

Solicitation Number: W912DY-18-T-PPA1

Notice Type: Request for Information

Response Date: 01 June 2018

Special Notice

Synopsis:

This is a Request for Information (RFI). This RFI shall not be construed as a Request for Proposal (RFP), a lease solicitation, or any obligation on the part of the Government. The Government does not intend to select or qualify proposals or offers on the basis of this RFI or otherwise pay for information obtained via this RFI or in response to this notice.

No basis for claim against the Government shall arise as a result of a response to this RFI.

The Government is performing market research to determine feasibility of contracting for various energy generation technologies for the purpose of providing resilience to Joint Base McGuire-Dix-Lakehurst (JB MDL), specifically to McGuire loads (illustrated in Appendix A).¹ The Government is specifically interested in determining the viability of procuring reliable, locally-generated, electricity from a Contractor-constructed, owned, operated, and maintained energy generation facility via a Power Purchase Agreement (PPA) 10 USC § 2922a contract. The energy generation facility would provide continuously available, non-interruptible primary power to McGuire and provide capability for islanding McGuire substations in the event of a utility grid outage.

The energy generation system shall be designed and optimized to meet the Government's respective requirements under two (2) operating conditions: Normal Operation and Grid Outage Operation.

- Normal Operation is defined as periods where McGuire is able to draw electricity from the utility grid.
 - In Normal Operation, the energy generation system would provide McGuire with up to 16,114,000-25,782,400 kWh per year of primary power at a PPA rate (in \$/kWh).
- Grid Outage Operation is defined as periods where McGuire is operating independently from the utility grid in an electrically islanded mode.
 - In Grid Outage Operation, the energy generation system will provide McGuire with primary power and islanding capability for 5-11 MW of critical substation load with the capability to isolate from the utility grid. The Government's interest is to increase electrical power availability to mission functions during periods of grid failure.

Evaluation during the RFP phase will be based on 1) total cost as measured by the offerors' levelized cost of energy as USD\$/MWhr to include consumption, avoided peak demand charges, market participation benefits, etc., as compared against other offerors' solutions and against existing grid parity 2) evaluation of the technical reasonableness and sufficiency of the solution, and 3) evaluation of the offerors' ability to complete, maintain and operate the project based on prior performance and demonstrated capability.

¹ For information about DoD Energy Resilience Initiatives, see https://www.acq.osd.mil/eie/IE/FEP_Energy_Resilience.html.

Interested entities should address all questions in the questionnaire below and demonstrate ability to execute the Government's following notional requirements.

Government Notional Requirements:

General Requirements (including requirements in Normal Operation)

1. The Contractor shall develop, finance, design, build, own, operate and maintain an off-site energy generation facility. The Contractor shall be responsible for providing all labor, material and capital to deliver energy from the proposed generation facility to the substations located at McGuire (see map in Appendix A). This will consist of all operation and maintenance, including upgrading and replacement of equipment required to ensure reliable deliveries of energy for the duration of the contract.
2. The Air Force will not subsidize the development, construction, or operation of any improvements (the Air Force would agree to purchase the energy) and does not warrant the availability of off-take agreements or contracts for the generated energy, except for the load provided via PPA listed in this RFI.
3. The electrical supply from any offsite generation assets shall feed the installation directly via a dedicated line, independent of the commercial grid.
4. JB MDL will not provide any Government property for the generation facility. It is anticipated that off-site generation will occur at a one or more locations adjacent to JB MDL. However, if the configuration includes assets that require minimal (<1 acre) land use such as for a battery or standby generator, JB MDL will provide easements for installation of all those components on Government property near the substations. JB MDL will also provide easements for interconnection to the installation's distribution systems.
5. The Government will purchase up to 16,114,000-25,782,400 kWh of electricity from the proposed energy generation facility, per Production Year.
6. The Contractor's proposed system must be able to deliver electric power to the Government at a total delivered cost between \$0.05 and \$0.15 per kWh.
7. During periods of Normal Operation, the Contractor may use generation and other resilience assets as revenue-generating, grid-facing resources for power generation beyond the agreed upon amount provided to the installation, as long as all other Government Notional Requirements listed herein are met. The Contractor shall meet any AF cyber security regulatory requirements regarding risk management framework (RMF), interconnection, and separation for assets used in Normal and Grid Outage operations.
8. The PPA Term shall be the minimal period necessary to support the financing of the Project or other development considerations, but in no event shall the PPA Term exceed 25 years including construction.
9. Should the Contractor propose net-metering as part of this project, the Contractor shall be responsible for arranging all net metering agreements.
10. Should the Contractor propose solar PV as part of the configuration, the contractor will retain ownership of any Renewable Energy Credits (RECs), tax advantages (Investment Tax

Credit and/or Production Tax Credit), and/or any other environmental attributes, and may sell them to a third party.

11. Should the Contractor proposed fossil fuel based generation, they must:
 - a. Have adequate fuel supply for continuous operation for no less than seven (7) days and a resourcing plan acceptable to the AF demonstrating the offeror's ability and commitment to provide fuel indefinitely.
 - b. Obtain/maintain their own air quality permit for any fuel based generation assets.
12. The Contractor (at its sole expense) shall be responsible for ensuring compliance with:
 - a. All applicable Federal and State environmental laws and regulations.
 - b. Force Protection and Anti-Terrorism requirements of JB MDL.
 - c. Department of Defense (DoD), National Institute of Standards and Technology (NIST) and other applicable cybersecurity standards.
13. The proposed generation asset shall meet all power quality standards as required by Pennsylvania-New Jersey-Maryland Interconnection (PJM) Regional Transmission Organization and outlined by the Institute of Electrical and Electronics Engineers (IEEE) including power factor, voltage (level, range, and balance) harmonic distortion, and frequency. The Contractor shall ensure that operation of the generation asset does not create upset conditions on the existing parallel McGuire grid.
14. The Government shall be responsible for conducting any required studies on the effect the solar array will have on air traffic on and around JB MDL in accordance with DoD and Federal Aviation Administration (FAA) policy and guidance.
15. The Contractor shall adhere to any additional applicable terms and conditions resulting from this and other market research.

Energy Resilience Requirements

16. The proposed configuration must be designed to meet historical 15-minute interval load (shown in Appendix B) with a 15% safety factor during Grid Outage Operation. Potential resilience scenarios to be covered by this project include:
 - a. Resilience to Substation 2 load (~5 MW peak load).
 - b. Resilience to Substation 2 and 3 loads (~11 MW peak load).
17. In Grid Outage Operation, the proposed configuration must be designed to sustain load for a minimum of seven (7) continuous days in Grid Outage Operation.
18. In Normal Grid Operation, the proposed generation facility shall provide four nines (99.99%) of availability (no more than 52.56 minutes total outage per year), with no more than (3) unscheduled outages per year. No outage during grid failure shall exceed 30 minutes, and Contractor shall ensure that all equipment, controls, and personnel are available to meet this requirement.
19. The proposed generation and resilience assets, switching, and controls should follow guidance outlined in IEEE standard 1547.4 to safely and effectively island loads. AF seeks to employ a modular open architecture as it develops this and future energy resilience projects, including microgrid(s).

20. Proposed configuration should include automated and/or manual switching to island identified loads, generation, and storage into a microgrid for Grid Outage Operation.
21. The Contractor must be able to regularly demonstrate system readiness to island McGuire substations described above in the event of a utility grid outage through periodic (annual and/or monthly) testing.

Sources Sought Questions:

1. What is the name and brief description to include type of entity, (i.e., partnership, corporation, etc.), of the public or private organization or business potentially interested in developing energy generation as stated above for JB MDL?
2. What is the business address and web site address?
3. Who are the point of contacts, including name, position, telephone number, and email address, for the submitted information?
4. What is your current and relevant experience, or comparable commercial experience, in developing, constructing, and operating energy generation and resilience assets?
5. If you believe that the Government's notional requirements are not feasible or cost effective, please explain. An explanation should include both the perceived problems with the notional requirements and proposed substitute requirements.
6. What would be your proposed remedy to ensure Contractor performance in the event of a breach of contract requirements, specifically those listed in terms of Normal Operation (i.e. the Contractor fails to provide the minimum amount of power specified in a given Contract Year).
7. What is the proposed technology configuration to achieve the Government Notional Requirements? Include all generation and resilience technologies, potential capacity (in MW), islanding capability, interconnection configuration, and other requirements (e.g. water, fuel).
 - a. Why are you suggesting that specific technology and plan?
 - b. What would be the expected annual fuel requirements and responsibilities for the proposed configuration?
 - c. What is the notional project development timeline to reach operation?
 - d. How much land will is required for the proposed concept (both on McGuire and on an off-base parcel)?
 - i. Per Government Notional Requirements #3, please indicate whether the concept would require land on-base via easement (not to exceed 1 acre).
 - e. If applicable, how would this concept utilize NJ and PJM Renewable Energy Credit and/or ancillary grid services market to generate revenue?
 - f. What testing requirements are recommended to demonstrate system readiness to island the McGuire load?
 - g. What is the minimal period necessary to support the financing your proposed concept?

8. Identify standards you believe facilitate the objective of a modular open architecture (as specified in Requirement #16 above).
9. What alternative technology configurations or acquisition vehicles would you recommend for this concept that meet the Government Notional Requirements (for all alternatives provided, please provide similar details as requested in Question 7)?
10. Are you a small business? If so, what type?

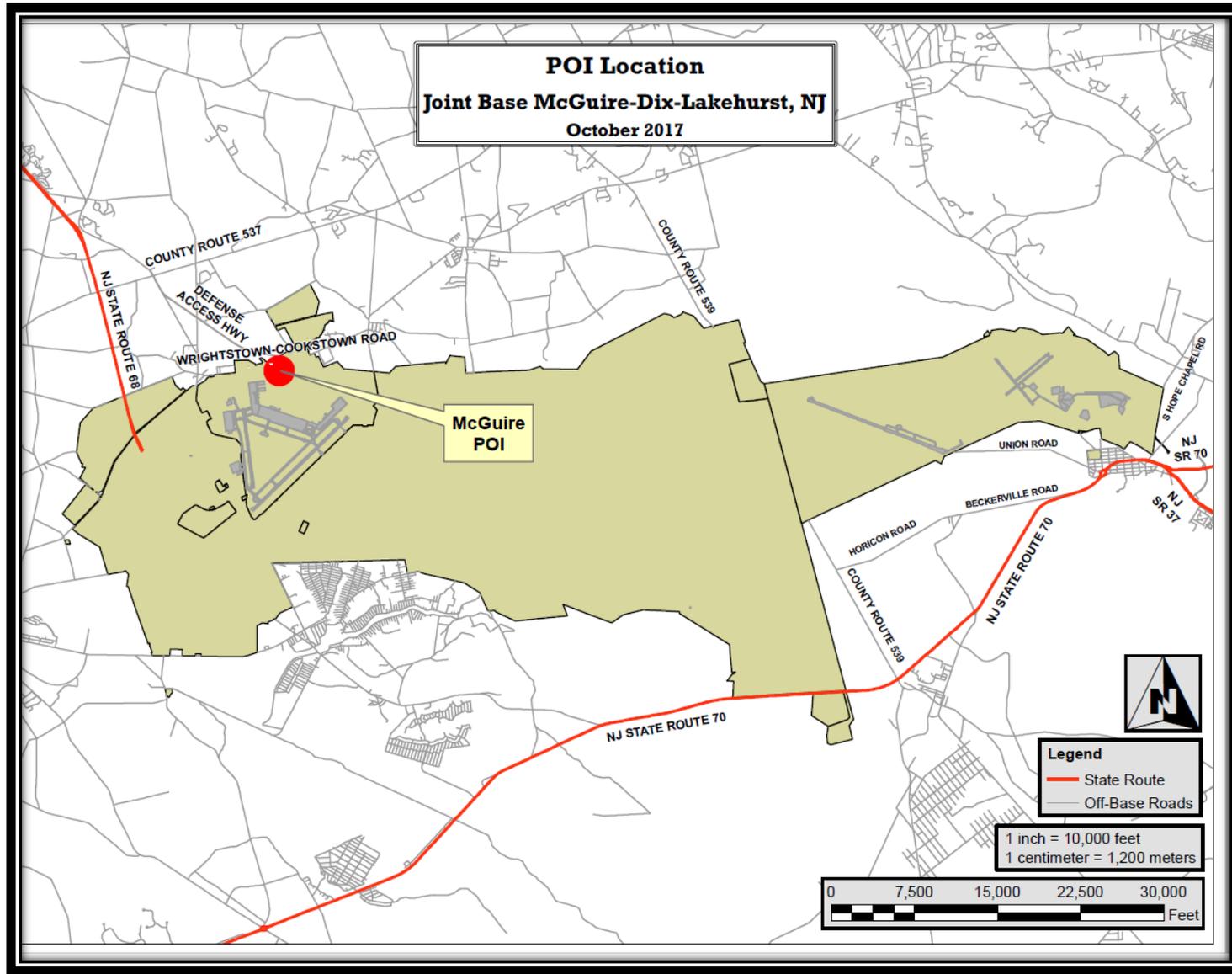
Interested entities should submit their questionnaire (sources sought) responses via email to Victor.G.Petty@usace.army.mil no later than 5:00 PM Eastern Time on 01 June 2018. Microsoft Word or Adobe Systems Portable Document Format (PDF) e-mail attachments not exceeding ten (8.5 inches x 11 inches) pages (five pages if printed two-sided) and 10 Megabyte total are acceptable. *Facsimile submissions will not be accepted.* Cover letters and extraneous materials (brochures, pamphlets, etc.) will not be considered. The Government will analyze all of the submitted information and determine among other things: the probability of realizing the Government's notional requirements; the suitability of the available parcel for the Government's proposed use; and the most appropriate acquisition strategy.

Interested parties should submit any additional questions or clarifications to Victor.G.Petty@usace.army.mil as part of or with their questionnaire response. Please do not contact other Air Force staff with questions regarding this RFI.

We appreciate your interest and thank you in advance for responding to this Request for Information.

Primary Point of Contact: Victor Petty, U.S. Army Corps of Engineers,
Victor.G.Petty@usace.army.mil.

Appendix A: Parcel Map.



Appendix B: McGuire Average Daily Interval Data

Substation 2 15-minute load data (Wh)

0:15	0:30	0:45	1:00	1:15	1:30	1:45	2:00	2:15	2:30	2:45	3:00
3:15	3:30	3:45	4:00	4:15	4:30	4:45	5:00	5:15	5:30	5:45	6:00
6:15	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00
9:15	9:30	9:45	10:00	10:15	10:30	10:45	11:00	11:15	11:30	11:45	12:00
12:15	12:30	12:45	13:00	13:15	13:30	13:45	14:00	14:15	14:30	14:45	15:00
15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00
18:15	18:30	18:45	19:00	19:15	19:30	19:45	20:00	20:15	20:30	20:45	21:00
21:15	21:30	21:45	22:00	22:15	22:30	22:45	23:00	23:15	23:30	23:45	0:00

Sub 2 Max

906975	902216	901503	875861	869807	853007	866829	868968	848417	841850	863648	850112
850785	880803	871085	883515	891674	916092	936490	901776	937622	932972	962682	996130
963138	1014718	1045143	1054059	1068784	1098011	1091105	1079504	1108800	1128536	1129448	1136258
1145324	1155503	1178647	1184400	1194645	1200976	1142309	1157203	1143891	1141591	1161655	1175993
1186744	1192812	1199941	1219511	1207305	1225355	1235467	1224073	1193211	1200575	1204596	1187462
1202079	1157677	1135474	1118233	1092038	1068341	1063829	1041002	1045269	1024734	1006444	982523
958157	987216	994460	1013699	1003102	1030227	991667	986288	981954	962014	939533	932611
936857	937129	921100	917830	913122	909367	893290	885736	889568	902774	890154	876264

Sub 2 Average

674270	673095	675554	673084	667318	665759	666023	665089	665009	662009	662190	659382
660189	671941	681183	685755	691917	697557	703976	710596	722914	721778	724355	731436
742119	757565	771362	780653	793490	806881	814938	815420	822114	830962	834855	839438
841793	840897	848539	853627	857612	853841	846921	845166	851052	854003	855297	853674
858870	863479	864881	866558	863206	866279	869299	873229	867066	862178	856804	846363
837398	828062	813664	805472	793415	787609	782726	769154	760548	747598	739211	733606
725592	730012	731384	737993	734758	734218	729490	725241	722228	721973	711569	707346
702143	695986	693620	692701	686718	681837	675739	673681	672549	671637	668758	664793

Sub 2 Min

503445	512769	515576	519302	517462	517444	512359	517482	514787	520303	517238	519253
514933	518235	519968	531948	529799	533137	532702	534555	543452	524825	520003	492570
507469	499657	506377	499618	505478	500738	505351	503575	508346	511174	419251	478629
502207	500813	366495	371746	391771	503847	512785	495848	520956	504058	515452	498158
516698	513886	371422	365822	373141	371629	370009	370689	371894	366206	373816	373160
374974	378386	374529	368069	381128	376850	377900	377796	372549	372881	371938	376050
368353	370989	369954	400435	398325	405515	403095	403105	399561	405479	409122	404777
403079	395376	392323	394554	394957	397796	393188	395413	384923	390561	385104	387309

Substation 3 15-minute load data (Wh)

0:15	0:30	0:45	1:00	1:15	1:30	1:45	2:00	2:15	2:30	2:45	3:00
3:15	3:30	3:45	4:00	4:15	4:30	4:45	5:00	5:15	5:30	5:45	6:00
6:15	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00
9:15	9:30	9:45	10:00	10:15	10:30	10:45	11:00	11:15	11:30	11:45	12:00
12:15	12:30	12:45	13:00	13:15	13:30	13:45	14:00	14:15	14:30	14:45	15:00
15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00
18:15	18:30	18:45	19:00	19:15	19:30	19:45	20:00	20:15	20:30	20:45	21:00
21:15	21:30	21:45	22:00	22:15	22:30	22:45	23:00	23:15	23:30	23:45	0:00

Sub 3 Max

1412342	1386752	1406136	1392828	1378383	1379041	1378762	1379601	1360576	1350341	1359042	1348286
1338069	1335207	1324913	1339623	1364887	1360396	1356214	1355070	1364068	1356047	1354985	1372516
1349958	1359433	1345611	1354768	1346837	1416015	1470061	1472440	1443821	1460235	1475403	1454122
1468692	1462254	1491456	1518366	1515036	1527378	1532708	1515737	1508328	1495066	1488834	1515371
1506865	1496499	1537186	1529384	1557014	1514461	1541612	1545001	1573866	1568831	1542979	1573769
1634762	1629324	1581755	1541763	1593868	1596231	1611563	1595008	1614855	1652788	1628765	1614494
1620859	1618598	1579641	1590972	1638498	1627182	1625540	1582320	1573078	1554958	1575777	1541054
1533740	1523915	1503165	1475683	1465208	1451334	1452111	1431567	1436493	1437405	1413449	1415279

Sub 3 Average

1014751	1009049	1004589	998988	994734	990426	988314	985036	983254	980616	978611	974441
974776	976350	978519	984612	999374	1000620	994505	991343	994710	1000774	996161	992107
994324	992778	997202	1002952	1008881	1016477	1020043	1021099	1025812	1029708	1030413	1030187
1031921	1031091	1030110	1028017	1032478	1032977	1035606	1035907	1038769	1038568	1045067	1046669
1041069	1040773	1046325	1051377	1056136	1058364	1062544	1065242	1074345	1078741	1083180	1086441
1090176	1093679	1093074	1092171	1098994	1102722	1104857	1106313	1104654	1108391	1109944	1114733
1116811	1124768	1130334	1139466	1147536	1159590	1165766	1160266	1152798	1145788	1138110	1126603
1105982	1090260	1075851	1067389	1049726	1041947	1036691	1030084	1033662	1028346	1022309	1016788

Sub 3 Min

766125	767451	760216	754026	754146	758226	758706	754009	751005	754405	757273	743964
756322	755083	758230	760370	780685	784144	784387	762741	762575	767344	754328	747824
762859	745343	754236	732520	736865	742562	735336	745841	735337	726311	695684	686972
694352	684182	669108	667299	669941	654644	660957	649598	647036	641188	637669	561948
417215	418098	417646	407945	423526	431482	425804	425161	424950	426958	416790	419753
414624	414156	409131	408756	398815	393686	395737	391916	382547	370183	379994	372982
376726	382855	389871	387088	379996	378428	389140	367730	365168	364014	355236	353078
350026	346006	339999	345203	327591	323814	326460	317793	317172	315255	306325	302539