

GOVERNMENT OF THE DISTRICT OF COLUMBIA
DEPARTMENT OF GENERAL SERVICES



**DETERMINATION & FINDINGS
FOR
SOLE SOURCE PROCUREMENT**

Purchasing Agency: Department of General Services
Caption: Supply and Demand Consulting Services
Contractor: New City Energy LLC (“New City Energy” or “Contractor”)

FINDINGS

1. AUTHORIZATION:

D.C. Official Code §2-354.04 and Title 27 DCMR 4718

2. MINIMUM NEED:

The Department of General Services’ Sustainability and Energy Management Division (DGS-SE) relies on multiple databases and software tools to support delivery, administration and quality assurance on more than \$90M in annual utility costs spread over 30+ million square feet of owned real estate, which supports more than 60 District agencies. In addition, DGS-SE supports data-driven building performance optimization through multiple programs that rely on both utility data and additional data and documents related to portfolio and facilities management. DGS-SE needs consulting support for day-to-day administration and strategic program development related to these complex data resources.

The utility-related (supply-side), professional services required include daily/monthly support for fixed cost data acquisition, validation, integration, budgeting, and reporting, including the following specific services that should be billed hourly by a team with appropriate expertise:

- Data analysis and communications development;
- Senior program management, admin, and IT support;
- Data collection, integration, and quality assurance, from multiple sources including the following:
 - PEPCO EDI
 - PEPCO GREEN BUTTON CONNECT SERVER

- ENERGYCAP BILL MANAGEMENT PLATFORM
- PJM MARKET SETTLEMENTS REPORTING SYSTEM
- LOCUS SOLAR DATA API
- AVANGRID WIND DATA API
- SOAR DGS PAYMENTS TRACKING DB;
- Development of reporting on fixed costs for the following purposes:
 - Fixed Cost Budgeting
 - Quarterly Reforecasting
 - Service-Level-Agreement-Compliant Agency Cost Reporting; and
- Related Strategic Advisory Support and Communications.

The retrofit and energy conservation related (demand-side), professional services required include daily/ monthly support for data-driven retrofit program development, including the following specific services that should be billed hourly by a team with appropriate expertise:

- Retrofit program development;
- Project monitoring and evaluation reporting;
- Dedicated DCPS program support liaison;
- Senior program management, admin, and IT support;
- Data collection, integration, and quality assurance, from multiple sources;
- Program tracking software (GRITS 3.0 or equivalent); and
- Related strategic advisory support and communications.

3. ESTIMATED FAIR AND REASONABLE PRICE:

The estimated reasonable price is Nine-Hundred Forty-Five Thousand Dollars (\$945,000.00).

4. FACTS WHICH JUSTIFY A SOLE SOURCE PROCUREMENT:

Due to the integrated nature of building performance and utility services management, and the reliance on extraction and management of each of the below data sets and/or software tools, a single vendor should be responsible for managing the required integration and reporting, as related to both (a) fixed cost and electricity supply optimization and (b) data-driven retrofit program management.

The data and services that DGS-SE relies on, and which will be drawn upon in the proposed services, include the following:

PEPCO EDI: The District government relies on daily XML transmissions via FTP from Pepco, which are parsed, processed, and uploaded into DGS-SE's EnergyCAP utility bill management platform. New City Energy has worked closely with PEPCO to digest and manage this data feed.

PEPCO GREEN BUTTON CONNECT: Pepco provides interval electricity meter data via API in the Green Button format, which can be used to track building electricity usage and validate utility billing information. New City Energy has worked closely with PEPCO to digest and manage this data feed.

PEPCO KYZ PULSE DATA ACQUISITION: Pepco's smart meter infrastructure is not comprehensive, so additional hardware and separate data acquisition is required to access interval data for those meters. New City Energy has worked closely with Pepco to digest and manage this data feed.

ENERGYCAP BILL MANAGMENT PLATFORM: This is the unified bill management platform that DGS-SE uses to manage utility billing. New City Energy has experience implementing EnergyCAP and in extracting appropriate data from the EnergyCAP API.

PJM MARKET SETTLEMENTS REPORTING SYSTEM: DGS relies on a PJM sub-account for administration of their electricity supply, and essential data regarding this sub account is available through the PJM market Settlements Reporting System. New City Energy has experience with the MSRS system and in compiling and analyzing this obscure and complex data set.

LOCUS SOLAR DATA API: DGS-SE manages solar arrays at 54 locations, most of which report hourly on-site generation via Locus API. This information is used to validate solar electricity billing and to create total building electricity usage at solar sites. New City Energy has experience working with the Locus API and has successfully used this data feed to support analytical and performance management programs.

AVANGRID WIND DATA API: The District government purchases about 30% of its electricity directly from a wind farm in southwestern Pennsylvania. The amount generated by this wind firm is reported via the Avangrid API and is used to validate wind electricity billing and inform electricity purchasing decisions.

SOAR DGS PAYMENTS TRACKING DB: DGS-SE relies on a SOAR database for tracking payments transactions. New City Energy has experience working with SOAR data.

ARCHIBUS PORTFOLIO MANAGEMENT DB: The DGS Portfolio Division maintains a Portfolio and Project database that is used by DGS-SE to track a variety of building conditions, including occupancy and status. New City Energy has experience working with ARCHIBUS data

iPLAN FACILITIES CONDITION ASSESSMENT DB: iPlan contains a variety of building documentation, generally including mechanical drawings, controls drawings and architectural drawings. DGS-SE relies on this material to support building retrocommissioning. New City Energy has experience working with iPlan data.

SALESFORCE FACILITIES MANAGEMENT WORK ORDER DB: The DGS Facilities Management Division (DGS-FM) tracks work orders via Salesforce, which DGS-SE uses to monitor mechanical equipment repairs required to conduct building retrocommissioning. New City Energy has experience working with Salesforce work order data.

ENTELIWEB BUILDING AND ENERGY MANAGEMENT SOFTWARE: Enteliweb has been integrated with 60+ DGS-maintained facilities and is used by DGS-SE to monitor building efficiency and support the diagnosis of building operational failure as requested by DGS-FM. New City Energy has experience working with Enteliweb tools and data.

VOLTTRON SENSOR & CONTROLS NETWORK*: VOLTTRON has been integrated with 30+ DGS-maintained facilities and provides real-time monitoring and historical reporting on building sensor network data, which is critical to building retrocommissioning and ongoing monitoring of building operations. New City Energy has unique experience working with VOLTTRON data. See the below details on the VOLTTRON Platform.

New City Energy is the only CBE/SBE with substantial experience in all of the above systems. Additionally, they have unique expertise with the Pepco Green Button API (which NCE beta-tested for Pepco) and VOLTTRON (NCE, working closely with PNNL staff, has facilitated implementation of the largest VOLTTRON deployment in the world).

New City Energy is the only qualified local resource that can quickly digest all of this relevant data and provide appropriate integrated data-driven solutions including skilled team members with experience in the relevant data and systems.

***WHAT IS VOLTTRON? (APPENDIX)**

PLATFORM OVERVIEW

VOLTTRON™ is an open-source distributed control and sensing platform for integrating buildings and the power grid. VOLTTRON connects devices, agents in the platform, agents in the Cloud, and signals from the power grid. The platform also supports use cases such as demand response and integration of distributed renewable energy sources. VOLTTRON provides an environment for agent execution and serves as a single point of contact for interfacing with devices (rooftop units, building systems, meters, etc.), external resources, and platform services such as data archival and retrieval.

DISTRIBUTED ENERGY MANAGEMENT

VOLTTRON™ generates powerful outcomes for distributed energy resources (DERs), buildings and the grid. The technology enables effective, secure coordination of DERs, including wind and solar generation and battery storage, with building energy loads and the power system. This offers significant new flexibility to the grid and supports large-scale DER integration, benefitting everyone from building owners and managers to power system operators, utilities, energy services providers and consumers. With VOLTTRON™,

data, devices and decisions connect seamlessly and securely based on user needs and preferences.

ENERGY EFFICIENCY

VOLTTRON™ enables secure, efficient management of a wide range of building-related functions, including heating, ventilation, and air-conditioning (HVAC) systems, electric vehicles, distributed energy resources, or even whole building loads. Building owners, management firms, energy services vendors and others are applying this versatile technology to maximize building performance and energy-efficient operations.

PLATFORM

Pacific Northwest National Laboratory (PNNL), with funding from the U.S. Department of Energy's (DOE's) Building Technologies Office (BTO), developed and maintains VOLTTRON as a reference transactional network platform to support buildings and grid integration. VOLTTRON source code includes agent execution software; agents that perform critical services that enable and enhance the functionality of VOLTTRON; and numerous agents that utilize the platform to perform a specific function (fault detection, demand response, etc.). The platform supports energy, operational, and financial transactions between networked entities (equipment, organizations, buildings, grid, etc.) and enhances the control infrastructure of existing buildings through the use of open-source device communication, control protocols, and integrated analytics.

VOLTTRON applications are referred to as agents since VOLTTRON provides an agent-based programming paradigm to ease application development and minimize the lines of code that need to be written by domain experts such as buildings engineers. VOLTTRON provides a collection of utility and helper classes that simplifies agent development.

OPEN SOURCE

To encourage development and growth of the platform, all VOLTTRON software, platform services, and agents are open-source and employ a BSD (Berkeley Software Distribution) style license, allowing the free distribution and development of the software. Contributing back to the project, which is encouraged but not required, enhances its capabilities for the whole community. The license supports organizations developing proprietary solutions on top of the open-source code.

SECURITY

Security is a primary feature for VOLTTRON. VOLTTRON provides security against unauthorized access to system data and unauthorized exercise of control functions. VOLTTRON isolates applications running on the platform from each other (if needed) and enforces resource utilization limits on the applications to ensure stability. VOLTTRON uses well-established and widely accepted security mechanisms including elliptic-curve encryption, authentication, and authorization.

5. CERTIFICATION BY ASSOCIATE DIRECTOR OF SUSTAINABILITY & ENERGY

I hereby certify that the above findings are true, correct and complete.

Date

Zach Dobelbower | Associate Director

6. CERTIFICATION BY THE CONTRACTS AND PROCUREMENT ASSOCIATE DIRECTOR/CONTRACTING OFFICER

I have reviewed the above findings and certify that they are sufficient to justify the use of the sole source method of procurement under the cited authority. I certify that the sole source notice of Intent to Award a Sole Source Contract was published in accordance with Section 404(c) of the District of Columbia Procurement Practices Reform Act of 2010 (D.C. Official Code §2-354.04) and that no response was received. As the Chief Contracting Officer at the Department of General Services, I approve the use of the sole source procurement method for this requirement.

Date

George G. Lewis, CPPO
Associate Director |
Chief Contracting Officer