Perth, WA, Australia

Leading technical, project management, owners engineer and construction support for large scale solar projects. Projects include:

- Concept Wind Farm Substation Design, SWIS, Confidential Client;
- Wind Farm Connection Application support, SWIS, Confidential Client;
- Grid Connection option study, WA solar development, Mitsui;
- 4 MW Kalbarri Solar Thermal Plant Project Manager, WA, Tidal Energy Australia Pty. Ltd. Grid Connection and Design;
- 10 MW Gullen Range Solar Farm Owners Engineer / Independent Certifier, NSW – Goldwind / ARENA;
- 15 MW Sunshine Coast Solar Farm, Technical Support for Detailed Design, QLD – Downer;
- 100 MW Darling Downs Solar Farm Concept Design, QLD – RCR Tomlison;

- Development support for ARENA Large Scale Solar Projects from Neoen;
- 50 MW Kidston Solar Farm, Owners Engineer support, QLD – GENEX;
- 200+ MW – PAREP - Technical Specification and Tender Support for a Wind/Solar Farm, SA, DP Energy; and
- 30 MW, Burgos Solar Farm, Solar Technical Advisor, Philippines – EDC.

Role: Hybrid, Off Grid and other Renewables

Location: Australia wide

- Off-grid feasibility study for Shire of Ngaanyatjarraku, WA.
- Project Development Manager – 1.8 MW development in VIC, undisclosed client. Responsibilities included the feasibility study for a set-up of a hybrid power plant including a Bio-Gas Plant, MW battery storage and a PV power Plant.
- Hybrid System, Feasibility Study, Site Visit and infrastructure review, Programmed Maintenance, Rottnest Island.
- Feasibility study on the integration of a solar farm on top of a landfill gas site for Geelong City Council.

Mugga Lane Solar Farm

Role: Owners Engineer / Project Manager

Client: Confidential

Location: Canberra, ACT, Australia

- Responsible for owner's engineer services including: Successful ACT FiT application, EPC negotiation, design, grid connection approvals and construction planning for a 13 MW Mugga Lane Solar Park, Canberra, ACT.
- Joep created a new performance testing procedure for this project which is considered to be standardised by NREL.

Royalla Solar Farm

Role: Design Manager

Client: Confidential

Location: Melbourne, Vic., Australia

Project Design Manager – Detailed design services included:

- Electrical (LV, HV, Earthing, Grid connection SCADA)
- Civil (Roads, pavement, drainage, approvals);
- Structural (mounting structures, foundations).
- Design Acceptance from TaMS
- Managing a team of 40+ designers, drafters and construction supervisors
- The project (\$AUD 50M) which was the first and largest utility scale solar farm on the NEM at the time.

Role: General Manager

Location: Ottawa, Canada

- Development Manager - Analysing business opportunities on technical, financial and legal

aspects. Pursue opportunities through interaction with potential clients, government entities and suppliers.

- Project Development Manager - for a 5 MW project with US Steel Corporation. Joep was responsible for receiving a \$ 3m dollar grant from the state of Pennsylvania and managed the proposals, contract & price negotiations (EPC, Permits, O&M, PPA, SREC etc.).
- Managed to set-up the dedicated project finance model for US operations.
- Preparation of Tender documents, with necessary technical specifications, contracts and other requirements for the sub-contracting.
- Co-development – Ottawa Valley Glass, multiple PV systems. Responsibilities included; financial modelling, advice in system sizing and feasibility studies.

Role: Project Development Manager

Location: Venlo, The Netherlands

- Project Manager – F-Glass 1 MW rooftop PV power plant. Arranging the financing and construction of a 1.0 MW plant in Osterweddingen, Germany.
- Managed a due diligence team of 2 lawyers, 3 engineers and 1 controller for a 21 MW pipeline in Italy which subsequently was bought.
- Project Development Manager – Italy 24 MW. Lead the site assessment feasibility study for development of PV plants in Calabria and Sardinia.

2.5 MW Dual Axis Tracker System

Role: Construction / Project Manager for

Client: Confidential

Location: Albacete, Spain

- Managing the engineering, procurement, and construction ('EPC') activities, within budget and with a tight timeline (connect before Spanish FiT change date).
- Solely responsible for the financial control, on-time delivery, and meeting quality-expectations of the construction.
- Managed corporate governance and share transfers of the Special Purpose Companies ('SPC').

Published

- February 2017 - [World Renewable Energy Congress](#)
- October 2015 – [All Energy Presentation & AIE Grid access and Wind Solar Co-Location](#)
- March 2016 – [Clean Energy Council Wind Forum. Combining powers – Wind and Solar a powerful combination](#)
- October 2014 – [All Energy Presentation. why a design methodology is essential to a successful solar farm design](#)