

Ref No.	Project Name	Year	Project Size (MW)	Main Scope	Owner (Client)
Α	Vietnam				
A35	Owner's Engineer for Hieu Wind Project	Ongoing	100	Owners Engineer	Hero Future Energies
A34	Owner's Representative for Tra Vinh Wind Project	Ongoing	48	Owners Representative	TWPC
A33	Operations Asset Management for Dam Nai Wind Project	Ongoing	39.4	Operations Asset Management	Dam Nai Wind Power
A32	Energy Yield Assessment for Dam Nai Wind Project Phase III & IV	2021	72	Technical Advisory	ScaTec
A31	OPEX Gap Analysis for Soc Trang 7 Wind Project	2021	71.4	Commercial Advisory	ScaTec
A30	Transition of Ownership for Dam Nai Operational Wind Project	2020-2021	39.4	Operations Assessment	SN Power
A29	Layout Optimization for Hieu Wind Project	2020	100	Technical Advisory	Hero Future Energies
A28	SAA Contract Negotiation for Bac Lieu Phase III and Soc Trang Phase I	2020	141 & 30	Commercial Advisory	Super Wind Energy
A27	EPC and TSA Commercial Support for Wind Project	2020	171	Commercial Advisory	Confidential Client
A26	EPC and SAA Contract Negotiations for An Tho and Chu Prong Wind Projects	2020	250	Commercial and Technical Advisory	Super Wind Energy
A25	Contract Negotiations Support and Construction OE for an Expansion of Existing 250MW Solar Project	2020	75	Owners Engineer	BIM/AC Energy
A24	Acquisition Due Diligence for Dam Nai Operational Wind Project	2019-2020	39.4	Acquisition Due Diligence	Confidential Investors
A23	Owner's Representative for Intertidal Wind Project Development	2019	144	Owners Representative	Climate Investor One
A22	Met Mast Inspection and Commissioning Support for 120m Mast	2019	300	Met Mast Campaign	B&T/AC Energy



Ref No.	Project Name	Year	Project Size (MW)	Main Scope	Owner (Client)
A21	Energy Yield Assessment for Binh Dinh Wind Project	2019	42	Acquisition Due Diligence	APDP
A20	Gia Lai Greenfield Wind Project	2019	50	Technical Advisory	APDP
A19	Acquisition Due Diligence for Mui Dinh Operational Wind Project	2019	37.6	Acquisition Due Diligence	Confidential Investor
A18	Acquisition Due Diligence for Duyen Hai Wind Project	2019	48	Acquisition Due Diligence	Confidential Investor
A17	Acquisition Due Diligence for Trung Nam Operational Wind Project	2019	104	Acquisition Due Diligence	Confidential Investor
A16	Acquisition Due Diligence for Ben Tre Wind Project	2019	120	Acquisition Due Diligence	Confidential Investor
A15	Acquisition Due Diligence for Tay Ninh Solar Project	2019	2 x 50	Acquisition Due Diligence	Confidential Investor
A14	Project Management and EPC Contract Support for Intertidal Wind Project	2019	78	Commercial Advisory	EcoTech/Climate Investor One
A13	EPC Contract Support for Tra Vinh Wind Project Phase I	2019	48	Commercial Advisory	TWPC/Climate Investor One
A12	TSA Commercial Support for Khai Long Wind Project	2019	100	Commercial Advisory	Power China
A11	Technical Advisory Support for Soc Trang Nearshore Government Tender Lot	2019	50	Technical Advisory	Confidential Client
A10	Site Hunting and Pre-Feasibility for Wind Project	2018	5 x 50	Site Hunting and Pre- Feasibility	Confidential Client
A9	Met Mast Campaign design for Wind Project	2018	300	Technical Advisory	B&T/AC Energy
A8	Red Flag and Site Assessment for Thanh Phong Wind Project	2018	30	Technical Advisory and Acquisition Due Diligence	APDP



Ref No.	Project Name	Year	Project Size (MW)	Main Scope	Owner (Client)
A7	Preliminary Due Diligence and Feasibility Studies for Wind Project Acquisition	2018	90	Technical Due Diligence	Confidential Investor
A6	Commercial and Technical Support for Co-development Wind Project	2018	100	Technical Advisory	Confidential Client
A5	Commercial Contracting and Construction Planning for Wind Project	2018	2 x 40	Commercial Advisory	Confidential Developer
A4	Site Assessment, Energy Yield Assessment and Wind Project Layout	2018	250	Technical Advisory	B&T/AC Energy
А3	Energy Yield Assessment and Wind Project Layout	2017	30	Energy Yield Assessment and Wind Project Design	InfraCo Asia
A2	Technical Due Diligence for Hybrid Wind and Solar Project Acquisition	2017	50	Technical Due Diligence	Confidential Client
A1	Initial Site Assessment and Pre-Feasibility Study for Wind Project	2017	30	Site Hunting and Pre- Feasibility	InfraCo Asia
В	Thailand				
B7	Insurance Audit/Inspection for Had Kanghan Operational Wind Project	2020	126	Technical Advisory	Price Forbes
В6	Blade Inspection for Had Kanghan Operational Wind Project	2019	126	Technical Advisory	Energy Absolute
B5	Pre-Feasibility Study for Korat Wind Project	2017	50	Technical Due Diligence	Prime Road Group
B4	Project Management for First & Second Utility-Scale Wind Project	2014-2017	207	Owners Representative	Wind Energy Holding
В3	Contracting, Negotiations, and Construction Project Management for Subplu I & II and Wayu Wind Project	2014-2017	60	Owners Representative	Wind Energy Development/Gunkul
B2	Contracting and Negotiations for Late Stage Development for Sarahnlom Wind Project	2014-2017	67.5	Owners Representative	Greenovation Power/Gunkul



Ref No.	Project Name	Year	Project Size (MW)	Main Scope	Owner (Client)
B1	Contracting, Negotiations, and Construction Project Management for Mittraphap Wind Project	2014-2017	52.5	Owners Representative	Korat Wind Energy/Gunkul
С	Philippines				
C11	Contract Negotiations Support and Construction OE for Solar Project	Ongoing	120	Owners Engineer	SolarAce1/AC Energy
C10	Contract Negotiations Support and Construction OE for Solar Project	Ongoing	63	Owners Engineer	Gigasol3/AC Energy
C9	Co-Development Wind Projects	Ongoing	500	Co-Development	Confidential Client
C8	Energy Yield and EPC Assessments for Nabas II Wind Project	2020-2021	N/A	Energy Yield Assessment	PetroWind Energy
C7	Energy Yield Assessment and Wind Project Layout	2020	150	Energy Yield Assessment	Viento Power/EGCO
C6	Wind Study Advisory and Data Management x 2 Masts	2017-2020	150	Met Mast Campaign	Viento Power/EGCO
C5	Technical and Commercial DD for Hybrid Wind and Solar Project	2018	150	Technical and Commercial Due Diligence	Confidential Client
C4	Met Mast Inspection and Upgrade of Existing Equipment	2018	150	Met Mast Campaign	Confidential Client
C3	Site Hunting & Assessment and Development Recommendations	2017	N/A	Site Hunting	Confidential Client
C2	Pre-Feasibility Study for Hybrid Wind and Solar Project	2017	150	Pre-Feasibility	Viento Power/EGCO
C1	O&M and Asset Management Strategy for Nabas 1 Wind Farm	2016	36	O&M	Petro Wind Energy Inc.
D	Myanmar				
D7	Acquisition Due Diligence for Magway Wind Project	2020	263	Acquisition Due Diligence	SN Power



Ref No.	Project Name	Year	Project Size (MW)	Main Scope	Owner (Client)
D6	Wind Data Management x 5 Masts	2017-2020	200	Met Mast Campaign	InfraCapital Myanmar/InfraCo Asia
D5	Pre-Feasibility for Mandalay Solar Project	2018	130	Solar Pre-Feasibility	Confidential Client
D4	Health & Safety Support for Met Masts Installation Work	2018	50	HSQE	InfraCapital Myanmar/InfraCo Asia
D3	Early Stage Development Support for Wind Project Pipeline	2017	300	Early Stage Development	InfraCapital Myanmar/InfraCo Asia
D2	Energy Yield Assessment and Met Mast Campaign Design for 2 Sites	2017	2 x 50	Energy Yield and Met Mast Campaign	InfraCapital Myanmar/InfraCo Asia
D1	RFI Process for ICM Wind Projects	2017	100	RFI	InfraCapital Myanmar/InfraCo Asia
E	Indonesia				
E6	Commercial and Technical Support of Negotiations with Bidders	2019	36	Technical and Commercial Advisory	APDP
E5	Marine Warranty Survey for Sidrap Wind Project	2017	75	Marine Risk Survey	Gcube Insurance
E4	Technical Due Diligence for 2 Early Stage Wind Projects	2017	30 & 40	Technical Due Diligence	Confidential Client
E3	Sustainable Energy Finance Market Study	2017	N/A	Market Study	IFC (World Bank)
E2	Risk Survey for UPC Sidrap Wind Project	2016	75	Risk Survey	RELA/GCube Insurance
E1	Commercial and Technical Due Diligence for Jeneponto Wind Project	2016	62.5	Techno-Commercial Due Diligence	China State Construction Engineering
F	Cambodia				
F1	Technical Due Diligence for Wind Project Pipeline	2017	N/A	Site Hunting	Confidential Client
G	Taiwan				



Ref No.	Project Name	Year	Project Size (MW)	Main Scope	Owner (Client)
G1	Technical Advisory and Construction Support for 3 Solar Projects	2019	N/A	Technical and Commercial Advisory	Formosa / Partners Group
Н	Laos				
H1	Site Hunting & Development Recommendations for Wind Project Pipeline	2017	N/A	Site Hunting	Confidential Client
ı	Pakistan				
19	Operations Management Plan for Hawa and JPL Wind Projects	Ongoing	50 & 50	Operations Management Plan	JCM Matswani Solar
18	Technical Advisory for Hawa and JPL Wind Projects in Sindh and a Solar Project in Salima	2019-2020	50 & 50 & 60	Technical Advisory	JCM Solar Capital
17	Technical Due Diligence and OE Construction for JPL Wind Project	2018	50	Asset Optimization	JCM Solar Capital
16	Energy Yield Calculation Discrepancy for Cacho Phase 1	2017	50	Technical Advisory	JCM Power
15	Board Advisory for O&M for Foundation Wind Energy I & II	2017	50 & 50	Asset Management	CapAsia / Fauji Foundation
14	Preliminary Due Diligence for Solar Project I & II	2017	50 & 50	Technical Due Diligence	JCM Solar Capital
13	Acquisition Due Diligence for Wind Project Pipeline	2016	750	Acquisition Due Diligence	China State Construction Engineering
12	Wind Data Management for Wind Project Pipeline	2016	450	Technical Advisory	Confidential Client
l1	Site Management Wind Project in Sindh	2016	50	Construction and Operations Advisory	JCM Hawa
J	Africa				
J4	Construction Project Management Support for Malawi Solar Project	2019	70	Construction Advisory	SUMEC



Ref No.	Project Name	Year	Project Size (MW)	Main Scope	Owner (Client)
J3	Acquisition Due Diligence for Lake Turkana Wind Project in Kenya	2018-2019	310	Technical and Commercial Advisory	JCM Capital
J2	Commercial Contracting, Negotiations, and Technical Support for Malawi Solar Project	2018	70	Technical and Commercial Advisory	JCM Solar Capital
J1	Commercial Contracting and Negotiations Support for First Utility-Scale Solar Project in Nigeria	2015	86	Commercial Advisory	JCM Capital / Pan Africa Solar
K	South America				
K1	Contract Negotiation Support for Brownfield Wind Project	2015	92	Owners Engineer	China State Construction Engineering Co.



#### **VIETNAM**

**Project:** 100MW Hieu Wind Project

Year: Ongoing

**Client:** Hero Future Energies

**Location:** Vietnam



Ref. No: A35

**Description:** Owner's Engineer

MEM scope of work included:

- RFI assessment
- EYA and layout optimization
- ITT design
- EPC bid assessment
- Contract negotiation
- CFD model

**Project:** 48MW Tra Vinh Wind Project

Year: Ongoing Client: TWPC

**Location:** Vietnam



Ref. No: A34

**Description:** Owner's Representative

- Coordinate with client, local representatives, EVN/MOIT, OE, vendors, EPC contractors, and other stakeholders
- Schedule, budget, cost, quality, and scope control
- Monthly progress report meetings with EPC contractors, subcontractors, and other consultants
- Contract and commercial management



**Project:** 39.4MW Dam Nai Wind Project

Year: Ongoing

**Client:** Dam Nai Wind Power

**Location:** Vietnam



**Description:** Operations Asset Management

MEM ongoing scope of work included:

- Risk and vulnerability analysis
- Performance assessment
- Asset management plan
- Operation plan
- Maintenance plan

Ref. No: A33

**Project:** 72MW Dam Nai Wind Project Phase III

& IV

**Year:** 2021

Client: ScaTec

**Location:** Vietnam



Ref. No: A32

**Description:** Energy Yield Assessment

- MCP forecast
- Operational data analysis
- EYA and optimization
- **EPC CAPEX and OPEX estimation**



**Project:** 71.4MW Soc Trang 7 Wind Project

**Year:** 2021

Client: ScaTec

**Location:** Vietnam



Ref. No: A31

**Description:** OPEX Gap Analysis

MEM scope of work included:

- CAPEX gaps and exclusions identification
- OPEX related cost estimation

Project: 39.4MW Dam Nai Wind Project

Year: 2020

**Client:** SN Power

**Location:** Vietnam



Ref. No: A30

**Description:** Operations Assessment

- Risk and vulnerability analysis
- Tower foundation assessment
- Establish performance indicators
- Asset management plan
- Operation plan
- Maintenance plan
- Operational readiness review and takeover



**Project:** 100MW Hieu Wind Project

**Year:** 2020

**Client:** Hero Future Energies

**Location:** Vietnam



Ref. No: A29

**Description:** Layout Optimization

MEM scope of work included:

- CFD wind layer
- MCP forecast
- Facility optimization analysis (LCOE)

**Project:** 141MW Bac Lieu Phase III and 30MW

Soc Trang Phase I

**Year:** 2020

**Client:** Super Wind Energy

**Location:** Vietnam



**Description:** SAA Contract Negotiations

MEM scope of work included:

- Prepare SAA contract
- Attend project SAA negotiations
- Commercial and risk evaluation of SAA contract

Ref. No: A28



**Project:** 171MW Wind Project

**Year:** 2020

**Client:** Confidential Client

**Location:** Vietnam



Ref. No: A27

**Description:** EPC and TSA Commercial Support

MEM scope of work included:

- Prepare TSA contract
- Review WTG supplier's comments
- Attend negotiation calls with WTG supplier

**Project:** 250MW An Tho and Chu Prong Wind

Farms

**Year:** 2020

**Client:** Super Wind Energy

**Location:** Vietnam



Ref. No: A26

**Description:** EPC and SAA Contract Negotiations

- Prepare EPC and SAA contracts
- Attend EPC and SAA negotiations



**Project:** 75MW Expansion of Existing 250MW

Solar Farm

**Year:** 2020

**Client:** BIM/AC Energy

**Location:** Vietnam



Ref. No: A25

**Description:** Contract Negotiation Support and Construction OE

MEM scope of work included:

- EPC contract negotiations
- Review of key technical conditions
- Review of spare parts list
- Review of project schedule and guaranteed completion dates
- Review of HSE and quality assurance provisions
- Site OE construction support
- Site HSE management

Site works: 100% HSE record, Zero incident

**Project:** 39.4MW Dam Nai Operational Wind

**Project** 

Year: 2019-2020

**Client:** Confidential Investors

Location: Vietnam



Ref. No: A24

**Description:** Acquisition Due Diligence

MEM scope of work included:

- Red flag analysis
- Contracts review
- Energy yield assessment
- Wind measurements
- Site assessment
- Internal WTG inspections
- Site HSE

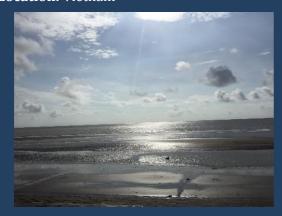


Project: 144MW Tra Vinh Wind Farm

Year: 2019

**Client:** Climate Investor One

Location: Vietnam



Ref. No: A23

**Description:** Owner's Representative for late stage development of nearshore wind farm.

MEM scope of work included:

- Allocation of fulltime project manager to coordinating and managing the development activities of the Client
- Advising on project management and development issues to enable the project to reach financial close
- Development of contracting and risk management strategy
- Development of tender materials including Employer's Requirements, Employer's HSE Requirements, EPC construction contract, Operations and Maintenance contract
- Commercial negotiations

**Project:** 300MW Met Mast Inspection and Commissioning support

**Year:** 2019

**Client:** AC Energy

(B&T Windfarm Joint Stock Company)

**Location:** Vietnam



Ref. No: A22

**Description:** Performed technical oversight during an installation of met mast to ensure that the deviations from the proposed design are resolved immediately.

MEM scope of work included:

- Installation procedures supervision
- Mast commissioning report
- HSE document preparation
- HSE site management
- IEC compliance
- Reporting
- Project management



**Project:** 42MW Wind Farm

Year: 2019 Client: APDP

**Location:** Vietnam



Ref. No: A21

**Description:** Acquisition Due Diligence. Represented project investors in conducting technical due diligence of a 21MW brownfield development acquisition opportunity.

MEM scope of work included:

- Red flag DD analysis
- Site visit
- Preliminary layout design and energy yield calculation
- Cost analysis (LCOE)
- Provision of recommendations for further development
- Site HSE

Site works: 100% HSE record, Zero incident

**Project:** 50MW Gia Lai Greenfield Wind

Project

**Year:** 2019

**Client:** APDP

**Location:** Vietnam



Ref. No: A20

**Description:** Project Evaluation

- GIS Desktop Assessment
- Site suitability review
- Project siting optimization
- Indicative AEP



**Project:** 37.6MW Mui Dinh Wind Farm

**Year:** 2019

**Client:** Confidential Investor

**Location:** Vietnam



Ref. No: A19

**Description:** Acquisition due diligence for an operational wind farm.

MEM scope of work included:

- Red flag review of contracts and financial performance
- Red flag review of energy yield assessment
- Site review and construction quality
- Equipment and O&M assessment
- Site HSE

Site works: 100% HSE record, Zero incident

**Project:** 48MW Duyen Hai Wind Farm

**Year:** 2019

**Client:** Confidential Investor

**Location:** Vietnam



Ref. No: A18

**Description:** Acquisition Due Diligence

- Red flag technical DD
- Red flag review of key permits, agreements and compliance



**Project:** 104MW Trung Nam Wind Farm

**Year:** 2019

**Client:** Confidential Investor

**Location:** Vietnam



**Description:** Acquisition due diligence for an operational wind farm.

MEM scope of work included:

- Review of contracts, financial performance and energy yield assessment
- Site review and construction quality
- Equipment and O&M assessment
- Site HSE

Site works: 100% HSE record, Zero incident

Ref. No: A17

Project: 120MW Ben Tre Wind Project

**Year:** 2019

**Client:** Confidential Investor

Location: Vietnam



Ref. No: A16

**Description:** Acquisition Due Diligence

MEM scope of work included:

- Review of AEP Report
- Contracts review
- Estimation of the expected all-in construction and O&M costs
- Provide costing assumptions for financial model
- Layout optimization
- Site assessment
- Site HSE



**Project:** 2 x 50MW Tay Ninh Solar Project

**Year:** 2019

**Client:** Confidential Investor

**Location:** Vietnam



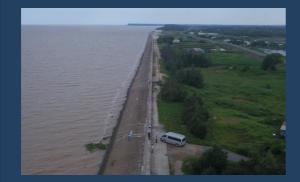
Ref. No: A15

**Project:** 78MW Intertidal Wind Project

**Year:** 2019

**Client:** EcoTech/Climate Investor One

**Location:** Vietnam



Ref. No: A14

**Description:** Acquisition Due Diligence

MEM scope of work included:

- **Energy Yield Assessment**
- Facility design review
- Site assessment
- Review of construction reports
- Review of flood risk assessment
- Site assessment HSE

Site works: 100% HSE record, Zero incident

**Description:** Project Management and EPC **Contract Support** 

- **Tender Evaluation**
- Technical and Commercial advisory
- **Energy Yield Assessment**



Project: 48MW Tra Vinh Wind Project Phase I

**Year:** 2019

**Client:** TWPC/Climate Investor One

**Location:** Vietnam



Ref. No: A13

**Description:** EPC Contract Support

MEM scope of work included:

- Attend contract negotiation meetings
- Advising on technical aspects
- Review project documents
- Liaise with the owner's legal advisor

**Project:** 100MW Khai Long Wind Project

**Year:** 2019

Client: Power China
Location: Vietnam



Ref. No: A12

**Description:** TSA Commercial Support

- Prepare TSA contract
- Calls and meetings with client
- Review WTG supplier's comments



**Project:** 50MW Soc Trang Nearshore

**Government Tender Lot** 

Year: 2019

Client: Confidential Client

**Location**: Vietnam



Ref. No: A11

**Description:** Technical Advisory Support

MEM scope of work included:

- Prepare TSA contract
- Calls and meetings with client
- Review WTG supplier's comments

**Project:** 5 x 50MW Wind Farm

**Year:** 2018

Client: Confidential Client

**Location:** Vietnam



Ref. No: A10

**Description:** Site hunting, site assessment and development recommendations for wind farm sites in Vietnam.

MEM scope of work included:

- Use free GIS data to identify potential locations for +50MW wind farm sites
- Site visit
- Conduct indicative AEP based on scaling of known wind speeds
- Provision of recommendations for further development
- Site assessment HSE



**Project:** 300MW Wind Farm

**Year: 2018** 

**Client:** AC Energy **Location:** Vietnam



Ref. No: A9

**Description:** Met Mast Campaign Design

MEM scope of work included:

- Met Mast siting assessment
- Review of mast specifications
- Measurement campaign methodology
- Lidar support strategy
- Met mast siting assessment
- Review of mast design
- Recommendations for bankable wind resource assessment

**Project:** 30MW Thanh Phong Wind Project

Year: 2018 Client: APDP

**Location**: Vietnam



Ref. No: A8

**Description:** Red Flag and Site Assessment

MEM scope of work included:

- Review of project constructability
- Project development status
- Preliminary project schedule
- High level evaluation of key project documentation
- Energy Yield Assessment
- Site Visit
- Site assessment HSE



**Project:** 90MW Wind Farm

**Year: 2018** 

**Client:** Confidential Investor

**Location:** Vietnam



Ref. No: A7

**Description:** Represented project investors in conducting preliminary due diligence and feasibility studies of a 90MW brownfield development acquisition opportunity.

MEM scope of work included:

 Assessment of crane and installation planning and the sourcing of local materials

**Project:** 100MW Wind Farm

**Year:** 2018

**Client:** Confidential Client

**Location:** Vietnam



Ref. No: A6

**Description:** Technical Consultancy for Codevelopment Wind Projects

MEM scope of work included:

- Site Hunting and fatal flaw analysis
- GIS Assessment and Turbine Layout
- Energy Yield and Met Mast Campaign
- Site visit and Pre-Feasibility study
- Site assessment HSE



**Project:** 2 x 40MW Wind Farm

**Year: 2018** 

Client: Confidential Developer

Location: Vietnam



Ref. No: A5

**Description:** Represented project developer in commercial contract and construction planning for 2 x 40MW wind power plant where the developer intended to engage in direct contracts with BOP contractor, inland transport contractor, crane contractor, installation labor contractor and wind turbine supplier.

MEM scope of work included:

- Advice on commercial and construction risks
- Analysis and advice on commercial contract risk management strategy

**Project:** 250MW Wind Farm

**Year:** 2018

**Client:** AC Energy

**Location**: Vietnam



Ref. No: A4

**Description:** Performed initial site assessment, measurement campaign methodology study for a coastal wind farm project.

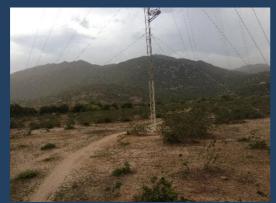
- Indicative layout and energy yield calculation
- Site feasibility analysis
- Risk assessment
- Measurement campaign methodology
- CAPEX sensitivity analysis (LCOE)



**Project:** 30MW Wind Farm

**Year:** 2017

**Client:** InfraCo Asia **Location:** Vietnam



Ref. No: A3

**Description:** Energy Yield Assessment and Wind Farm Layout

MEM scope of work included:

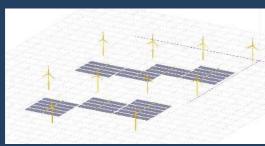
- Wind Data Cleaning
- MCP Analysis and long-term correction of wind speed
- Layout design and technology selection
- Energy Yield Assessment
- Uncertainty and Loss Assessment

**Project:** 50MW Hybrid Wind and Solar Farm

**Year:** 2017

**Client:** Confidential Client

Location: Vietnam



Ref. No: A2

**Description:** Technical Due Diligence for Hybrid Wind Farm and Solar Farm

- Layout design for a hybrid wind and solar plant
- Shadow flicker analysis on solar panels
- Solar Plant conceptual design and technology selection
- Energy yield and shadow loss estimation





**Description:** Represented project investors in performing initial site assessment, site preliminary design, energy yield calculation and identification of potential sites in that area.

- Site feasibility analysis for project investor provided sites
- Used GIS data to identify additional potential locations for +20MW wind farm sites
- Wind resource assessment
- Preliminary layout design
- Conduct indicative AEP



#### **THAILAND**

**Project:** 126MW Had Kanghan Operational Wind Project

**Year:** 2020

**Client:** Price Forbes

Location: Thailand



Ref. No: B7

**Description:** Insurance Audit and Inspection

MEM scope of work included:

- General site inspection and assessment of WTG and BOP
- Review maintenance procedures and provide equipment condition assessment
- Assessment of surrounding site conditions and environmental hazards
- Inspection of warehouse and inventory management

Site works: 100% HSE record, Zero incident

**Project:** 126MW Had Kanghan Operational Wind Project

**Year:** 2019

**Client:** Energy Absolute

Location: Thailand



Ref. No: B6

**Description:** Blade Inspection

- Inspect blade damage
- Compile detailed reports
- Project management support



Project: 50MW Korat Wind Farm

**Year:** 2017

**Client:** Prime Road Group

Location: Thailand



Ref. No: B5

**Description:** Represented project investors in performing initial site assessment, site preliminary design, land strategy.

MEM scope of work included:

- Site feasibility analysis
- Land strategy support
- Preliminary layout design
- Perform site visit
- Site assessment HSE

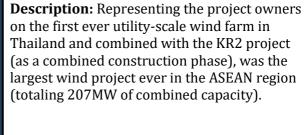
Site works: 100% HSE record, Zero incident

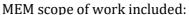
**Project:** 207MW First & Second Korat Wind Farm (Siemens 2.3MW at 100m hub height)

**Year:** 2014-2017

Client: Wind Energy Holding Co., Ltd.

Location: Thailand





- Project management of financial close process
- Construction project management
- Quality management
- Safety management
- Contract and claims management



\*The principals of MEM led the PM team for this project.



**Project:** 60MW Subplu 1,2 & Wayu Wind Farm (G114 - 2.0MW at 125m hub height)

**Year:** 2014-2017

**Client:** Wind Energy Development Co., Ltd. (subsidiary of Gunkul Engineering Co., Ltd.)

Location: Thailand

**EPC Contractor:** PowerChina Zhongnan



Ref. No: B3

**Description:** Owner's Representative for a Thai solar developer's first wind farm project.

MEM scope of work included:

- Late stage development (design, commercial contracting, negotiations with EPC and wind turbine supplier)
- Project management of the financial close process including communication interfaces with lender's advisors
- Construction project management
- Contract and claims management
- Quality management of FAT, receiving and mechanical completions of WTG
- Safety management
- Site HSE

Site works: 100% HSE record, Zero incident

**Project:** 67.5MW Sarahnlom Wind Farm (G114 - 2.0-2.1MW at 153m hub height)

**Year:** 2014-2017

**Client:** Gunkul Engineering Co., Ltd.

Location: Thailand

**EPC Contractor:** PowerChina Zhongnan



Ref. No: B2

**Description:** Owner's Representative for late stage development of wind farm.

MEM scope of work included:

- Development of contracting and risk management strategy
- Development of tender materials including Employer's Requirements, Employer's HSE Requirements, EPC construction contract, Operations and Maintenance contract
- Commercial negotiations
- Management of the financial close process including communication interfaces with lender's advisors
- Contract preparation for key subcontracts- crane and inland transport
- Site HSE



**Project:** 52.5MW Mittraphap Wind Farm (G126 – 2.5MW at 137m hub height)

**Year:** 2014-2017

**Client:** Korat Wind Energy Co., Ltd. (subsidiary of Gunkul Engineering Co., Ltd.)

Location: Thailand

**EPC Contractor:** PowerChina Zhongnan



Ref. No: B1

**Description:** Owner's Representative for late stage development and construction O/E of wind farm.

- Development of contracting and risk management strategy
- Development of tender materials including Employer's Requirements, Employer's HSE Requirements, EPC construction contract, Operations and Maintenance contract
- Management of the financial close process including communication interfaces with lender's advisors
- Construction document review
- Quality management of FAT, receiving and mechanical completion of WTG



#### **PHILIPPINES**

**Project:** 120MW Solar Project

Year: Ongoing

**Client:** SolarAce1/AC Energy

**Location:** Philippines



Ref. No: C11

**Description:** Contract Negotiations Support and Construction OE

MEM scope of work included:

- Support EPC contract negotiations
- Review of key technical conditions
- Review of spare parts list
- Review of project schedule and guaranteed completion dates
- Review of HSE and quality assurance provisions
- Site OE construction support
- Design review
- Construction management
- HSE management

Site works: 100% HSE record, Zero incident

**Project:** 50MW Solar Farm

Year: Ongoing

**Client:** Gigasol3/AC Energy

**Location:** Philippines



Ref. No: C10

**Description:** Contract Negotiations Support and Construction OE

MEM scope of work included:

- Support EPC contract negotiations
- Review of key technical conditions
- Review of spare parts list
- Review of project schedule and guaranteed completion dates
- Review of HSE and quality assurance provisions
- Site OE construction support
- Design review
- Construction management
- HSE management



**Project:** 500MW Co-development in The

Philippines

Year: Ongoing

Client: Confidential Client

**Location:** Philippines



Ref. No: C9

**Description:** Co-development wind projects with local partner, provide technical consultancy.

- MEM scope of work included:
- Site identification
- Preliminary layout design
- Wind resource assessment and AEP including turbine selection
- Met mast strategy
- Financial modelling
- Performed site visits
- Site assessment HSE

Site works: 100% HSE record, Zero incident

**Project:** Nabas II Wind Project

Year: 2020

**Client:** PetroWind Energy

**Location:** Philippines



Ref. No: C8

**Description:** Energy Yield and EPC Assessments

- Wind raw data analysis
- Met mast review
- MCP analysis
- Turbine selection and layout
- Energy yield calculation
- Uncertainty assessment
- EPC assessment



Project: 150MW Wind Farm

**Year:** 2020

Client: Viento Power/EGCO

**Location:** Philippines



Ref. No: C7

**Description:** Energy Yield Assessment and Wind Project Design

MEM scope of work included:

- Wind raw data analysis
- Met mast review
- MCP analysis
- Turbine selection and layout
- Energy yield calculation
- Uncertainty assessment

**Project:** 150MW Wind Farm

**Year:** 2017-2020

Client: Viento Power/EGCO

**Location:** Philippines



Ref. No: C6

**Description:** Wind Data Management 2 x Masts

MEM scope of work included:

- Initial quality assurance on data gathered by the met mast
- Conducting Quality Control (QC) on the measured data
- Producing a monthly report detailing the findings
- Site assessment HSE



**Project:** 150MW Wind Farm

**Year:** 2018

**Client:** Confidential Client **Location:** Philippines



Ref. No: C5

**Description:** Site assessment and technical, commercial due diligence hybrid wind farm and solar farm.

MEM scope of work included:

- Prepare and manage RFI process
- Technical and commercial evaluation of shortlisted bidders
- GIS Assessment and land mapping
- Wind farm layout design
- Energy Yield Assessment
- Provide key financial model inputs
- Recommendations for further development
- Site works HSE

Site works: 100% HSE record, Zero incident

**Project:** 150MW Wind Farm

**Year:** 2018

Client: Confidential Client

**Location:** Philippines



Ref. No: C4

**Description:** Met Mast inspection and upgrade of existing equipment.

MEM scope of work included:

- Identification of issues in met mast configuration, equipment, data collection gaps and associated wind data risk.
- Propose mast equipment upgrades and implement solution.
- Liaison and Coordination with local mast contractors to execute work.
- Site visit and mast verification report
- Site works HSE



**Project:** Wind Project Pipeline

**Year: 2017** 

**Client:** Confidential Client **Location:** Philippines

Ref. No: C3

**Description:** Site hunting, site assessment and development recommendations for wind farm sites in the Philippines.

MEM scope of work included:

- Used GIS data to identify potential locations for +50MW wind farm sites
- Conduct indicative AEP based on scaling of known wind speeds
- Provision of recommendations for further development

Project: 150MW Wind Farm

Year: 2017

Client: Viento Power/EGCO

**Location:** Philippines



Ref. No: C2

**Description:** Pre-feasibility study for hybrid wind farm and solar farm.

- Initial site assessment and evaluation of site constrains for the development of a hybrid wind and solar project
- Layout design with consideration for shadow flicker loss on pv modules
- Energy yield estimates for wind and solar
- Evaluation of wind data and recommendations to reduce energy yield uncertainty.
- Identification of key project risk and mitigation measures against typhoons.



**Project:** Nabas 1 36MW Wind Farm (Gamesa G90 – 2.0MW at 78m hub Height)

**Year: 2016** 

**Client:** Petro Wind Energy Inc.

**Location:** Philippines



Ref. No: C1

**Description:** Represented project owners on an operating wind farm in the Philippines. Scope of work included O&M and asset management strategy, training of the operator's operations management team and targeting of key risks and opportunities to optimize wind farm cash flow.

MEM scope of work included:

- Asset management and energy yield optimization advisory support
- Technical advisory
- Site Audit to identify warranty risks and source of revenue shortcomings
- Monthly support to verify production values and confirm allocation of downtime
- Site works HSE



#### **MYANMAR**

**Project:** Magway Wind Project

**Year:** 2020

**Client:** SN Power **Location:** Myanmar



Ref. No: D7

**Project:** 200MW Wind Data Management for ICM Met Masts

Year: 2017-2020

Client: InfraCapital Myanmar/InfraCo Asia

Location: Myanmar



**Description:** Acquisition Due Diligence

MEM scope of work included:

- Risk assessment
- Feasibility assessment
- Project cost estimates
- OE construction budget assessment
- 0&M cost estimates
- Timeline and schedule review
- Financial model review

**Description:** Wind Data Monitoring of 5 Met Masts

- Initial quality assurance on data gathered by the met mast
- Conducting Quality Control (QC) on the measured data
- Producing a monthly report detailing the findings



**Project:** 130MW Pre-feasibility Study for Mandalay Solar Project

**Year:** 2018

**Client:** Confidential Client

Location: Myanmar



Ref. No: D5

**Description:** Pre-feasibility and design of a 130 MWp solar plant in Myanmar.

MEM scope of work included:

- Site Visit
- Preliminary solar layout design.
- Energy Yield Assessment
- Pre-Feasibility study
- Site works HSE

Site works: 100% HSE record, Zero incident

**Project:** 50MW HSE support for mast installation

**Year:** 2018

Client: InfraCapital Myanmar/InfraCo Asia

Location: Myanmar



Ref. No: D4

**Description:** HSE support for the installation of new instruments at Kandok met mast.

MEM scope of work included:

- Support ICM in the review of HSE method statement.
- Identify any gaps in the HSE policy.
- Recommend additional international best practice methods not considered in the report.
- Site works HSE



**Project:** Early Stage Development Support for 300MW pipeline in Myanmar

**Year:** 2017

Client: InfraCapital Myanmar/InfraCo Asia

Location: Myanmar



Ref. No: D3

**Description:** Owner's Engineer services in wind project site hunting and early stage development efforts.

MEM scope of work included:

- Analysis of local regulatory requirements related to zoning, set-backs, fall zones, etc.
- Analysis of GIS related to local infrastructure affecting constructability and CAPEX
- Identification of over 25 sites (30-50MW sites) including analysis and ranking of project pipeline opportunities
- Analysis of meso-scale wind data and creation of micro-scale site wind data
- Site visits including presenting at governmental seminars to show wind potential in Myanmar
- Devising wind measurement campaign for 3 sites, and assistance with met mast contracting, construction and data monitoring and quality control
- Site assessment HSE

Site works: 100% HSE record. Zero incident

**Project:** 2 x 50MW Energy Yield Assessment and Met Mast Campaign Design

**Year:** 2017

Client: InfraCapital Myanmar/InfraCo Asia

**Location:** Myanmar



Ref. No: D2

**Description:** Wind farm layout design and initial energy yield assessment for 2 sites.

- Selection of suitable
- Preliminary wind farm layout
- Energy Yield Assessment and indicative P50
- Selection of suitable mast locations for Met Mast campaign



**Project:** RFI ICM Wind Projects

**Year:** 2017

Client: InfraCapital Myanmar/InfraCo Asia

Location: Myanmar



Ref. No: D1

**Description:** Prepare and manage a request for information ("RFI") process for potential wind turbine suppliers.

- Drafting the RFI package
- RFI management
- Q&A session
- Evaluation of bidders



#### **INDONESIA**

**Project:** 36MW West Timor Wind Farm

Year: 2019 Client: APDP

Location: Indonesia



Ref. No: E6

**Description:** Perform commercial and technical analysis of up tender submittals and support of negotiations with shortlisted bidders.

MEM scope of work included:

- Tender package and strategy of tender process
- Cost Analysis (LCOE)
- Contract negotiation support

**Project:** 75MW Sidrap Wind Project (Gamesa G114 2.5MW at 80m hub height)

**Year:** 2017

**Client:** GCube Insurance

Location: Indonesia



Ref. No: E5

**Description:** Marine Warranty Survey

MEM scope of work included:

- Risk assessment of marine warranty, construction or delays in start-up for transportation of generator step-up transformer (GSU) & WTG components
- Desktop review of transportation route
- Desktop review of jetty extension to the permanent port
- Discharge survey of generator step-up transformer (GSU)
- Discharge survey of nacelles & hubs
- Discharge survey of blades
- Site works HSE



**Project:** 30MW and 40MW Wind Farms

**Year:** 2017

**Client:** Confidential Client

Location: Indonesia



Ref. No: E4

MEM scope of work included:

 High-level assessment of the projects based on meso-scale wind data and known local constraints

**Description:** Technical due diligence on two

early stage wind farm projects in Indonesia.

- Evaluation and recommendation on which project to continue
- GIS mapping of local constraints and application of setback distances to generate indicative layout
- Indicative AEP calculation using mesoscale virtual met mast timeseries data. from AWS

**Project:** Market Study of Agriculture Waste to Energy (AWTE)

Year: 2017

Client: IFC (World Bank)

Location: Indonesia



Ref. No: E3

**Description:** Performed market study of AWTE sector in Indonesia for financial institution.

- Identify and package potential lending opportunities in the AWTE sector for building an investment case
- Market review of AWTE status and the potential for developers, technology providers and lenders
- Develop a framework & screening process for lending opportunities utilizing economic, commercial and finance considerations



**Project:** 75MW Sidrap Wind Farm (G114 - 2.5MW at 80m hub height)

**Year:** 2016

**Client:** Renewable Energy Loss Adjusters (RELA)/GCube Insurance

Location: Indonesia



Ref. No: E2

**Description:** Risk survey for UPC Renewables' 75 MW Sidrap wind farm located outside Parepare, Indonesia.

MEM scope of work included:

- Site Visit to assess construction and operation risks to the Insurers
- Assessment of project progress against project schedule
- Evaluation project risks and recommendation on mitigation measures
- Review of project documentation, design and quality of the works
- Assess technology risk of the WTGs, as the Project is utilizing a newer model
- Site works HSE

Site works: 100% HSE record, Zero incident

**Project:** Jeneponto 1 62.5MW Wind Farm

**Year:** 2016

**Client:** China State Construction Engineering Co., Ltd. ("China Construction")

Location: Indonesia



Ref. No: E1

**Description:** Represented the EPC contractor in commercial and technical due diligence.

- Market research and due diligence
- Project planning including transport route survey, site assessment, crane and installation planning and sourcing of local materials
- Constructability assessment
- Scope, cost and risk analysis



#### **CAMBODIA**

**Project:** Wind Project Pipeline

**Year:** 2017

**Client:** Confidential Client

Location: Cambodia



Ref. No: F1

**Description:** Performed technical due diligence on wind farm site in southern Cambodia.

- Review of the available land and generation of indicative layout.
- High-level investigation using wind resource maps to indicate potential wind resources



#### **TAIWAN**

**Project:** 3 Solar Projects

Year: 2019

Client: Formosa / Partners Group

**Location:** Taiwan



**Description:** Technical Advisory and Construction Support

MEM scope of work included:

- EPC employer's requirements
- EPC design review
- Construction advisory
- Site assessment
- Site works HSE



#### **LAOS**

**Project:** Wind Project Pipeline

**Year:** 2017

**Client:** Confidential Client



**Description:** Site hunting and development recommendations for wind farm sites in Laos.

- Use GIS data to identify potential locations for 50-100MW wind farm sites
- Conduct indicative AEP based on scaling of known wind speeds
- Provision of recommendations for further development



#### **PAKISTAN**

**Project:** Hawa and JPL Wind Projects

Year: Ongoing

Client: JCM Matswani Solar

Location: Pakistan



Ref. No: 19

**Description:** Operations Management Plan

MEM scope of work included:

- Operations management
- HSE management
- Quality management
- Inventory management
- SCADA
- Maintenance
- Offtaker
- Commercial/Insurance claims

**Project:** Hawa and JPL Wind Projects in Sindh and a Solar Project in Salima

Year: 2019-2020

**Client:** JCM Solar Capital

**Location:** Pakistan



**Description:** Technical Advisory

- Daily analytics and monitoring
- Field training
- Cost and asset management
- 0&M contractor negotiation
- Insurance procurement and claims
- End of warranty claims



**Project:** JPL 50MW Wind Farm

**Year:** 2018

**Client:** JCM Solar Capital

Location: Pakistan



Ref. No: 17

**Description:** Performed technical due diligence on a 50MW wind farm in Pakistan.

MEM scope of work included:

- Assessed key areas of the project to allow investors make an informed investment decision.
- Commercial and risk evaluation of EPC and O&M contracts
- Wind resource assessment & Energy yield calculation
- Operation performance analysis
- Quality of construction analysis
- Site assessment & HSE

Site works: 100% HSE record, Zero incident

**Project:** 50MW Cacho Phase I Wind Project

**Year: 2017** 

Client: JCM Power

Location: Pakistan



Ref. No: 16

**Description:** Performed energy yield calculation discrepancy

- Wind analysis
- Energy yield calculation
- Loss assumptions
- Uncertainty analysis



**Project:** 50 & 50MW Foundation Wind Energy I & II Wind Farm (Nordex N100G 2.5MW at 80m hub height)

**Year:** 2017

**Client:** CapAsia/Fauji Foundation

Location: Pakistan



Ref. No: 15

**Description:** Acting as an independent board member, represented project investors in providing asset management advisory services.

MEM scope of work included:

- Asset management and energy yield optimization advisory support
- End of warranty strategy support
- Human resources advisory support
- Technical advisory support

Project: 50 & 50MWp Solar Farm I & II

**Year: 2017** 

**Client:** Confidential Investor

**Location:** Pakistan



Ref. No: 14

**Description:** Represented project investors in conducting preliminary due diligence of a brownfield development acquisition opportunity.

- Project layout survey
- Transmission line and transportation Survey
- Constructability assessment



**Project:** 750MW Wind Farm Pipeline

**Year:** 2016

**Client:** China State Construction Engineering Co., Ltd. ("China Construction")

Location: Middle East



Ref. No: 13

**Description:** Owner's representative in conducting due diligence on the acquisition of a 750MW wind power project pipeline.

MEM scope of work included:

- Local permit and regulatory process mapping
- Technical due diligence including wind resource analysis, review of grid study, grid code and analysis of geotech
- Commercial due diligence
- Commercial strategy and contracting of share purchase agreements
- Commercial negotiations support

**Project:** 450MW Wind Pipeline

**Year:** 2016

Client: Confidential Client

Location: Middle East



Ref. No: 12

**Description:** Technical due diligence and cleaning measured wind data for wind farm pipeline.

- Optimized wind farm layout into nine 50MW projects
- AEP methodology to estimate production on site using satellite data
- Devised most representative Virtual Met Mast location
- Calculated AEP using Virtual met mast data based on reanalysis time series
- Provided recommendations on how to further develop the project
- Used production numbers as input into MEM's indicative Financial Model to give indication of predicted returns



**Project:** 50MW Wind Farm (GE 1.7MW x 103m at 80m hub height)

**Year:** 2016

Client: JCM Hawa

**Location:** Pakistan



Ref. No: 11

**Description:** Performed technical due diligence and OE construction services on a 50MW wind farm in Pakistan.

MEM scope of work included:

- Assessed key areas of the project to allow investors make an informed investment decision.
- Commercial and risk evaluation of EPC and SAA contracts, and Project Schedule
- Technical and commercial evaluation of the PPA and Grid Connection Agreements
- Analysis of project budget including the adequacy of project contingency
- Insurance scope and risk analysis
- OE Support services during construction and HSE



#### **AFRICA**

**Project:** 70MW Malawi Solar Project

**Year:** 2019

**Client:** SUMEC

Location: Malawi



Ref. No: J4

**Description:** Construction Project Management Support

MEM scope of work included:

- Project management support
- Develop project resource
- Maintain construction schedule
- Monitor design changes and site quality control inspections
- Review monthly construction reports
- HSE reporting
- Site activity HSE

Site works: 100% HSE record, Zero incident

**Project:** 310MW Lake Turkana Wind

**Year:** 2018-2019

**Client:** JCM Capital

Location: Kenya



**Description:** Acquisition Due Diligence

MEM scope of work included:

- Site assessment
- Quality of construction
- Operational performance
- Energy Yield Assessment
- Forecasted production
- Turbine Inspections
- Contracts review
- Site assessment HSE



**Project:** 70MW Wind Farm

**Year: 2018** 

**Client:** JCM Solar Capital

Location: Malawi



Ref. No: J2

**Description:** Performed technical and commercial advisory services.

MEM scope of work included:

- Key technical and commercial risks
- Potential mitigation strategies
- Due diligence
- Project documentation
- Commercial advisory
- EPC contract support

**Project:** 86MWp Solar Farm

**Year:** 2015

Client: JCM Capital/Pan Africa Solar

Location: Nigeria



Ref. No: J1

**Description:** Represented project investors on their first international project. The project itself was the first ever utility-scale solar farm in Nigeria and the largest solar farm in sub-Saharan Africa outside of South Africa.

- Translation of commercial negotiations (English / Mandarin)
- Contracting and commercial negotiations support
- Contract Management
- Drafting of Owner's quality management and safety management requirements
- Contract management



#### **SOUTH AMERICA**

**Project:** 92MW Wind Farm

**Year:** 2015

**Client:** China State Construction Engineering Co., Ltd. ("China Construction")

Location: Argentina



Ref. No: K1

**Description:** Represented the EPC contractor in acquisition and development of a brownfield wind development project.

- Market research and due diligence
- Contracting and commercial negotiations for the share purchase agreement for the project
- Risk planning including tax/import duty restrictions, selection of local BOP subcontractors, local content requirements, expatriation of funds
- Project planning including transport route survey, site assessment, crane and installation planning and sourcing of local materials