Portable Turbine Energy (PTE) LLC An Innovative Company Creating Green Energy

#### **Development of Solar Farms**

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Environmentally sustainable solutions: Green products & processes with latest technology:

USA designed turn-key system USA designed & made system

#### Creating Solar Farms in Many Countries



## **Steps for Developing a Solar Farm**

1) Site Identification / Concept: Owner's responsibility

2) Funding of the project development: Owner's responsibility

3) Rough technical Concept development;

4) Pre-feasibility study:

a) Cost/benefit analysis,

b) Assessment of different technical options, and

c) Permitting needs, d) market assessment

5) Feasibility study:

a) Technical and financial evaluation of the preferred option,

b) Assessment of financing options,

c) Initiation of permitting process,

d) Development of rough technical concept, and

e) First contact with project development





# **Steps for Developing a Solar Farm**

6)Contracts:

- a) Developing contracting strategy,
- b) Supplier selection and contract negotiation,

and

- c)Due diligence
- 7) Detailed design:
  - a) Preparation of detailed design for all relevant lots,
  - b) Preparation of project implementation schedule, and
  - c) Finalization of permitting process

#### 8)Construction:

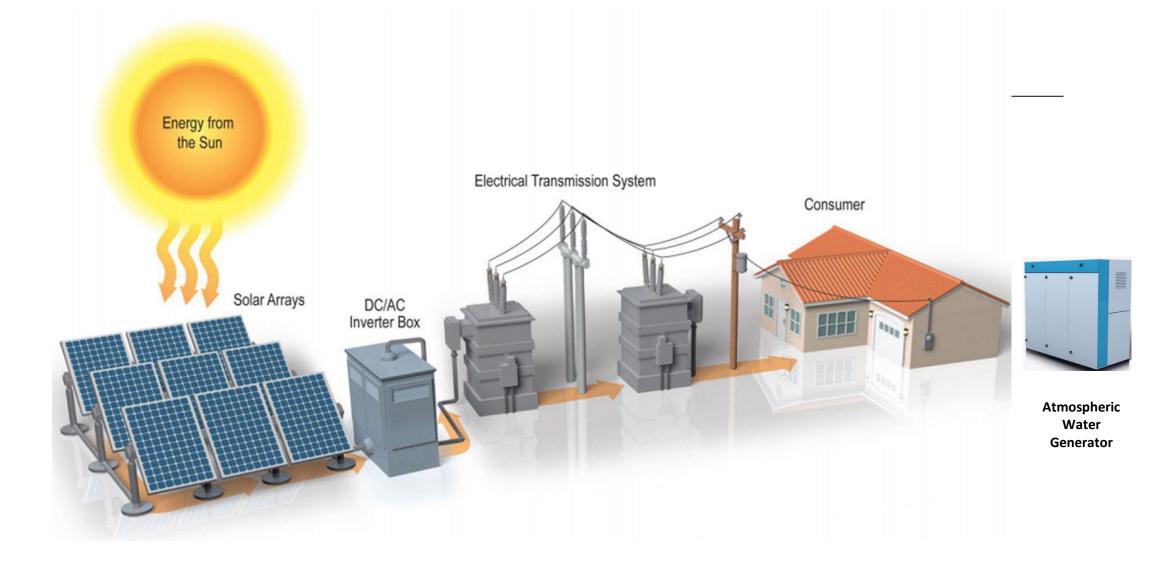
- a) Construction supervision, and
- b) Independent technical review of construction

#### 9)Commissioning:

- a) Performance testing,
- b) Preparation of as-built-design (if required), and
- c) Independent review of commissioning



## 50 MW Solar Farm = Electricity for over 12,000 Homes



### **Our Capabilities: Providing a Turnkey Project**



Our Team's Core Competencies: Providing Turn-Key Projects

#### Design

- Soil Investigations
- Pull Testing
- Construction of the System
- Pull Wires
- Construction of Substation
- High Voltage Connections
- Commissioning of the Project



# **Our Electrical Design Team**

We have a dedicated team of solar professionals to fulfill all your solar and electrical needs.

> We have worked with our solar installers, electrical contractors, EPC's, and many solar project developers.

> We have substantial investments in inventory, storage, warehousing, transportation and specialty vehicles.

- > We have:
  - Stock material
  - Specialized vehicles
  - Commercial storage solutions
  - Dedicated warehouse
  - Dedicated fleet of trucks
  - Dedicated highly skilled team of solar professionals



### **Our Electrical Partner**

- In business since 1961 in the USA
- > Over 1,000 employees in 53 branch
- > Many house expertise in many areas of electrical design
- > Solar team with many years of experience
- > Has over 160.000 square meter of distribution center and offices
- > Many years of experience in many



### **Electrical Team Leader**

- Designed and managed start-up of several co-generation power plants ranging from 545MW to 850MW
- Collaborated with General Electric Engineers for designs of Digital controls and PLC programs for turbine installations
- Electrical supervisor at U.S. Embassy in Moscow, Russia
- Owned and operated own electrical contracting/ design firm
- Experience in Power/Controls/Security Systems
- Managed many subcontractors
- Electrical Power Services, Power Distribution, Back Up generators
- Worked on Fulton St. Station (World Trade Center)
- Lead Electrical Engineer: Long Island Railroad, NYCTA, and MTACC (NY)
- Completed several high voltage utility substation projects
- Provided controls design and PLC programming for various companies



### Field Construction Team Leader

- Ph.D. in Civil Engineering
- Over 20 years of field experience
- Owning and managing geotechnical testing laboratory
- Owning and managing drilling and pile driving company
- Experiences in many countries (USA, Central and
- South America, etc.)
- Work experience with Solar Farms
- Many years of experience in Foundations, Retention, & establishing QC/QA programs



## Logistics, Marketing & Team Manager Leader

- Co-Founder of many businesses all over the world
- Responsible for managing \$100s of million for various companies
- Director of many companies responsible for thousands of employees
- Business Administration degree from USA
- Worldwide experiences in many industries and trading
- Logistics expert
- Travelled extensively in the MENA region



## Manager of the Project Team

- >Ph.D. in Civil Engineering
- Many years of R&D experience for many industries
- Involved with many construction projects since 1983
- > Has been involved with billions of dollars of projects
- University teaching/research experiences
- Extensive experience all over the world (e.g., Asia, Europe, USA, etc.)
- Traveled extensively in the Middle East
- Work experience with The World Bank, the UN, BMW, Honeywell, Dow
- Work experience with Solar farms



### Experience in:

- Design of Electrical Connections
- Design of the entire system
- Geotechnical Testing of the Site
- Construction of the Entire System
- Construction of Substations
- ➢Initiation of the System

#### Can Deliver a Turn-Key Project w/Experiences in:

- Managing large projects
- Managing construction projects
- > Able to provide technical info
- Excellent and qualified team members
- Extensive solar farm construction experiences
- Extensive experience in the Middle East



### Examples of Solar Farms Around the World

1) Kenya: 50 MW solar farm: Constructed by Chinese; \$122,000,000 USD

2) USA: 50 MW solar farm: Ohio: \$200,000,000 USD

3) USA: 26 MW solar farm: Panama: \$50,000,000 USD

Thank you for your time and consideration. For more information, please contact: Serji Amirkhanian <u>serji.amirkhanian@gmail.com</u> +01 864-844-3145

