





# KODIAK MOON

## KODIAK MOON



## Agenda

Overview

Developer Business Plan

Historic Example (2023)

Technical Services Overview

Case Studies

KMES is a tech-enabled fully integrated renewable energy and clean mobility infrastructure company that provides renewable energy project development, engineering, and construction processes as a service, dramatically lowering costs and accelerating the execution of associated projects and portfolios around the clock. KMES is a one-stop resource for development, engineering and technical services and to manage the third parties necessary to successfully, rapidly develop, and build critical renewable and storage assets.

KMES has industry-leading experience in all portions of the engineering value chain. The team has led high-volume, turnkey engineering for projects of all sizes, including those 300% larger than exist in North America today. KMES completes all elements of project system design from inception through construction.



Supporting GW+ scale single-site projects for Adani Green Energy, including ~\$600 million of US project assets for clients including Berkshire Hathaway, Meta and Dominion.

# ommercial

Full engineering, from initial project design to asbuilts nationally for the #3 commercial and industrial integrator in the USA, iSun (\$100 million annual EPC).

# Residential

Residential engineering for SunCommon, 10,000 systems completed.
Registered B-corp and Vermont's largest solar company, acquired Hudson Solar.









Development-as-a-Service (DaaS)



**Engineering Services** 



Construction Management (EPCm)



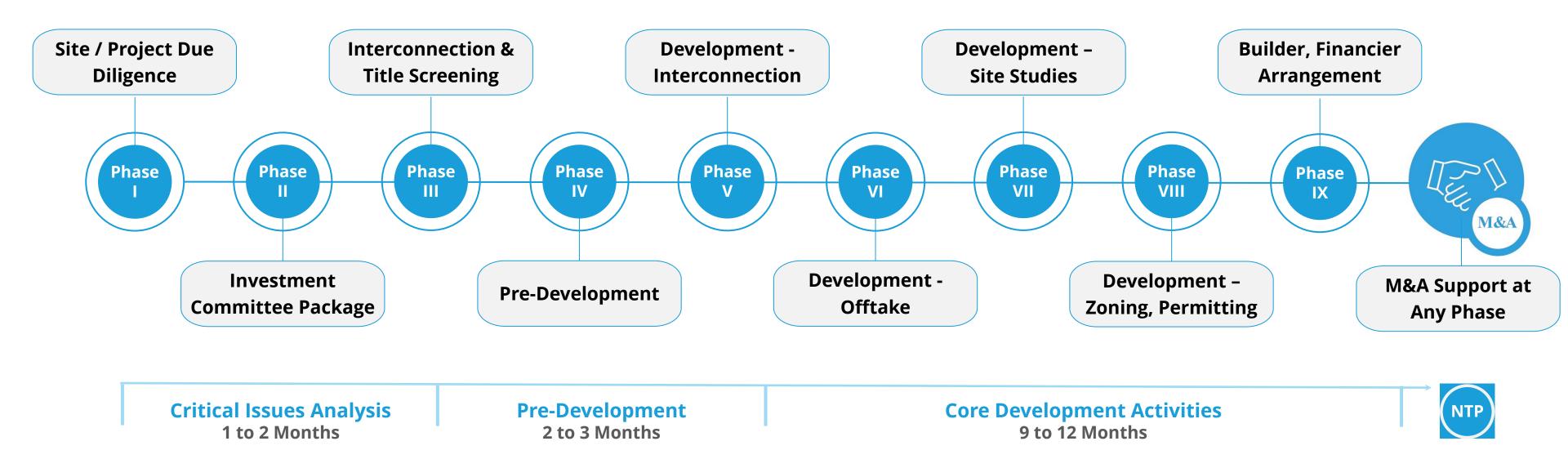
Subscription-Based Renewable Energy Experts

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#### **Development-as-a-Service**

Our in-sourcing model includes capabilities across the full spectrum value chain of solar development and engineering. We have a diverse global team with expertise in project feasibility, federal / state / local policy, development, legal consulting, engineering, procurement, construction management, project financing and M&A.

KMES offers customers development-as-a-service under a fully transparent task-based "menu" approach. Customers select only those services necessary to advance their projects and control the pace of development accordingly, with complete visibility into progress through a real-time enterprise software platform. You can engage KMES on any individual task, or for turnkey project development-as-a-service.



#### **Developer Business Plan**

95

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Feasibility

and

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#### Phase I

Site / Project Due
Diligence

\$1,709
2 to 3 Days

Preliminary DDR
Initial Site Layout
Energy Model

KMES completes a Preliminary Due Diligence to screen:

- ✓ Land ownership verification
- ✓ Wetlands, topography, soil profile
- ✓ IX review (hosting capacity, voltage class, ownership, network restriction, etc)
- ✓ Net Utilizable Area
- ✓ Feasible Solar/ BESS capacity

Strategic State Review / Market / Legislative Analysis and land origination services also available.

#### **Phase II**

| Full DDR | 10% Design with BOM | PVsyst | Indicative Capex | Financial Model | IC Proposal Deck

Feasibility

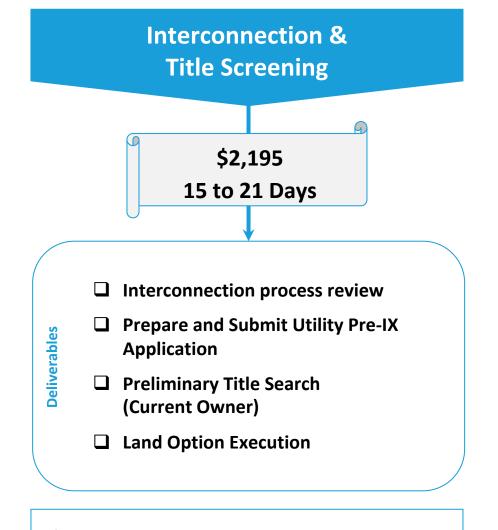
**Financial** 

**Project** |

- ✓ Extensive desktop due diligence analysis for the project and a decision-maker proposal package encompassing the technical and economic viability of the opportunity.
- ✓ Critical issues including zoning, FAA, encroachments, and easements.
- ✓ Project critical issues are screened.

Site-visit by KMES team member or drone operator and diligence provider available.

#### **Phase III**



- ✓ KMES prepares Utility Pre-IX application to get the initial feedback from the Utility to assess existing line loading and high-level network upgradation.
- ✓ KMES undertakes a thorough current owner title search, providing a comprehensive title history of the property from the time of the current owner's acquisition to the present day.

High-level IX Upgradation & Title Screening

**Development** 

#### **Phase IV**

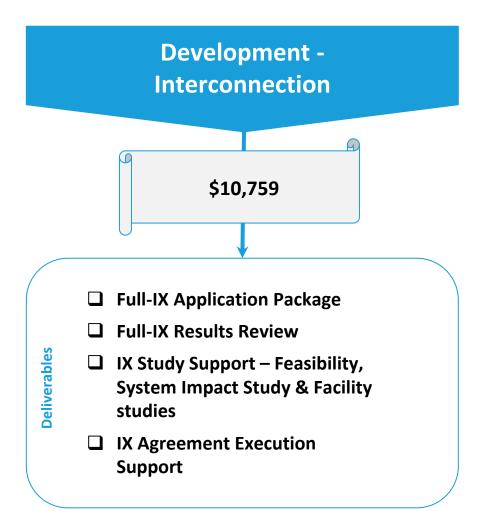
# \$17,529 1 to 2 Months Detailed Development Budget Permit Matrix 10% Engineering w Bill of Materials

✓ KMES conducts a gap analysis of projectspecific interconnection, zoning,
construction and development
requirements to establish detailed budgets
and schedule - mitigating potential
setbacks.

☐ Turnkey EPC Capex

✓ Completes open-book construction cost budget from internally prepared 10% engineering and detailed bill of materials.

#### **Phase V**



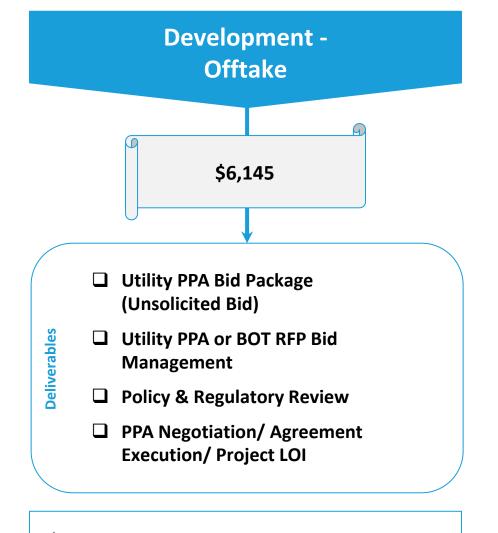
Cost

grade

Actual

- ✓ KMES provides comprehensive core interconnection development services, including application submission, study result review, ISA execution, and coordination with utilities, ensuring a streamlined and expedited project development process.
- ✓ Timeline depends on utility.
- ✓ Supplementary studies if applicable shall be coordinated as-needed.

#### **Phase VI**



- ✓ KMES provides legal consulting for Power Purchase Agreements, Build-Transfer Agreements, Membership Interest Purchase Agreements and more.
- ✓ Manage bilateral negotiations or bidding processes for utilities, energy brokers and commercial offtakers, helping clients navigate complex procurement procedures.
- ✓ Landlord-tenant negotiation support.

PPA Execution

Diligence

Due

**Technical** 

**Project** 

čo

Site

#### **Phase VII**

#### **Development – Site Studies** \$11,918 ☐ Title Search & Title Commitment ☐ ALTA, Boundary & Topo Survey ☐ Geotech & Soil Testing **☐** FAA Glare Analysis ☐ Civil Design & SWPPP ☐ Lease/ Purchase Agreement Execution

- ✓ KMES ensures all necessary site studies and design sets required to secure permits and financing are in place.
- that simplifies project development by bundling essential services, reducing the
- ✓ All third-party services are arranged by

#### **Phase VIII**



and other AHJ feedback during

✓ Permitting timeline depends on the AHJ

and project-specific issues resolution.

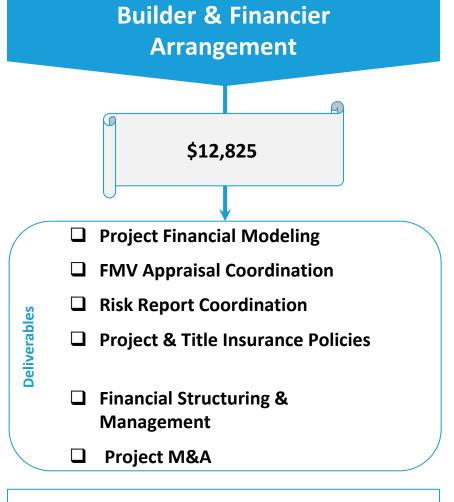
permitting.

Clearance

**Permitting** 

Development

#### **Phase IX**



financer RFPs (construction, debt and tax equity), and lead financial closure. ✓ KMES prepares builder specifications, provides legal advisory and arranges builder RFPs through contracting. ✓ At ANY Phase, KMES can run project M&A processes, seeking prospective buyers through comprehensive RFP process



EPC

✓ Clients benefit from a one-stop solution need to coordinate with multiple providers.

KMES and billed to client directly at cost.

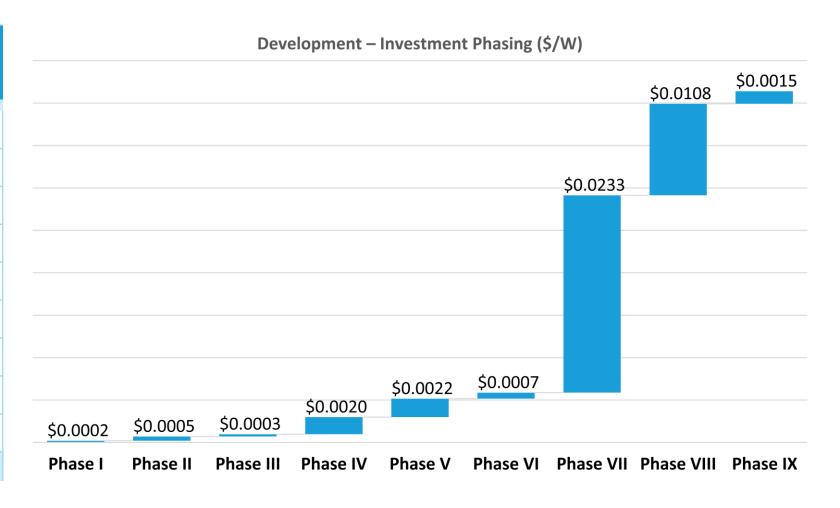
Seek project financial support, run

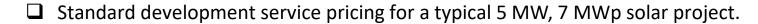
management, dataroom management.

#### **Standard Development Investment**

#### **Typical 5 MWac | 7 MWp Solar Project**

Phase	Development Scope	KMES Cost (\$)	3 <sup>rd</sup> Party Cost (\$)	Total Dev Cost (\$)	Total Dev Cost (\$/Wp)	
Phase I	Site / Project Due Diligence	\$ 1,709		\$ 1,709	\$ 0.0002	
Phase II	Investment Committee Package	\$ 4,393		\$ 4,393	\$ 0.0006	
Phase III	Interconnection & Title Screening	\$ 2,195	\$ 100	\$ 2,295	\$ 0.0003	
Phase IV	Pre-Development	\$ 17,529		\$ 17,529	\$ 0.0025	
Phase V	Dev – Interconnection	\$ 10,759	\$ 6,500	\$ 17,259	\$ 0.0024	
Phase VI	Dev – Offtake	\$ 6,145		\$ 6,145	\$ 0.0008	
Phase VII	Dev – Site Studies	\$ 11,918	\$ 153,200	\$ 165,118	\$ 0.0234	
Phase VIII	Dev - Zoning & Permitting	\$ 14,399	\$ 63,950	\$ 78,349	\$ 0.0111	
Phase IX	Builder & Financer Arrangement	\$ 12,825		\$ 12,825	\$ 0.0018	
	Total Development Investment	\$ 81,872	\$ 223,750	\$ 305,722	\$ 0.0434	





<sup>☐</sup> Reference quotes of an actual project with similar capacity included for third party costs.

☐ Interconnection costs does not include application fee/ deposit to Utility or upgradation cost.

Cost for typical PPA bid support included, some offtakers have specific requirements; KMES scopes and prices these on a cost plus basis.

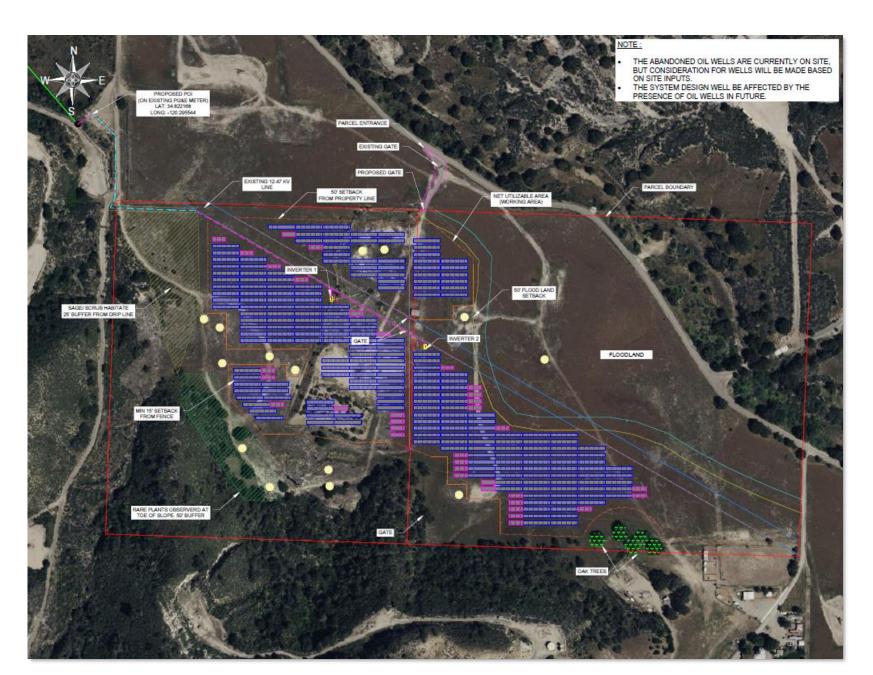
<sup>☐</sup> All third party scopes specified, RFPd and arranged by KMES, actual costs on a pass-through basis.

#### **Actual Case Study - Top-Three PE Fund Solar Project**

KMES team developed a 4.95 MWac/ 7.05 MWp ground mounted fixed tilt solar PV project in Santa Barbara County, California with PG&E interconnection.

KMES managed the entire process from site option to construction readiness, including legal consulting (lease and power purchase agreements), development (arranged and coordinated execution of all site studies), engineering (all interconnection as well as 10% engineering to IFC drawings), construction management (EPC specification, RFP and contracting) and financing (project M&A / sale process), KMES team executed everything.

ITEM	DETAILS
Property Owner	> Top-Three PE Fund
Location Coordinates	> Santa Barbara, California
Total Available Land	> 80.43 Acres
Net Utilizable Land	> 36.50 Acres
Interconnection Utility	Pacific Gas & Electric Corporation
Interconnection Voltage Class	> 13.4kV
EPC NTP	) Q1'24
COD	) Q4'24
PPA Offtaker	> Top-Three PE Fund
PPA Term	> 25 Years
EPC	› iSun Utility, LLC
Development Timeline	~16 months from site option to NTP

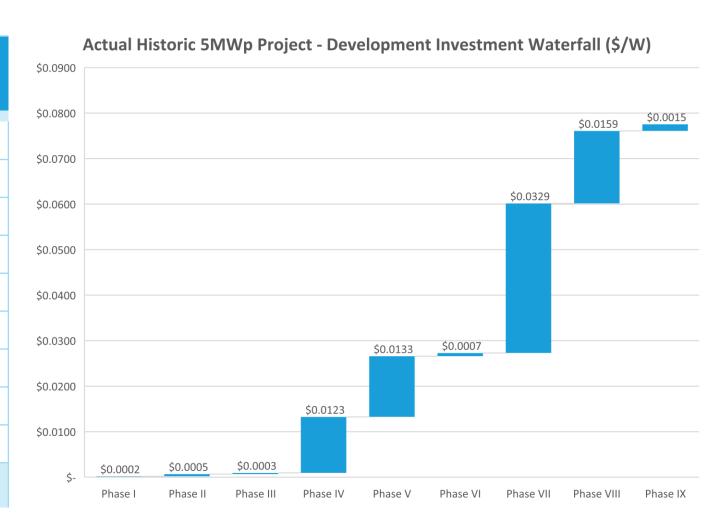


Interconnection study with PG&E was completed and interconnection agreement executed. Land use permit application filed with Santa Barbara County Planning & Development Department following the completion of all site due diligence activities (civil & environmental). KMES arranged construction provider RFP and contracting as well as project sale through Membership Interest Purchase Agreement (MIPA).



#### 4.95 MW | 7.05 MWp Solar Project

Phase	Development Scope	K	KMES Cost (\$)		KMES Cost (\$)  3 <sup>rd</sup> Party Cost (\$)		Total Dev Cost (\$)		Total Dev Cost (\$/ Wp)	
Phase I	Site / Project Due Diligence	\$	1,709			\$	1,709	\$	0.00020	
Phase II	Investment Committee Package	\$	4,393			\$	4,393	\$	0.00062	
Phase III	Interconnection & Title Screening	\$	2,195			\$	2,195	\$	0.00031	
Phase IV	Pre-Development	\$	17,529	\$	72,500	\$	90,029	\$	0.01277	
Phase V	Dev – Interconnection	\$	10,759	\$	85,300	\$	96,059	\$	0.01363	
Phase VI	Dev – Offtake	\$	6,145			\$	6,145	\$	0.00087	
Phase VII	Dev – Site Studies	\$	28,294	\$	208,838	\$	237,132	\$	0.03364	
Phase VIII	Dev - Zoning & Permitting	\$	14,399	\$	100,500	\$	114,889	\$	0.01630	
Phase IX	Builder & Financer Arrangement	\$	12,825			\$	12,825	\$	0.00182	
	Total Development Cost	\$	98,248	\$	467,138	\$	565,387	\$	0.08	

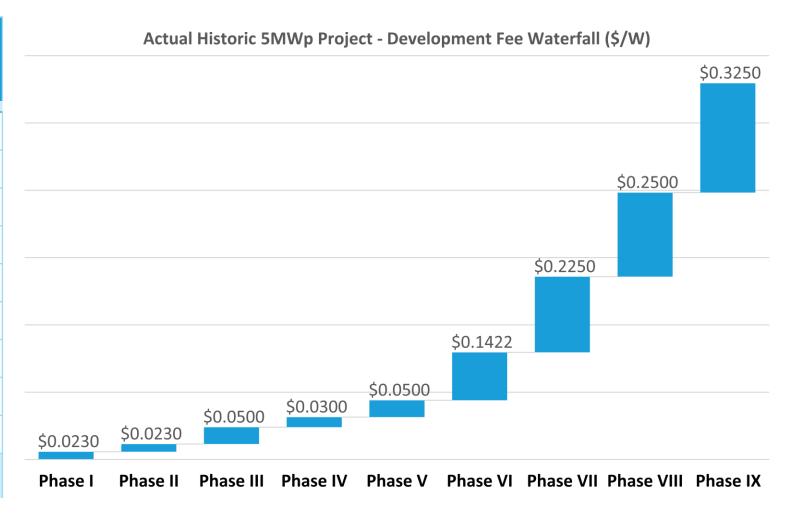


- KMES executed this 5MWac project turnkey on behalf of its developer partner.
- ☐ From land origination, legal negotiations.
- ☐ KMES arranged all site studies by competitive process, with developer selecting final provider.
- ☐ KMES provided turnkey internal engineering and technical services.
- ☐ KMES arranged turnkey EPC by competitive process, with developer selecting final provider.
- ☐ Total KMES cost to NTP: \$98,249; total development cost \$565,387.

#### **Actual Case Study - Development Value**

#### 4.95 MW | 7.05 MWp Solar Project

Phase	Development Scope	Project Value (\$)		Project Value (%)		umulative oject Value (\$)	Cumulative Project Value (%)
Phase I	Site / Project Due Diligence	\$	162,058	2.1%	\$	162,058	2%
Phase II	Investment Committee Package	\$	162,058	2.1%	\$	324,116	4%
Phase III	Interconnection & Title Screening	\$	352,300	4.5%	\$	2,085,616	9%
Phase IV	Pre-Development	\$	211,380	2.7%	\$	2,437,916	11%
Phase V	Dev – Interconnection	\$	352,300	4.5%	\$	2,790,216	16%
Phase VI	Dev – Offtake	\$	1,001,889	12.7%	\$	3,494,816	28%
Phase VII	Dev – Site Studies	\$	1,585,350	20.1%	\$	4,904,016	49%
Phase VIII	Dev - Zoning & Permitting	\$	1,761,500	22.4%	\$	6,117,285	71%
Phase IX	Builder & Financer Arrangement	\$	2,289,950		\$	7,878,785	100%
Cumulative Development Value					\$	7,878,785	



☐ KMES team executed this project with an all-in development **budget of \$565,389** 

I KMES executed this project's turnkey sale to a ~\$100 billion energy fund on behalf of its developer partner, creating a \$7,878,785 developer fee.

☐ KMES's fees in this process: \$98,249

KMES provides turnkey development-as-a-service for residential, commercial & industrial, small-scale utility and large-scale utility projects. Our team's diverse experience enables us to support the execution of all development milestones, either through internal technical work, engineering, legal consulting and construction controls or management of third parties within competitive processes.

- Preliminary Due Diligence Report (DDR)
- Full Due Diligence Report (DDR)
- 10% Engineering Package (With Bill of Materials)
- Helioscope, PVcase
- PVsyst (SolarGIS, SolarAnywhere, Meteonorm)
- Interconnection Review & Indicative Cost Estimation
- EPC Pricing Open Book
- Financial Modeling
- Development Expense Budget
- Proposal Decks
- Deep-Dive State / Market Review
- Pre-IX Application
- Pre-IX Results Review & Feedback
- Land Origination
- Land Control Option Execution
- Permit Matrix
- Coordination of all Site Studies -Local Counsel, Environmental, Civil, Geotech, Historic, Cultural, All Studies
- Project Development and Construction Technical Scope

- EPC Agreement Technical Specification, RFP and Negotiation
- Procurement (Supply/ Service)
   RFPs, Vendor Quote Evaluation
- Project Capex Turnkey EPC
   Pricing
- Full IX Application
- IX Package PE SLD Stamping
- IX Package PSS/E Model
- Full-IX Results Review and Feedback
- IX Study Support Feasibility Study
- IX Study Support SIS Study
- IX Study Support Facility Study
- IX Agreement Execution Support (Legal & Budget Review)
- Title Search & Title Commitment Reports
- Coordination of ALTA & Boundary Surveys
- Utility PPA and BOT Agreement Consulting
- Utility PPA and BOT Bid Packages
- PPA Negotiation

- Development Permit:
   Environmental- Cultural, Historic
   & Archeological Survey
- Development Permit:
   Environmental Wetlands and
   Waters of the U.S. Delineations
- Development Permit: Civil Civil
   Design Package
- Development Permit: Civil -Storm
   Water Management Plan (SWPPP)
- Development Permit: Civil Topo Survey,
- Development Permit: Civil -Geotechnical Study & Soil Testing
- Environmental consultant Permit Application, Facilitation &
   Project Management
- Local Tax Calculations and Agreements
- FMV Appraisal
- Risk Report
- Insurance Quotes
- Title Insurance Policy Quotes
- FAA Application & Coordination
- Financial Structuring
- Bank RFPs (Debt and Tax Equity)

KMES provides turnkey engineering services for residential, commercial & industrial, small-scale utility and large-scale utility projects. Our team's diverse experience enables us to offer design services for all types of renewable energy projects including rooftop, ground mount, carport, BESS, and EV charging stations and provide our customers with the best technical and commercially viable project solutions available.

We provide a complete electrical engineering package for projects up to the interconnecting substation in compliance with all applicable design standards and codes. Our design deliverables comply with the required codes and standards and meet submission requirements of utility, permitting authorities, independent engineering review and builders.

- Project Location Map
- Project Summary Table
- General and Electrical Notes
- One Line Diagram / Three Line Diagram
- AC SLD
- DC SLD
- Auxiliary Power / Low Voltage
   Diagram
- Electrical Site Layout
- System Summary Table Racking, Rows, Modules
- Access Roads and Entrances
- Pad Mounted Equipment Locations
- Fencing and Gates
- Point of Interconnection (POI)
- Existing Transmission / Distribution Line Details
- Existing Obstacles Details
- Array Layout
- Racking Placement details
- Equipment Placement
- Major Equipment Tagging
- DC Collector Plan

- Drainage Channel Crossing Details
- Bore Hole Details
- SCADA/ DAS System Details
- Communication Block Diagram
- Communication Cable Schedule
- Detailed / Vendor Based System Values and Calculations
- DC String and Feeder Cable Sizing Details
- DC Cable Schedule with Voltage
   Drop Calculation
- LV AC Cable Schedule with Voltage Drop Calculation
- MV AC Cable Schedule with Voltage Drop Calculation
- Equipment Plan with Elevation Details
- String Combiner Box
- Inverter
- Equipment Pad Details
- Weather Station Details
- Wire Management
- String Wiring Details
- DC String Wire Management

- Direction Drill Details
- Electrical Installation Details
- Equipment Pad Stub-up Details
- Conduit Transition Above Grade Details
- Compression Lug Details
- Bonding Jumper Details
- Conduit Expansion Details
- MV Termination Details
- Grounding Details
- Overall Grounding plan
- Array / Module Grounding Plan
- DC and AC equipment Grounding
- Fence Grounding
- Equipment Pad and Transformer Grounding
- Site Logistics Plan
- Project Equipment Laydown Area
- Plan View Layout, Pads,
   Elevations
- Equipment Signage & Labels
- Equipment Datasheets
- Electrical System Studies & Report
- ETAP Model Preparation

#### **Case Study - Rooftop Solar**







6.9 MW of Solar assets installed for Westfield Malls, the largest luxury mall owner, and one of the largest real estate owners in the world by market capitalization. These installations were largely performed at night, even spanning during the sensitive holiday shopping season, to limit the impact to the ongoing operations of the facility.



Consisting of carport and rooftop assets, the project was completed on two sites and offset most of the properties' common area meters.



#### **Case Study - Rooftop Solar**

A 160-kW installation with Jones Lang LaSalle, one of the largest real estate services companies in the world, for Intuit, a Fortune Most Admired Company.

Part of Intuit's renovation to its Mountain View, CA headquarters included a solar photovoltaic installation, including Hanwha SolarOne modules and a SatCon inverter on a PanelClaw roof rack.

# 



#### Case Study - Rooftop + Carport Solar

**400 kW government solar project**, for the Antelope Valley Transportation District at Lancaster, CA. Recipient of a Congressional Certificate of Recognition as an innovative public-private partnership. Inclusive of rooftop, carport, and busport solar assets.





#### **Case Study - Carport Solar**

The largest solar carport in the Northeastern USA at 4.2 MWp for the largest car services company in the country.





#### Case Study - Small Utility-Scale Solar

**1.2 MW utility interconnected solar asset** providing power via long-term Power Purchase Agreements to the Town of Maynard, Massachusetts. The asset was financed, owned, and operated by Washington Gas; the project was developed by EPG Solar.

Roughly seven acres of solar installed on ballasted ground mounted racking on a capped landfill site, the asset is comprised of Tianwei New Energy modules and SatCon inverters connected to National Grid's 13.8 kV distribution system.





#### Case Study - Large Utility-Scale Solar







112 MWp Sigurd Solar Project was the first solar in the queue and the 3<sup>rd</sup> largest utility project in Utah built starting from development. The PPA was executed with Berkshire Hathaway Energy, executed with in-house EPC with an investment of \$94 M. The project was constructed on 768 acres of land and became successfully operational in April 2021.



- Selected as a low-cost provider from public solicitation.
- RECs provided to Facebook for NE data centers.
- Turnkey development and direct-to-labor construction services.



#### Case Study - Large Utility-Scale Solar







101 MW Midlands Solar Project is the 3<sup>rd</sup> largest utility project in South Carolina built on 910 acres in Calhoun County, SC. The project is built starting from development for Dominion with in-house EPC with an investment of \$86.9 M. The project became successfully operational in July 2020 with the best technology selection built by our expert execution team and qualified sub-contractors.



- Represents ~10% of the solar operating in the State of South Carolina.
- Turnkey development and direct-to-labor construction services.
- Turnkey financial structuring (closed tax equity with U.S.
   Bank and debt with KeyBank).



# KODIAK MOON

## Thank you!

Let us know if you have questions.

#### **Edmund Davis**

**Founder** 

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