

Site Visits:

CITY OF HOUSTON

REQUEST FOR INFORMATION (RFI) ENERGY TECHNOLOGY IMPLEMENTATION (POWER GENERATION AND RESILIENCY STRATEGY) HOUSTON AIRPORT SYSTEMS

SOLICITATION NO.: HJA-RFIPGR-2023-021

Date Issued: April 14, 2023

Information Session and Thursday May 4, 2023 @ 10:00 A.M., local time, at

HAS-IDO Bldg., Wright Brothers Conference Room,

111 Standifer Drive.

Site Tour: May 4, 2023, 11:00 A.M., after the information

session.

Pre-proposers Questions Deadline: June 22, 2023 By 3:00 P.M. CST

RFI Submittal Due Date: Thursday, July 27, 2023 @ 2:00 P.M., local time

Solicitation Contact Person: Jorge Ardines

Sr. Procurement Specialist jorge.ardines@houstontx.gov.

(281) 233-1620

Project Summary: The Houston Airport System (HAS) is seeking information from entities who will be qualified for the design, build, finance, operation, and maintenance of energy producing systems for George Bush Intercontinental Airport (IAH). The entity will design, build, finance, operate and maintain energy producing and storage systems to serve IAH. Interested entities should also have a plan for connection of the new energy resources to the loads in the terminals and elsewhere at IAH along with maintaining these connections.

REQUEST FOR INFORMATION (RFI)

Power Generation and Resiliency Strategy for George Bush Intercontinental Airport

Date: April 14, 2023

TABLE OF CONTENTS

PAR	T 1 – GENERAL INFORMATION	2
1.0	GENERAL INFORMATION	2
5.0	PROCUREMENT PROCESS OVERVIEW	5
15.0	ATTACHMENTS	
ATT	ACHMENT A SCOPE OF SERVICES	11
ATT	ACHMENT B ENERGY ROADMAP	14

REQUEST FOR INFORMATION (RFI)

PART 1 - GENERAL INFORMATION

1.0 **GENERAL INFORMATION**

- 1.1 Houston Airport Systems (HAS) is choosing a pro-active approach to meeting its future energy needs. The success of George Bush Intercontinental Airport (IAH) is improved with more resilient, clean, and affordable energy to meet IAH electricity and thermal energy needs. HAS currently pays about 5 cents a kWh so any solution should be within this price range. This RFI is the first step in a process that HAS will follow in the development of its energy future for IAH.
- The expectations of this RFI are to collect industry input that can be applied or included in the development of a subsequent Request for Qualifications (or Statement of Qualifications) and Request for Proposals (RFP) that will identify potential vendor partners for delivering the energy Project that contains specified services and a defined scope of work. For now, this RFI is seeking information and input for innovative strategies and approaches that support attainment of the following HAS/IAH goals:
 - Economic: Attaining lowest long term levelized cost of energy
 - Resilient: Assurance of reliable energy delivery to IAH operating facilities
 - Clean: Support emission reductions for IAH and the region
 - Sustainable: Comprehensive solutions that don't compromise energy and environmental needs of future generations within the IAH region
 - Low risk: Proven technologies and business model that reduce risks to HAS
 - Flexible and scalable: Provide options or choices for how HAS will continue meeting the ever-changing energy requirements set forth by airlines, concessionaires, vehicle rentals, vendors and other airport stakeholders
- 1.3 HAS is open to the Energy-As-A-Service (EAAS) or PPA (Power Purchase Agreement) business model provided by a firm (or team) with competencies to Design, Build, Finance, Operate and Maintain (DBFOM) the Project (the DBFOM Firm).
- 1.4 The DBFOM team consists of a Prime respondent and affiliated partners, joint ventures, vendors and subcontractors that collectively can deliver each component of the business model. Design services must include Texas registered Professionals. Build services must include contracting expertise to construct the new energy measures. Financing services must include an option for the provider of the energy services to fund the required investments in capital and subsequent operations. Operations and Maintenance services related to the new energy assets must be provided by the energy services provider and require minimal involvement of HAS O&M teams.
- 1.5 Firms that do not offer all DBFOM services are encouraged to team with others to arrive at a complete team that can respond to the future DBFOM solicitation. HAS seeks to avoid a piecemeal approach that apportions DBFOM responsibilities across multiple suppliers. However, HAS will accept responses from firms that provide any of the DBFOM services but do not qualify as a single point of responsibility as Prime provider of DBFOM services. Respondents to this RFI shall identify the expertise(s) provided.
- 1.6 EAAS (Energy as a Service) or PPA (Power Purchase Agreement) are financial models whereby

customers pay a provider for delivery of energy services such as electricity, chilled water cooling or hot water heating, without having to make any upfront capital investment. The provider of the Project supplies financial capital to design, build and operate the new energy assets over a long-term contract (15 to 20 years). The provider of the Project collects revenue based on delivery of energy commodities (electricity, cooling and/or heating).

- 1.7 Respondents to this RFI are encouraged to present for consideration any energy resource measure (ERM) that can produce or store or deliver electricity or thermal energy that meets the IAH requirements for clean and resilient electric power, chilled water cooling and hot water heating. The new ERM technologies need to diversify IAH's fuel dependency and improve IAH's flexibility or choices for meeting energy demand.
- Recommended technologies to meet demand should be commercially proven and not be a nascent or introductory deployment. Technologies for consideration include solar photovoltaic (PV), energy storage (battery and thermal), "hydrogen ready" natural gas generators, integrated combined heating and power systems, heat pumps (ground source, air source, water source), small wind turbines, fuel cells, advanced load management controls, integration of electric transportation vehicles (autos, ground support equipment, electric aircraft) and other technologies as recommended for consideration by the DBFOM Firms that respond to this RFI. New ERM 's shall prioritize clean air options that reduce air emissions for IAH and the Houston region.

2.0 PROGRAM BACKGROUND

- 2.1 IAH overall onsite demand is expected to grow (see the Energy Roadmap Exhibit B for indicative energy capacity requirements, for multiple years). The indicated energy capacity requirements are relevant for consideration when responding to this RFI and will be revised for the subsequent RFQ/P. HAS would like to see new technologies presented that further diversify fuel mix beyond the two existing primary energy resources (grid power and pipeline natural gas).
- The future Project should provide energy capacity to meet 100% of the IAH needs, while also including a plan for redundant power. HAS has no priority or preference of technologies in meeting its requirements. In support of hosting new onsite energy assets, HAS has ample land and large roof and parking deck surfaces. The lease spaces shall be restricted to activities that support HAS power generation needs. DBFOM firms are encouraged to suggest spaces, locations and easements that should be considered for sighting and connecting new energy equipment.
- 2.3 Some of the large green space opportunities are indicated in the attached scope of work. IAH is receptive to including within this RFI the co-development of other uses for green spaces such as providing flood mitigation measures (i.e., provide a dry detention area).
- 2.4 During the future RFQ/P phase the selected DBFOM Firm will collaborate with HAS to establish the scale of planned onsite generation capacity additions and technologies for each year, taking into consideration the expected growth in demand and other IAH requirements.
- 2.5 New ERM's must be reliable and resilient under any weather condition and therefore any new ERM's that provide intermittent power (such as solar or wind) must be accompanied with technologies that assure 100% capacity availability and energy delivery during prolonged weather events or grid utility outages. Fuel diversity is encouraged to include renewable energy as well as pipeline natural gas and possible onsite fuel storage to assure resiliency. Any new

natural gas electric generation systems must address possible transition to hydrogen fuels. As the Clean Energy Capital of the World, multiple local initiatives are underway in Houston to further commercialize hydrogen.

- One of the challenges of onsite energy production and distribution is the existing disaggregated and fragmented power distribution at IAH. IAH receives power at 12.47 kV through multiple delivery points and primarily through two substations (Greens Road and Intercontinental). Multiple individual CenterPoint Energy revenue meters serve crucial and non-crucial facilities at IAH. See Attachment A for overhead photos that provide an example of this phenomenon (see graphic for Central Terminal Areas East and West).
- 2.7 To meet IAH's energy requirements, new onsite ERM's must address interconnection to multiple existing meters while recognizing that many existing meters will experience growth in demand. In addition to growth in demand of existing meters, new distribution systems will be required to meet growth in IAH square footage and electrification of transportation (such as EV chargers in parking lots and garages).
- 2.8 HAS contracted with Texas Engineering Experiment Station (TEES) to facilitate the development of this RFI solicitation, to identify potential DBFOM firm's or teams that maximize project value and resiliency for HAS. The procurement process initiates with this RFI that brings forward discussion of options for technology and business models, which will be followed by an RFQ/P to qualify potential DBFOM firms that can provide the required services, as well as clarify the expected economic and environmental impacts.

For this RFI, the Energy Roadmap (Attachment B) illustrates expected growth in demand and diversification of fuel mix. The numbers will be revised during the subsequent RFQ/P. This RFI seeks to expose Energy Resource Measure options that support HAS objectives for resiliency, long term energy price affordability, and emissions reductions.

2.9 **<u>Vision</u>**

- 2.9.1 Key to this Project's success is to support the Houston Airport System's Vision Statement to "Establish Houston as a five-star global air service gateway where the magic of flight is celebrated". The Project is expected to economically provide 100% of the energy needs of HAS facilities whenever the utility grid becomes unreliable while also reducing air emissions and improving fuel diversity and flexibility. HAS and the DBFOM provider will collaborate on a plan of implementation for a potential 15 to 30-year commitment. While initial capital investments are to be provided by the DBFOM Firm, HAS agrees to provide compensation to the DBFOM Firm by rechanneling existing IAH budgets for purchase of energy utilities and associated equipment operations, maintenance, and repair (or replacement).
- 2.9.2 Objectives for Project delivery are as follows:
- 2.9.2.1 Quality: Deliver a project that exceeds the minimum performance requirements as indicated in the Scope of Work.
- 2.9.2.2 Financial: Obtain long term pricing for energy commodities that improve HAS financial performance.
- 2.9.2.3 Schedule: Substantially attain IAH's energy goals (financial, resiliency, environmental) within 3 years after Project implementation.

- 2.9.2.4 Public: Provide a safe and effective project that minimizes emissions impacts and nuisance impacts to the public.
- 2.9.2.5 Sustainability: Comprehensive solutions that don't compromise energy and environmental needs of future generations within the IAH region.
- 2.9.2.6 Resiliency: Project shall provide continuous delivery of energy to IAH operating facilities whenever the traditional utility power becomes unreliable (see Attachment A for sampling of multiple electric meters).
- 2.9.2.7 Traffic: Always Maintain existing vehicle and pedestrian traffic patterns.
- 2.9.2.8 Risk: Effectively manage and achieve an optimal balance of risk allocation between HAS and the DBFOM firm.
- 2.9.2.9 Safety: Manage and implement an effective safety program incorporating industry best practices.
- 2.9.2.10 Accountability: Provide a single point of accountability for performance of all services under the DBFOM Agreement.
- 2.9.2.11 Collaboration: Provide for coordinated design development, with the DBFOM Firm eliciting HAS input in a manner that preserves DBFOM Firm's sole responsibility for the achievement of Project performance objectives while meeting HAS objectives associated with cost, quality, and long-term operability.

3.0 SOLICITATION SCHEDULE

3.1 The following schedule has been established for this Solicitation process. HAS reserves the right to modify the schedule during the Solicitation process. Changes and updates will be posted on the HAS procurement website:

(https://www.fly2houston.com/biz/opportunities/office-of-business-<u>opportunity</u>) via Letter(s) of Clarification.

EVENT	DATE (TBD)
Date RFI Published	4/14/2023
Pre-Submittal Conference (IDO Conference Room)	5/4/2023
Site Visit No.1 (site tour – transportation by HAS)	5/4/2023
Site Visit No. 2 (repeat tour – transportation by HAS)	6/1/2023
Questions from Respondents Due to HAS	7/22/2023
RFI Submittal Due from Respondent (Step One)	8/27/2023
Optional oral Interviews/Presentation	9/17/2023 (estimated)

4.0 PROCUREMENT PROCESS OVERVIEW

4.1 <u>Procurement Approach</u>

- 4.1.1 This Request for Information (RFI) represents <u>Step One</u> of the procurement processes that solicits information and input for innovative strategies and approaches that should be considered for meeting HAS technical, financial, and environmental requirements as indicated in Attachment A Scope of Work.
- 4.1.2 This RFI is directed to well qualified businesses within the energy industry to provide information, recommendations, suggestions, and guidance that may be used in preparing a subsequent RFQ/P (**Step two**) to design and construct, finance, and operate new energy infrastructure to support IAH.
- 4.1.3 Houston Airport Systems will conduct a Pre-Submittal Conference for this RFI solicitation. Please refer to the procurement schedule for time and place. At the Conference, HAS will present an overview of the Project scope, including the procurement process, schedule, and forms that to be submitted in response to the RFI.
- 4.1.4 A tour will be offered to allow interested parties to see some of the included IAH facilities and see a portion of the available green space to host ERM's. Attendance at the Pre-Submittal Conference and tours is highly recommended but is not required. Likewise, participation in this RFI is not a requirement for participation for the future RFQ/P.
- 4.1.5 **Step two** of the procurement process is to issue a RFQ/P. The responses to this RFI will be reviewed and evaluated for possible inclusion in a subsequent RFQ/P. The RFQ/P will require submittal of qualifications (Statement of Qualifications) by potential DBFOM firms that can deliver Energy Resource Measures and financial business models that maximize value to HAS. Also required in the RFQ/P will be proposals for delivery of specific scopes of work, energy commodity pricing and implementation planning in accordance with a DBFOM and EaaS/PPA business model.

5.0 RFI RESPONSE SUBMITTAL

5.1 **SUBMISSION FORMAT**

Houston Airport System's review committee will review the submissions based on the following criteria. Please be advised that the information received may be utilized in a forthcoming RFQ/P. For the response to this RFI, please copy the outline as provided herein and insert your response below each item.

A. Business Viability and Capability (Recommend maximum 6 Pages including graphics, etc.)

- 1. Corporate name.
- 2. DBA name if different from 1.
- 3. State of incorporation in the United States (or elsewhere).
- 4. Location of corporate headquarters.
- 5. Is the Company legally qualified to do business with the City of Houston, and within the State of Texas, and conduct all aspects of the subject project as required by Texas State and Federal law.
- 6. Explain the organizational chart that the Company will use to provide each of the required DBFOM activities (Design–Build-Finance-Operate-Maintain)?
- 7. Geographic coverage of business activities.

- B. Does your company or team have the operational expertise and field experience to assure the ongoing integrity and performance of this Project, year after year? Services (Recommend maximum 25 Pages including graphics, etc.)
 - 1. Describe the Company's mission, vision, and core competencies.
 - 2. Describe whether and how the Project and the DBFOM and EaaS business models fit into your traditional scope of competitive service offerings.
 - 3. Describe why the Project is of interest to your company.
 - 4. Would your company propose to deliver the Project as a prime, as a form of joint venture or as a member of a consortium?
 - a. If not the prime, in what role would you foresee your company participating?
 - b. Why and how are you qualified to perform in the anticipated Project capacity?

C. Energy Initiatives Project Approach (Recommend maximum 25 Pages including graphics, etc.)

- 1. Explain your vision for the Project.
- 2. Identify your Company's planned approach and delivery method that meet HAS's stated objectives?
- 3. Energy as a Service (or PPA) financing model is suggested for providing revenue to the DBFOM firm. What other funding options and incentives, grants, rebates, etc. should HAS consider that avoids a capital investment or encumbrance by HAS while allowing for off balance sheet funding and will take advantage of provisions of Inflation Reduction Act or other incentives?
- 4. The delivery model for the Project is envisioned to have the Prime contractor provide services to design, build, finance, operate and maintain (DBFOM). What other iterations of this delivery model should be considered that will provide all of these services while spreading performance risks fairly to all participants? You are also free to suggest alternative delivery approaches.
- 5. Which delivery approach(s) would your Company be able to offer for the Project?
- 6. HAS's objective is to secure clean, resilient, and affordable energy over a fixed long term contractual period. What technical approaches (Energy Resource Measures) do you recommend for meeting the demand requirements set forth in the Energy Timeline (Exhibit B)?
- 7. Given that HAS wants to diversify its fuel mix and reduce dependence on any one or two energy resources, what do you recommend for optimal fuel mix?
- 8. Given that HAS is considering a long term contract for the Project, what do you recommend to maintain flexibility and scalability over the long term?
- 9. What is your company's approach for providing design services for the new ERM's within this Project?
- 10. What is your company's approach for providing building and construction services for the new ERM's within this Project?
- 11. What is your Company's approach for providing financing and cost recovery for the ERM's envisioned with this Project?
- 12. Explain resources for staffing, monitoring, operations, and repairs. What is your Company's approach for providing financing and cost recovery for the ERM's envisioned with this Project?

- 13. Describe your expectations regarding the schedule for design and construction.
- 14. What do you recommend for the term of the EaaS agreement?
- 15. What are the major issues and challenges that your Company perceives with the Project? (Please address all risks that your Company foresees; (examples: emissions permitting, utility interconnections, meter aggregation, competitive pricing for energy, development and implementation schedule, technology uncertainty, others, etc.)

D. Additional Information (Maximum: 20 Pages)

- 1. Please provide any other information or details you believe pertinent to the successful delivery and ongoing operations of the Project.
- 2. Describe any lessons learned from similar projects which would be beneficial in consideration of delivery of this project.
- 3. Any individual project profile should be limited to one page in length for each project.

6.0 RFI RESPONSE -SUBMITTAL INSTRUCTIONS

- Please indicate your interest to this RFI requirement by adhering to the following submittal procedure.
- 6.1.1 Submit 2 digital copies on memory sticks (USB drive one on each memory stick), labeled with the appropriate RFI name and number that includes a complete copy of all information, submitted in a sealed envelope to:

Houston Airport System Supply Chain Management Office

Attn: Cathy Vander Plaats

18600 Lee Road Humble, Texas 77338

- 6.2 HAS desires to minimize the submission of unnecessary RFI material. Please include the RFI identification number **HJA-RFIPGR-2023-021** on any submissions.
- 6.3 The envelope or package should clearly identify the name and address of the Respondent and indicate the contents to be: "Response to HJA-RFIPGR-2023-021: RFI IAH Power Generation & Resiliency Strategy".
- The deadline for submissions in response to this request for information is August 27, 2023 at 2:00 PM CST.

7.0 QUESTIONS ON THE RFI

Questions and comments regarding this RFI must be emailed to jorge.ardines@houston tx.gov

7.1 The deadline for requests for additional information and questions is May 4, 2023 @ 12:00

P.M. (Noon), CST. Please include the phrase RFI: HJA-RFIPGR-2023-021 in the subject line and provide all applicable contact information. HAS shall provide written responses to all questions received in writing before the additional information and questions deadline. Questions received from all Respondent(s) shall be answered and posted on HAS website

http://www.fly2houston.com/_ in the form of a Letter of Clarification (LOC). It is the Respondent(s) responsibility to ensure that they secure all correspondence.

8.0 GENERAL TERMS

- 8.1 Interested vendors are encouraged to submit information requested in this RFI. HAS may use this information as source material for a future RFQ/P.
- 8.2 All information provided, and expenses incurred must be at "NO COST" to HAS. All responses will be subject to the Texas Public Information Act (TPIA). Any proprietary materials and/or trade secrets that are submitted should be clearly and individually marked.
- 8.3 Houston Airport Systems will not be liable for any cost of work performed in the preparation and production of any RFI response. By submitting a response to the RFI, respondent agrees not to make any claims for, or have any right to, damages because of any misunderstanding or misrepresentation of the information, or because of any misinformation or lack of information in the RFI. The responses to the RFI shall become the property of HAS. HAS has the right to adopt, modify, or reject any or all ideas presented in any material submitted in response to the RFI. The information provided may be used in a future RFQ or RFP.
- 8.4 Since this RFI is designed as a tool to collect information and will not result in a procurement contract for the Project, it does not fall under the requirements of Chapter 252 of the Texas Local Government Code.

8.5 TPIA and Responses

 The purpose of the TPIA requirements is to promote the public's right to know the process of governmental decision-making and to grant maximum public access to governmental records.

Thus, a member of the public may submit a TPIA request for disclosure of the contents of the responses submitted to HAS in response to this RFI. The responses of respondents are subject to disclosure under the TPIA. However, pursuant to Section 552.110, a governmental agency may except from disclosure information that qualifies as a trade secret or commercial and "financial information privileged or confidential by statute or judicial decision." Mark clearly in your RFI response, any information you claim as proprietary, copyrighted or rights reserved which may be protected from disclosure under the TPIA.

 If there is information in your response, which you claim meets the requirements set forth by Section 552.110 of the TPIA; you must inform HAS in a letter or by email, accompanying your response.

8.6 Houston Airport Systems reserves the right to:

- 1. Postpone or cancel this RFI upon notification to all RFI respondents.
- 2. Amend the specifications after release with appropriate notice to all RFI respondents.
- 3. Request RFI respondents to present supplemental information clarifying their responses,

either in writing or in a formal presentation.

9.0 ADMINISTRATIVE INFORMATION

9.1 All recommendations and comments are welcomed and will be reviewed and considered. All recommendation(s) of good merit and clear business logic and methodology may be used and incorporated into the final RFQ/P solicitation document.

10.0 RESPONSE TO REQUEST FOR INFORMATION DELIVERY INSTRUCTIONS

10.1. The response packages shall be submitted in one (1) envelope or box **clearly** identified and addressed as follows:

RESPONDENT NAME_____
CONTACT NAME____
CONTACT EMAIL___
CONTACT PHONE NUMBER_____

RFI - HJA-RFIPGR-2023-021

Attention: Cathy Vander Plaats Aviation Procurement Officer Supply Chain Management

1860 Lee Road Humble, TX 77338

Label in Upper Left-Hand Corner

Label in Center

11.0 <u>ATTACHMENTS</u>

Attachment A – Scope of Services Attachment B – Energy Roadmap

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ATTACHMENT A SCOPE OF SERVICES

Scope of Services and Design Criteria

Houston Airport Systems is seeking qualified DBFOM Firms that can propose a program that delivers and operates new onsite energy resources and assets by using a Design-Build-Finance-Operate-Maintain (DBFOM) business model.

Design services using Texas registered professionals as required per this solicitation.

Build or Construction services by licensed contractors and subcontractors, in accordance with City of Houston and HAS requirements as referenced in this solicitation.

Financing of the project costs, including professional services, construction, and commissioning. Also include a mechanism for recovery of costs over the term of the proposed project agreement. Such financing mechanisms may be is an Energy as a Service or Power Purchasing Agreement or similar.

Operations and **Maintenance** services to assure the performance of the onsite generation assets during a multi-year O&M agreement. The term of the O&M agreement shall be commensurate with the term of the EaaS or PPA.

The intent of the Project is to provide IAH with onsite energy resources that assure continuation of "essential" services for an indefinite time whenever the utility grid becomes unreliable. Such equipment and services should result in positive impacts to the regional air quality, be sustainable over many decades of time, and be affordable when compared to HAS's historical costs for energy, including the associated HAS costs to operate, maintain and replace the affected energy infrastructure over time. Additionally, the new onsite energy services need to be flexible and scalable to accommodate new fuels such as hydrogen and expected growth in electric vehicles and aircraft.

The Design Criteria and Scope of Services provided herein provides additional background of the expectations and needs of IAH. The scope of equipment and services to be delivered includes onsite energy production equipment with electrical (and thermal as applicable) capacity to meet or exceed the maximum demand of the IAH. HAS is making available multiple locations for the sighting of new ERM's as indicated herein.

See the chart below and Energy Timeline for indication of capacities that should be considered for responding to this RFI. These numbers are indicative only, for use in development of responses to this RFI. The capacities or "mix" of each Energy Resource Measure will be updated at the RFQ/P step based on input of Respondents and other owner variables.

Available green spaces for large solar farm, energy storage and other ERM's could be east of JFK Blvd. and the FAA facility. This may require multiple conduits in a new underground duct bank in the easements along JFK to reach point of interconnecting to existing meters. Service voltage may need to be 12.47 kV to avoid losses. The space could accommodate a new substation if required for aggregation of large capacities of ERM's. Coordination with CenterPoint electric is required insofar as provisions of new substation.

POWER GENERATION & RESILIENCY STRATEGY RFI NO.: XXX

For one of our green spaces in the southeast the acreage is predominately densely wooded with 10 identified wetland areas scattered throughout, a 1.05-acre pond in the south, and an approximate 45-acrea dry-bottom detention basin in the north. Of the 10 wetland areas, there are 7 classified as palustrine forested (PFO) ranging from .07-acre to 2.08-acres (average of 0.78-acre) and 3 classified as palustrine scrub-shrub (PSS) ranging from .07-acre to .25-acre in size. The 100-year floodplain extends from Reinhardt Bayou approximately 4500 feet into the acreage from the northeast at Lee Road to the south-central area. One of the 7 PFO wetland areas of 0.12-acre lies within this floodplain. Wetland jurisdictional determination efforts are currently underway and should be available in the Summer of 2023.

Most of the acreage was purchased from the Jetero Ranch Company except for the northeast quadrant purchased from Danjo Associates, LTD. Although there are no known suspected areas of contamination, HAS recommends that a Phase I Environmental Assessment be performed to assess environmental conditions. Additionally, HAS recommends the preparation of Section 163 documentation to determine FAA authority in accordance with most recent instructions regarding Airport Layout Plan reviews. HAS does not anticipate the acreage to be associated with any of the FAA zones of interest.



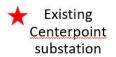




Figure 1 IAH Property and Available green space for solar and other Energy Resource Measures

POWER GENERATION & RESILIENCY STRATEGY RFI NO.: XXX



Figure 2 Overview of existing CenterPoint electric meters - Central Terminal Area Wes

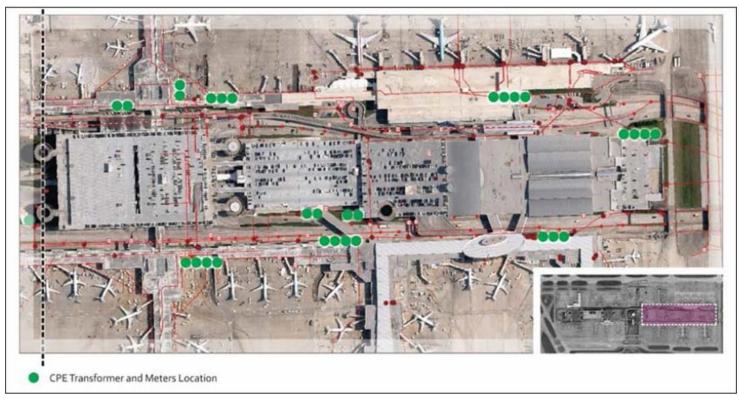


Figure 3 Overview of existing CenterPoint Electric meters - Central Terminal Area East

POWER GENERATION & RESILIENCY STRATEGY RFI NO.: XXX

ATTACHMENT B ENERGY ROADMAP

Electric Demand Growth (MW) - 2023 to 2030											
Area of Growth	2023 Base Year	2024	2025	2026	2027	2028	2029	2030	Growth Only		
Expansions of Central Terminal Areas:											
Terminal A: Renovation and Expansion					1.5	1.5			3		
Terminal B: Two new North Concourses				5					5		
Terminal C, D and E Renovation								1.0	1.0		
Electric Vehicles - Airport Fleet											
HAS Fleet		0.3	0.3	0.3	0.3	0.3	0.3	0.3	2		
Electric Transportation											
Electric Vehicles (EV) - Rental Agencies			1.3	1.3	1.3	1.3			5		
EV - Customer Parking - Level Two			1	1	1	1	1	1	6		
EV - Two Rapid Charger Power Stations (4.5 MW each)						9			9		
Electric Vertical Take Off And Landing Aircraft (1 MW ea.)				1	1	1	1	1	5		
Three (3) Electric Airplanes(1 MW ea.)								3	3		
MW - Growth	35	0	3	9	5	14	2	6	39		
Diversification Factor		80%	80%	80%	80%	80%	80%	80%	80%		
Diversified Demand	35	35	37	44	48	59	61	66	30		

Figure 4 Anticipated Load (MW) for RFI Planning Purposes - To Be Updated for Future RFQ/P

This RFI is to solicit discussion for accommodating future load growth and fuel diversification for IAH. Year 2024 represents the energy requirements and Energy Resource Measures anticipated for that year. The year 2027 and 2030 indicate growth in energy requirements to be considered for this RFI.

< END OF RFI DOCUMENT >