

	Offer and Acceptance		State of Arizona State Procurement Office 100 N. 15 th Ave. Suite 201 Phoenix, AZ 85007	
	SOLICITATION NO.: ADSP016-00005912 Request for Qualifications: 2016 Annual Professional Services List		PAGE 1	
	Offeror: <u>Iteknowledgies International Inc</u>		OF 1	

OFFER

TO THE STATE OF ARIZONA:

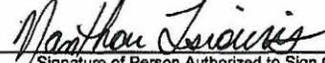
The Undersigned hereby offers and agrees to furnish the material, service or construction in compliance with all terms, conditions, specifications and amendments in the Solicitation and any written exceptions in the offer. Signature also certifies Small Business status.

Iteknowledgies International Inc
Company Name

12425 W. Bell Road
Address

Surprise AZ 85378
City State Zip

mgtsiouris@itekknowledgies.com
Contact Email Address


Signature of Person Authorized to Sign Offer

Manthou Tsiouris
Printed Name

Director of Engineering and CTO
Title

Phone: 480.205.0881

Fax: _____

By signature in the Offer section above, the Offeror certifies:

- The submission of the Offer did not involve collusion or other anticompetitive practices.
- The Offeror shall not discriminate against any employee or applicant for employment in violation of Federal Executive Order 11246, State Executive Order 2009-9 or A.R.S. §§ 41-1461 through 1465.
- The Offeror has not given, offered to give, nor intends to give at any time hereafter any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to a public servant in connection with the submitted offer. Failure to provide a valid signature affirming the stipulations required by this clause shall result in rejection of the offer. Signing the offer with a false statement shall void the offer, any resulting contract and may be subject to legal remedies provided by law.
- The Offeror certifies that the above referenced organization IS/ IS NOT a small business with less than 100 employees or has gross revenues of \$4 million or less.

ACCEPTANCE OF OFFER

The Offer is hereby accepted.

The Contractor is now bound to sell the materials or services listed by the attached contract and based upon the solicitation, including all terms, conditions, specifications, amendments, etc., and the Contractor's Offer as accepted by the State.

This Contract shall henceforth be referred to as Contract No. ADSP016-00005912

The effective date of the Contract is March 1, 2016

The Contractor is cautioned not to commence any billable work or to provide any material or service under this contract until Contractor receives purchase order, contact release document or written notice to proceed.

State of Arizona
 Awarded this 29 day of February 2016

 Procurement Officer



ATTACHMENT I – General Qualifications

ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP016-00005912

STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007

DEFINITIONS

Architect Services, Engineer Services, Land Surveying Services, Assayer Services, Geologist Services and Landscape Architect Services: Those professional services within the scope of the practice of those services as provided in ARS § 32-101.

Branch Office: A geographically distinct place of business or subsidiary office of a firm that has a key role on the team.

Discipline: Primary technical capabilities of key personnel, as evidenced by academic degree, professional registration, certification, and/or extensive experience.

Firm: Defined in ARS § 32-101(B.19.).

Key Personnel: Individuals who will have major contract responsibilities and/or provide unusual or unique expertise.

SPECIFIC INSTRUCTIONS:

1. Complete this form for each branch office seeking work under this RFQ.
 - a. – e. **Firm (or Branch Office) Name and Address.** Self-explanatory.
 - f. **Year Established.** Enter the year the firm (or branch office, if appropriate) was established under the current name.
 - g. **Ownership.**
 - (g1). *Type.* Enter the type of ownership or legal structure of the firm (sole proprietor, partnership, corporation, joint venture, etc.).
 - (g2). *Small Business Status.* A firm is a small business if the firm has less than 100 employees **or** has gross revenues of \$4 million or less.
 - h.-j. **Point of Contact.** Provide this information for a representative of the firm that the Customer can contact for additional information. The representative must be empowered to speak on contractual and policy matters.
 - k. **Name of Firm.** Enter the name of the firm.
2. **Employees by Discipline.**
 - a. Select disciplines from the List of Disciplines (Function Code) listed on Page 3 of 4 Instructions. For employees that do not qualify for any of the disciplines, select "Other". *Note: The intended searchable database indicated in the RFQ will be populated from the Qualifications Form I Excel attachment only.*
 - b. Each person can be counted only twice; once for his/her primary function and once for his/her secondary function. Primary and secondary functions should be indicated by including a "P" or an "S" in column b after the Description Title is given.
 - c-d. If the form is completed for a firm (including all branch offices), enter the number of employees by disciplines in column c. If the form is completed for a branch office, enter the number of employees by discipline in column d and for the firm in column c.
3. **Profile of Firm's Experience and Annual Average Revenue for Last Year.**
 - a. Enter the approximate number of projects the firm (or branch) has done attributable by Profile Code listed on Page 3 of 4 Instructions over the last year.



ATTACHMENT I – General Qualifications

ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSPO16-00005912

STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007

- b. Enter the appropriate Profile Codes from Instructions Pages 3 of 4 that represent the type of work the firm (or branch) has done over the last year.
 - c. Using the Revenue Index Number on Page 3 of 6 Form, indicate the approximate revenue the firm has earned over the last year per Profile Code entered into the table.
4. **Resumes of Key Personnel Proposed for This Contract.** Complete this section for each key person who will participate in this contract.
 - a. Self-explanatory.
 - b. Self-explanatory
 - c. Total years of relevant experience (block c1), and years of relevant experience with current firm, but not necessarily the same branch/office (block c2).
 - d. Name, City and State of the firm where the person currently works, which must correspond with one of the firms (or branch office or a firm, if appropriate) listed in Section 1.
 - e. Provide information on the highest relevant academic degree(s) received. Indicate the area(s) of specialization for each degree.
 - f. Provide information on current relevant professional registration(s) and in which State(s) they are current.
 - g. Provide information on any other professional qualifications relating to this contract, such as education, professional registration, publications, organizational memberships, certifications, training, awards, and foreign language capabilities.
 - h. Provide information on no more than five (5) projects in the last year which the person had a significant role that demonstrates the person's capability relevant to her/his proposed role in this contract. These projects do not necessarily have to be any of the projects presented in Section 5 for the project team if the person was not involved in any of those projects or the person worked on other projects that were more relevant than the team projects in Section 5. Use the check box provided to indicate if the project was performed with any office of the current firm. If any of the professional services or construction projects are not complete, leave Year Completed blank and indicate the status in Brief Description and Specific Role.
5. **Example Projects Which Best Illustrate Firms Qualification for this contract.** Select project where multiple team members worked together, if possible, that demonstrate the team's capability to perform work similar to that required for this contract. Complete one Section 5 for each project. List no more than five (5) projects.
 - a. Title and Locations of project or contract. For an indefinite delivery contract, the location is the geographic scope of the contract.
 - b. Enter the year completed of the professional services (such as planning, engineering study, or design), and/or the year completed if construction. If any of the professional services or the construction projects are not complete, leave Year Completed blank and indicate the status in Brief Description of Project and Relevance to This Contract (block f).
 - c. Project Owner or user, such as a government agency or installation, an institution, a corporation or private individual.
 - d. Provide the original budget or not to exceed dollar amount for the project.
 - e. Provide the Total Cost of the Project. If any of the professional services or construction projects is not complete, indicate the percentage complete and whether this project will be on budget, over or under budget.
 - f. Brief Description: Indicate scope, size, and length of project, principle elements and special features of the project. Discuss the relevance of the example project to this contract.
6. **Additional Information.** Use this section to provide additional information you feel may be necessary to describe your firm's qualifications for this contract.
7. **Annual Average Professional Services Revenues of Firm for Last 3 Years.** Complete this block for the firm or branch office for which this form is completed. In column a, enter an approximate percentage of total work attributable to State, Federal or Municipal Work. In column b, enter an approximate percentage of total work attributable to Non-Government work. Percentages should take into consideration work completed over the last 3 years.



ATTACHMENT I – General Qualifications

ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP016-00005912

STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007

8. **Authorized Representative.** An authorized representative of the firm or branch office must sign and date the completed form. Signing attests that the information provided is current and factual. Provide the name and title of the authorized representative who signed the form.

List of Disciplines (Function Codes) for Question 2

- | | | |
|---------------------------|--|--------------------------|
| Aeronautical Engineer | Environmental Engineer | Mining Engineer |
| Agricultural Engineer | Environmental Scientist | Nuclear Engineer |
| Archeologist | Fire Protection Engineer | Petroleum Engineer |
| Architect | Geodetic Surveyor | Photogrammetrist |
| Architectural Engineering | Geographic Information System Specialist | Project Manager |
| Biologist | Geological Engineer | Sanitary Engineer |
| CADD Technician | Geologist | Soils Engineer |
| Chemical Engineer | Hydrographic Surveyor | Structural Engineer |
| Civil Engineer | Hydraulic Engineer | Technician/Analyst |
| Construction Manager | Hydrologist | Transportation Engineer |
| Construction Inspector | Industrial Engineer | Water Resources Engineer |
| Control Systems Engineer | Landscape Architect | |
| Cost Engineer/Estimator | Mechanical Engineer | |
| Ecologist | Metallurgical Engineer | |
| Electrical Engineer | | |

List of Experience Categories (Profile Codes for Question 3)

- | | |
|---|--|
| Acoustics, Noise Abatement | Dams (<i>Concrete; Arch</i>) |
| Aerial Photography; Airborne Data and Imagery Collection and Analysis | Dams (<i>Earth; Rock</i>); Dikes; Levees |
| Activity Centers | Desalinization (<i>Process and Facilities</i>) |
| Air Pollution Control | Design-Build - Preparation of Requests for Proposals |
| Airports; Nav aids; Airport Lighting; Aircraft Fueling | Digital Elevation and Terrain Model Development |
| Airports; Terminals and Hangars; Freight Handling | Digital Orthophotography |
| Agricultural Development; Grain Storage; Farm Mechanization | Dining Halls; Clubs; Restaurants |
| Animal Facilities | Dredging Studies and Design |
| Anti-Terrorism/Force Protection | Design & Planning Structured Parking Facilities |
| Area Master Planning | Detention Security Systems |
| Auditoriums and Theaters | Disability / Special Needs |
| Automation; Controls; Instrumentation | Ecological and Archeological Investigations |
| Barracks; Dormitories | Educational Facilities; Classrooms |
| Bridge Design: Bridges | Electrical Studies and Design |
| Cartography | Electronics |
| Cemeteries (<i>Planning and Relocation</i>) | Elevators; Escalators; People-Movers |
| Chemical Processing and Storage | Energy / Water Auditing Savings |
| Child Care/Development Facilities | Energy Conservation; New Energy Sources |
| Codes; Standards; Ordinances | Environmental Impact Studies, Assessments or Statements |
| Cold Storage; Refrigeration and Fast Freeze | Fallout Shelters; Blast-Resistant Design |
| Commercial Building (<i>Low Rise</i>); Shopping Centers | Fire Protection |
| Community Facilities | Fisheries; Fish Ladders |
| Communications Systems; TV; Microwave | Forensic Engineering |
| Computer Facilities | Garages; Vehicles Maintenance Facilities; Parking |
| Conservation and Resource Management | Gas Systems (<i>Propane; Natural, Etc.</i>) |
| Construction Management | Geodetic Surveying: Ground and Airborne |
| Construction Surveying | Heating; Ventilating; Air Conditioning |
| Corrosion Control; Cathodic Protection Electrolysis | Highways; Streets; Airfield Paving; Parking Lots |
| Cost Estimating; Cost Engineering and Analysis; Parametric Costing; Forecasting | Historical Preservation |
| Cryogenic Facilities | Hospital and Medical Facilities |
| Construction Materials Testing | Hotels; Motels |
| | <i>Housing (Residential, Multi-Family; Apartments; Condominiums)</i> |
| | Hotels; Motels |



ATTACHMENT I – General Qualifications

ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP016-00005912

STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007

Hydraulics and Pneumatics
Hydrographic Surveying
Industrial Buildings; Manufacturing Plants
Industrial Processes; Quality Control
Industrial Waste Treatment
Intelligent Transportation Systems
Infrastructure
Irrigation; Drainage
Judicial and Courtroom Facilities
Laboratories; Medical Research Facilities
Land Surveying
Landscape Architecture
Libraries; Museums; Galleries
Lighting (*Interior; Display; Theater, Etc.*)
Lighting (*Exteriors; Streets; Memorials; Athletic Fields, Etc.*)
Labs - General
Labs – Research – Dry
Labs – Research – Wet
LEED Accredited A/E
LEED Independent 3rd Party Building Commissioning
Mapping Location/Addressing Systems
Materials Handling Systems; Conveyors; Sorters
Metallurgy
Materials Testing
Measurement / Verification / Conservation Water Consumption Savings
Mining and Mineralogy
Medical Related
Modular Systems Design; Fabricated Structures or Components
Mold Investigation
Museums
Nuclear Facilities; Nuclear Shielding
Office Buildings; Industrial Parks
Outdoor Recreation
Petroleum and Fuel (*Storage and Distribution*)
Photogrammetry
Pipelines (*Cross-Country - Liquid and Gas*)
Phase I Environmental
Prisons & Correctional Facilities
Plumbing and Piping Design
Prisons and Correctional Facilities
Product, Machine Equipment Design Pneumatic Structures, Air-Support Buildings Power Generation, Transmission, Distribution Public Safety Facilities
Radar; Sonar; Radio and Radar Telescopes
Radio Frequency Systems and Shielding's
Railroad; Rapid Transit
Recreation Facilities (*Parks, Marinas, Etc.*)
Refrigeration Plants/Systems
Rehabilitation (*Buildings; Structures; Facilities*)
Research Facilities
Resources Recovery; Recycling
Roof Infrared Imaging to Identify Water Leaks

Roofing
Safety Engineering; Accident Studies; OSHA Studies
Security Systems; Intruder and Smoke Detection
Seismic Designs and Studies
Sewage Collection, Treatment and Disposal
Soils and Geologic Studies; Foundations
Solar Energy Utilization
Solid Wastes; Incineration; Landfill
Special Environments; Clean Rooms, Etc.
Structural Design; Special Structures
Surveying; Platting; Mapping; Flood Plain Studies
Sustainable Design
Swimming Pools
Storm Water Handling and Facilities
Specifications Writing
Toxicology
Testing and Inspection Services
Traffic and Transportation Engineering
Topographic Surveying and Mapping
Towers (*Self-Supporting and Guyed Systems*)
Tunnels and Subways
Traffic Studies
Transportation
Urban renewals; Community Development
Utilities (*Gas and Steam*)
Value Analysis; Life-Cycle Costing
Warehouse and Depots
Water Resources; Hydrology; Ground Water
Water Supply; Treatment and Distribution
Wind Tunnels; Research/Testing Facilities Design
Waste Water Treatment Facility
Water Well Rehabilitation; Water Well Work
Zoning; Land Use Studies



ATTACHMENT I – General Qualifications
ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP016-00005912

STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007

(If a firm has branch offices, complete for each specific branch office seeking work.)

1. Annual Request for Qualifications

a. FIRM (OR BRANCH OFFICE) NAME:	Iteknowledgies International, Inc
b. FIRM (OR BRANCH OFFICE) STREET:	12425 W. Bell Road
c. FIRM (OR BRANCH OFFICE) CITY:	Surprise
d. FIRM (OR BRANCH OFFICE) STATE:	AZ
e. FIRM (OR BRANCH OFFICE) ZIP CODE:	85378

f. YEAR ESTABLISHED:	2002
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(g1). OWNERSHIP - TYPE:	C- Corp
(g2). OWNERSHIP - SMALL BUSINESS STATUS:	Small Business

h. POINT OF CONTACT NAME AND TITLE:	Manthou Tsiouris
i. POINT OF CONTACT TELEPHONE NUMBER:	480-205-0881
j. POINT OF CONTACT E-MAIL ADDRESS:	mgtsiouris@iteknowledgies.com

k. NAME OF FIRM <i>(If block 1a is a branch office):</i>	Name of firm same as in Block 1a
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ATTACHMENT I – General Qualifications
ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP016-00005912

STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007

2. EMPLOYEES BY DISCIPLINE

a. Discipline Title	b. Function: Primary (P) or Secondary (S)	c. No. of Employees - Firm	d. No. of Employees - Branch
Electrical Engineer	P	1	
Project Manager	P	1	
Control Systems Engineer	P	3	
Systems Engineer	P	1	
Total		5	0



ATTACHMENT I – General Qualifications
ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSPO16-00005912

STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007

4. Resumes of Key Personnel Proposed for this Contract *(Complete one Section #4 for each key person.)*

a. NAME Phillip Glass	b. ROLE IN THIS CONTRACT Automation; Controls; Instrumentation	c. YEARS EXPERIENCE	
		1. TOTAL 25	2. WITH CURRENT FIRM 1
d. LOCATION <i>(City and State)</i> 12425 W. Bell Road Surprise AZ 85378			
e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> Technician/Technologist		f. PROFESSIONAL TRAINING - REGISTRATIONS	
g. OTHER PROFESSIONAL QUALIFICATIONS <i>(Organizations, Awards, etc.)</i> Awarded Large Water and Wastewater Systems Instrumentation Technician of the Year by AZ Water at the annual conference in Glendale, AZ.			

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION <i>(City and State)</i>	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
1.	City of Flagstaff, Remote Sites	2015	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Performed retrofit of aging Sixnet Controllers to Modicon M340 PLCs. Project included programming, graphics, startup and commissioning of 5 sites.	<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	City of Flagstaff, Water and Wastewater Facilities.	2014	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Performed retrofit of aging Sixnet controller to Allen-Bradley CompactLogix PLC and included numerous process enhancements that resulted in significant energy savings	<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	City of Flagstaff, Water and Wastewater Facilities.	2013	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Developed SCADA Master Plan to outline and prioritize technology upgrades and capital projects in the coming 5 years.	<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	Milum Textile Services, Industrial Linen Facility	2013	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Directed and managed installation of \$1.5M Continuous Batch Washer. Rebuilt and recommissioned 9 aging gas fired Milnor dryers.	<input checked="" type="checkbox"/>	Check if project performed with current firm
5.	City of Flagstaff, Wildcat Hill Plant	2015	
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Performed control system assessment to determine plant and process vulnerabilities and to aid in prioritization of capital expenditures.	<input checked="" type="checkbox"/>	Check if project performed with current firm



ATTACHMENT I – General Qualifications
ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSPO16-00005912

STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007

a. NAME Manthou Tsiouris	b. ROLE IN THIS CONTRACT Controls and Electronics Engineer	c. YEARS EXPERIENCE	
		2. TOTAL 25	2. WITH CURRENT FIRM 13
d. LOCATION (<i>City and State</i>) 12425 W. Bell Road Surprise AZ 85378			
e. EDUCATION (<i>DEGREE AND SPECIALIZATION</i>) MS Electrical Engineering (Advanced Control Systems) BS Chemical Engineering (Nuclear and Water Systems)		f. PROFESSIONAL TRAINING - REGISTRATIONS	
g. OTHER PROFESSIONAL QUALIFICATIONS (<i>Organizations, Awards, etc.</i>) 2015 and 2013 - Cleantech Open semifinalist awards for outstanding clean and sustainable product design concept in the Rocky Mountain Region			

H. RELEVANT PROJECTS

1.	(1) TITLE AND LOCATION (<i>City and State</i>) City of Scottsdale, AZ – SCADA Technology Master Plan	(2) YEAR COMPLETED	
		Professional Services 2015	Construction (if applicable)
	(3) BRIEF DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE This is the Master Plan for the next 10 years as it relates to the complete SCADA system and additional items such as AMI/AMR, IT infrastructure and security both IT and physical. The plan is to map out the technology for the next 10 years and beyond.	<input checked="" type="checkbox"/>	Check if project performed with current firm
2.	(1) TITLE AND LOCATION (<i>City and State</i>) Kettleman City, CA., Kettlaman Land, LLC , a 20MW PV Power Generation	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable)
	(3) BRIEF DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE In this design effort I was the Director of Project Engineering and responsible for the design-build turnkey installation of a 20MW AC facility.	<input checked="" type="checkbox"/>	Check if project performed with current firm
3.	(1) TITLE AND LOCATION (<i>City and State</i>) Chowchilla, CA., Madera Solar Farm Solar Farm project, a 20MW PV Power Generation	(2) YEAR COMPLETED	
		Professional Services 2014	Construction (if applicable)
	(3) BRIEF DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE In this design effort I was the Director of Project Engineering and responsible for the project assessment with regards to the Madera Solar Farm Solar Farm project, a 20MW-ac PV Power Generation Facility, located in Chowchilla, Madera County, CA.	<input checked="" type="checkbox"/>	Check if project performed with current firm
4.	(1) TITLE AND LOCATION (<i>City and State</i>) ASARCO Ray Operations, AZ., Project Management Systems	(2) YEAR COMPLETED	
		Professional Services 2013	Construction (if applicable)
	(3) BRIEF DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE As the Senior Engineering Consultant I implemented a plan for a set of recommendations to achieve a higher level of Project management capability. With extensive audits and analysis. The implementation plan was provided as a starting point for Project improvement.	<input checked="" type="checkbox"/>	Check if project performed with current firm
5.	(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
	(3) BRIEF DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE	<input checked="" type="checkbox"/>	Check if project performed with current firm



ATTACHMENT I – General Qualifications

ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP016-00005912

STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007

EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

a. TITLE AND LOCATION (City and State)	b. YEAR COMPLETED	
Kettleman City, CA., Kettlaman Land, LLC, a 20MW PV Power Generation Facility	PROFESSIONAL SERVICES 2014	CONSTRUCTION (If applicable)

23. PROJECT OWNER'S INFORMATION

c .PROJECT OWNER	d .ORIGINAL BUDGET/NTE AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
Clenera	\$5,000,000+	in negotiations

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

The Project was a photovoltaic ("PV") generation facility with a maximum generating capacity of 20.32 MW AC. The Project area needed a new paved entrance, all-weather site roads and existing gravel access roads and will include single axis racking, associated foundations, modules, inverters, combiner boxes, underground ("UG") collector and communication infrastructure.

The Project was to connect to a Pacific Gas & Electric ("PG&E") 70kV lines located adjacent to the property. The energy generated by the Project was to be delivered at 70kV at the point of interconnection, also known as the Point of Change of Ownership ("POCO") with the Utility.

The Project was to have the installation of two (2) MET stations and ten (10) sensors, including two (2) ambient temperature sensors, two (2) anemometers, two (2) back of module (BOM) temperature sensors, two (2) first class pyrometers mounted at Horizontal and two (2) Plane of Array (POA). Data Acquisition System ("DAS"), designed specifically for this site, monitoring, and communication telemetry between the Project and the Owner, will be by SOLV and the ability to connect and control the solar plant shall be included.



ATTACHMENT I – General Qualifications

**ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP016-00005912**

**STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007**

EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

a. TITLE AND LOCATION <i>(City and State)</i>	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION <i>(If applicable)</i>
Chowchilla, CA., Madera Solar Farm Solar Farm project, a 20MW PV Power Generation	2014	

23. PROJECT OWNER'S INFORMATION

c .PROJECT OWNER	d .ORIGINAL BUDGET/NTE AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
Iberdrola	\$5,000,000+	in negotiations

g. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

In summary, several analysis around project all-in cost against the after-tax internal rate of return. The purpose of the technical assessment is to communicate a design approach for this project to provide the plant configuration which would provide the LCOE solution for Iberdrola Renewables, while meeting target financial and after-tax internal rate of return (unlevered), based on design and cost assumptions.

The assumed point-of-interconnection for running a gen-set from the PV plant substation is the existing 115kV overhead transmission line, located just outside the property boundary. Having an 115kV tee-tap available for gen-set adjacent to the project site is beneficial in that the gen-set costs will be minimized. It is assumed (for purposes of this assessment) that the interconnection voltage for the PV Plant will be 115kV (generator step-up transformer provided by others). The PV plant will have its own substation on-site, and run a short distance gen-set from the PV plant substation to the transmission easement (existing) at 115kV interconnection voltage. The assumed Point of Interconnection (as to be read in the executed LGIA documentation for this project) was the OH line, 115kV terminals (20MW-ac at the point of interconnection).



ATTACHMENT I – General Qualifications

**ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP016-00005912**

**STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007**

EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

a. TITLE AND LOCATION <i>(City and State)</i>	b. YEAR COMPLETED	
City of Scottsdale, AZ – Technology Master Plan	PROFESSIONAL SERVICES In Progress	CONSTRUCTION <i>(If applicable)</i>

23. PROJECT OWNER'S INFORMATION

c .PROJECT OWNER	d .ORIGINAL BUDGET/NTE AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
City of Scottsdale	\$300,000+	in negotiations

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

Consulting on the SCADA control systems of The Technology Master Plan (TMP) for the City of Scottsdale addresses all major aspects of technology, including critical communications, industrial controls systems, cyber security, and organizational alignment across departments, and technology synergies across the City in critical business areas such as asset management and meter reading. The TMP identifies, prioritizes, and quantifies the proposed technology investments, and serves to support future budget planning.

The Technology Master Plan (TMP) for the City of Scottsdale, is organized around the four areas (Project Initiation / Identify Goals and Metrics, Assess Current Environment, Recommend Actions, and Deliver Final Water Resources Technology Master Plan) and five phases (Phase I: Project Initiation / Visioning Work Shop, Phase II: Evaluation Research and assessment; Phase III: Systems Analysis and Development of Recommendations; Phase IV: Development of Draft TMP; and Phase V: Development and Delivery of Final TMP) included in your RFP.)

The Technology Master Plan (TMP) for the City of Scottsdale addresses several key issues currently faced by any client including developing recommendations to maintain, upgrade or replace the existing control systems infrastructure; assessing the City's critical communications, looking at options to optimize the existing network, exploring solutions such as leveraging the City network managed by the Information Systems Department; recommending whether the City should keep, update, or replace the existing work order management system; or assessing the current status and projected plans for AMR/AMI development, looking for opportunities to accelerate and reduce the cost of an AMR/AMI effort.



ATTACHMENT I – General Qualifications

**ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP016-00005912**

**STATE PROCUREMENT OFFICE
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**EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS
FOR THIS CONTRACT**

(Present no more than five (5) projects. Complete one Section 5 for each project.)

a. TITLE AND LOCATION <i>(City and State)</i>	b. YEAR COMPLETED	
City of Flagstaff, AZ – SCADA Upgrades	PROFESSIONAL SERVICES 2015 continuing	CONSTRUCTION <i>(If applicable)</i>

23. PROJECT OWNER'S INFORMATION

c .PROJECT OWNER	d .ORIGINAL BUDGET/NTE AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
City of Flagstaff	\$15,000-\$300,000 continuing	in negotiations

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

Performed a large variety of control system upgrades and assessments. Also studies to determine plant and process vulnerabilities and to aid in prioritization of capital expenditures. Performed retrofit of aging Sixnet controller to Allen-Bradley CompactLogix PLC and included numerous process enhancements that resulted in significant energy savings.

Developed SCADA Master Plan to outline and prioritize technology upgrades and capital projects in the coming 5 years.

Performed retrofit of aging Sixnet Controllers to Modicon M340 PLCs. Project included programming, graphics, startup and commissioning of 5 sites.



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**. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS
FOR THIS CONTRACT**

(Present no more than five (5) projects. Complete one Section 5 for each project.)

a. TITLE AND LOCATION <i>(City and State)</i> ASARCO Ray Operations, Project Management Systems	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES 2013	CONSTRUCTION <i>(If applicable)</i>

23. PROJECT OWNER'S INFORMATION

c .PROJECT OWNER ASARCO	d .ORIGINAL BUDGET/NTE AMOUNT OF PROJECT \$25,000-250,000 continuing	e. TOTAL COST OF PROJECT in negotiations
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f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(include scope, size, and length of project)*

Improving an organizations Project Management (PM) capability is a necessary and critical part of continuously upgrading an organizations performance in executing its mandate and consistently performing above the industry average in its core operations. An organization sets out to make specific Project management improvements because it demands a better outcome.

This report tackled the concerns by Asarco management and provides an audit and analysis with a set of recommendations for project management improvement and implementation within a 1 year time period. Extensive work included interviews and discussions and defined the baseline project capabilities and how projects are managed and reported to Asarco management.

The report recognizes the different elements that were needed to improve Project Management at Asarco. Many of the recommendations were reinforced from the interviews and questionnaires of engineers and management. This led to an analysis between the current baseline capabilities and what Asarco staff wanted to achieve.

The recommendations focused on closing the gap between the current project capabilities and what is reasonably achievable. This assessment was made during the many discussions with the interviewed staff and their convictions that better standards and processes to manage projects and programs are definitely needed.



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6. ADDITIONAL INFORMATION

a. PROVIDE ANY ADDITIONAL INFORMATION YOU FEEL MAY BE NECESSARY TO DESCRIBE YOUR FIRMS QUALIFICATIONS. (ATTACH ADDITIONAL SHEETS AS NEEDED.)

Our strength is the result of more than 12 years of expertise, hands-on engineering and operational experience, combined with professionals focused on cutting-edge technology, engineering and project management consulting.

The blend of technical skills, recent and local experience, and extensive Project management and SCADA design, planning, design, implementation, and support expertise are second to none. We are industry experts with proven experience supporting utilities with consulting, project management, and SCADA Industrial IT projects.

Our team features: Knowledgeable project management professionals to specialists in SCADA, experience in master plans with technology, budget, and schedule recommendations to meet business needs. Control systems and process engineers who understand processes, distribution system facility operations, instrumentation, and equipment being monitored and controlled. Database designers who understand data collection and reporting and how to securely link commercial database and reporting systems to SCADA systems.

Other Recent work

2015 - City of Flagstaff, Remote Sites. Performed retrofit of aging Sixnet Controllers to Modicon M340 PLCs. Project included programming, graphics, startup and commissioning of 5 sites.

2015 - City of Flagstaff, Wildcat Hill Plant. Performed control system assessment to determine plant and process vulnerabilities and to aid in prioritization of capital expenditures.

2014 - City of Flagstaff, Rio de Flag Plant. Performed retrofit of aging Sixnet controller to Allen-Bradley CompactLogix PLC and included numerous process enhancements that resulted in significant energy savings.

2013 - City of Flagstaff, Water and Wastewater Facilities. Developed SCADA Master Plan to outline and prioritize technology upgrades and capital projects in the coming 5 years,

2012 - Milum Textile Services, Industrial Linen Facility. Directed and managed installation of \$1.5M Continuous Batch Washer. Rebuilt and recommissioned 9 aging gas fired Milnor dryers.

2008 – City of Peoria, Remote Site Distribution System. Changed out remote site radios at 55+ sites from primarily licensed frequency serial radios to spread spectrum Ethernet radios.

2007 – City of Peoria, Jomax Wastewater Treatment Plant. Reviewed and approved all electrical, instrumentation and SCADA work for major plant expansion.

2007 – City of Peoria. Worked with Westin Engineering to develop SCADA Master Plan for the city. Provided all information regarding history and future direction of SCADA within the city, as well as programming and asset tag name convention standards.



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ADSP016-00005912**

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2006 – City of Peoria, Butler Wastewater Reclamation Facility. Worked with engineering firm to design electrical and SCADA system for new \$125M MBR plant. Reviewed and approved all programming and graphics submitted by contractors.

2005 – City of Goleta, CA, Goleta Wastewater Treatment Plant. Developed PLC and HMI applications for plant using Wonderware InTouch and Allen-Bradley PLCs. Developed all control descriptions. Developed programming standards to be used for the plant and all future projects.

2004 – City of Peoria, Remote Site Distribution System. Developed programming standards for city. Used standards to reprogram 55 remote well and booster sites. 1990 – Hughes Aircraft Company, Industrial Wastewater Treatment Plant. Programmed numerous SCADA screens for the plant using Wonderware Intouch and Allen-Bradley PLC-3 controllers.

2003 – Pima County, Randolph Park Water Reclamation Facility. Partnered with EMA to develop control system programming for new MBR plant. Developed all control descriptions for plant. Worked with Pima County to modify and enhance programming standards.

2003 – Town of Gilbert, Neely Wastewater Treatment Plant. Developed PLC and HMI application for new headworks and various support equipment around the plant. Developed automated reporting and integration into plant CMMS system.

2002 – City of Phoenix, Squaw Peak Water Treatment Plant. Developed PLC and HMI applications for Solids Handling Facility using Wonderware InTouch and Modicon Quantum controllers. Directed I/O check-out as well as plant commissioning and operations.

2002 – El Paso Water Utilities, Haskell Street Wastewater Treatment Plant. Developed PLC and HMI application for new reclaimed water reservoir and plant enhancements using Intellution Fix Dynamics and Siemens TI-505 controllers. Served as project manager as well.

2002 – City of Mesa, Lindsay Booster Station. Developed PLC and HMI application for large booster station using Intellution iFix and Modicon Quantum Controllers.

2001 – City of Phoenix, Process Control Standards Study. Participated in a multi-company effort to develop control system standards for the City of Phoenix. Developed Chapter 4 of the standard, “Alarm Annunciation Systems”.

2000 – City of Phoenix, 91st Ave. Wastewater Treatment Plant. Programmed numerous areas of plant using Johnson Controls DCS-5000 on UNIX platform. Areas included methane plant, flare systems, centrifuges, aerobic digesters, bar screens, effluent pumps and numerous other smaller systems.

1999 – Town of Ignacio, CO, Southern Ute Wastewater Treatment Plant. Programmed SCADA system for new wastewater treatment plant using Intellution Fix-32 and Allen-Bradley PLCs. Developed numerous compliance, flow and chemical usage reports. 1995 – Rio Rico Utilities, Remote Site Distribution System. Programmed PLC and HMI application for 12 remote well and booster sites using Citect and Modicon PLCs. Configured radio network for sites as well.

1998 – City of Peoria, Beardsley Wastewater Treatment Plant. Developed SCADA screens for plant using Intellution Fix-32 and Modicon Quantum controllers. Configured network. Compiled O&M manuals.



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1998 – City of Clovis, NM, Remote Site Distribution System. Programmed numerous well and booster sites using Bristol Babcock RTU and Wonderware InTouch. Configured sites to communicate via cellular.

1997 – City of Oshkosh, WI, Water Treatment Plant. Led development of massive SCADA system for plant and remote sites using Intellution Fix-32 and Modicon Quantum controllers.

1997 – City of Arlington, TX, Pierce Burch and John F. Kubala Water Treatment Plants. Programmed SCADA system for both plants. Conducted I/O checkout and commissioning of both facilities.

1992 – Motorola Semiconductor, Industrial Wastewater Treatment Plant. Programmed PLC and HMI applications for the plant using Wonderware InTouch and PLC-5 controllers.

1991 – City of Chandler, Ocotillo Water reclamation Facility. Programmed all SCADA screens for entire facility using Wonderware InTouch and Allen-Bradley PLC-5 controllers.

Awards

2015 and 2013 - Cleantech Open semifinalist awards for outstanding clean and sustainable product design concept in the Rocky Mountain Region

2010 – Philip Glass - Awarded *Large Water and Wastewater Systems Instrumentation Technician of the Year* by AZ Water at the annual conference in Glendale, AZ.

Papers

2014 – Manthou Tsiouris - Presented paper entitled *Practical SCADA Security Considerations* at the 2014 AZ Water Annual Conference in Glendale, AZ.

2014 - Philip Glass - Presented paper entitled *Optimization of a Distribution System* at the 2014 AZ Water Annual Conference in Glendale, AZ.

2011 – Philip Glass - Presented paper entitled *Evolution of a SCADA System* at the 2011 AZ Water Annual Conference in Glendale, AZ.

2010 – Philip Glass - Presented paper entitled *Dynamic Mass Balancing of an MBR System* at the 2010 Southwest Membrane Operators Association annual conference in Glendale, AZ.



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7. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

a. Percentage of Total Work Attributable to State, Federal and Municipal Government Work:	90%
b. Percentage of Total Work Attributable to Non-Government Work:	10%

8. AUTHORIZED REPRESENTATIVE. The foregoing is a statement of facts.

Signature: *Manthou Tsouris*
Name: MANTHOU TSOURIS

Date: 12-20-2015
Title: Dir. of Engr & CTO