RESOLUTION NO. 32734

A RESOLUTION AUTHORIZING THE ADMINISTRATOR FOR THE DEPARTMENT OF WASTEWATER TO EXECUTE A PROJECT SALE AGREEMENT AND OPERATIONS AND MAINTENANCE AGREEMENT WITH MAINSPRING ENERGY, INC., IN SUBSTANTIALLY THE FORM ATTACHED, FOR THE PURCHASE, INSTALLATION, OPERATION, AND MAINTENANCE OF LINEAR GENERATOR SYSTEMS, FOR AN AMOUNT NOT TO EXCEED EIGHT MILLION FIVE HUNDRED THOUSAND DOLLARS ($8,500,000.00), ON A SOLE SOURCE BASIS.

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF CHATTANOOGA, TENNESSEE, That it is hereby authorizing the Administrator for the Department of Wastewater to execute a Project Sale Agreement and Operations and Maintenance Agreement with Mainspring Energy, Inc., in substantially the form attached, for the purchase, installation, operation, and maintenance of linear generator systems, for an amount not to exceed $8.5 million, on a sole source basis.

ADOPTED: December 2, 2025

/mem

CHATTANOOGA PURCHASING DIVISION
SOLE SOURCE JUSTIFICATION FORM

Sole source purchases are goods and services available from only one supplier, and cannot be procured through the competitive bidding process because of the existence of a single source of supply, or other reason below. Justification for this basis must be provided, per purchase order.

Description of item/service, its function and cost estimate $ 8,500,000
Mainspring Linear Generators; purchase, installation, and maintenance agreements

This is a sole source vendor because:
_X__ Sole provider of proprietary rights, and/or is a licensed or patented good or service.
_X__ Sole provider of items that are repair parts of or upgrades to existing equipment/systems.
_X__ Sole provider of factory-authorized warranty service.
_X__ Sole provider with specialized facilities or technical competence.
_X__ Sole provider of unique equipment or products not offered by others.

Please attach the suggested vendor's letter stating the reasons that it is considered a sole source for the product/service.

What steps were taken to verify that these features are not available elsewhere?
(Attach any additional explanation)

___ Other brands/manufacturers were examined (List specific company names, phone numbers and contact names, and explain why there were not suitable)

___ Other vendors were contacted (List specific company names, phone numbers and contact names, and explain why these were not suitable).

_X__ What specific feature makes this item unique and why is this feature needed for your project?
The Only Flameless Biogas to Electricity Generator Available

Suggested Vendor: Mainspring Energy Inc.

Department: Moccasin Bend Environmental Campus Contact: William Cannon

My department's recommendation for sole source is based upon an objective review of the good/service being required and appears to be in the best interest of the City.

Mark Heinzer (Nov 17, 2025 18:36:48 EST) 17/11/2025

Department Head's Signature Date

Mainspring Energy
3601 Haven Avenue
Menlo Park, CA 94025
mainspringenergy.com

November 11, 2025

Company Overview

Mainspring Energy (Mainspring) was founded in 2010 and is headquartered in Menlo Park, CA. Mainspring manufactures a distinct category of onsite power generation called a linear generator, which produces electricity for utilities, data centers, microgrids, as well as other commercial and industrial customers. The product helps maximize efficiency, resilience, and flexibility in electricity production while significantly lowering both emissions and overall operating cost.

Mainspring's generation technology is fully dispatchable, which means it is able to ramp up and down and track both electricity demand and renewables production. Linear generators are fuel-flexible and can seamlessly switch between renewable fuels such as biogas, and hydrogen, as well as other conventional fuels such as natural gas and propane.

- There are no other companies that sell a Linear Generator with commercially operational projects in the field.
- Mainspring Energy holds over 120 issued patents with another 76 pending worldwide.
- Mainspring is the only provider of factory authorized service, parts and performance guarantees.

There are no other commercial companies in the world that manufacture, deliver, commission, service, maintain and operate Linear Generators today. Mainspring does not have any third party distributors operating in Tennessee.

How a Linear Generator works

The Mainspring Linear Generator is fuel flexible - it can produce electricity from natural gas and propane as well as non-fossil gaseous fuel such as biogas and hydrogen. Software control enables the linear generator to run on and switch between fuels without any hardware changes. The unique design enables the direct conversion of linear motion into electricity, resulting in an efficiency higher than turbines or engines and comparable to most fuel cells. The linear generator uses a non-combustion, low-temperature chemical reaction without a flame or burning, which results in near-zero criteria emissions

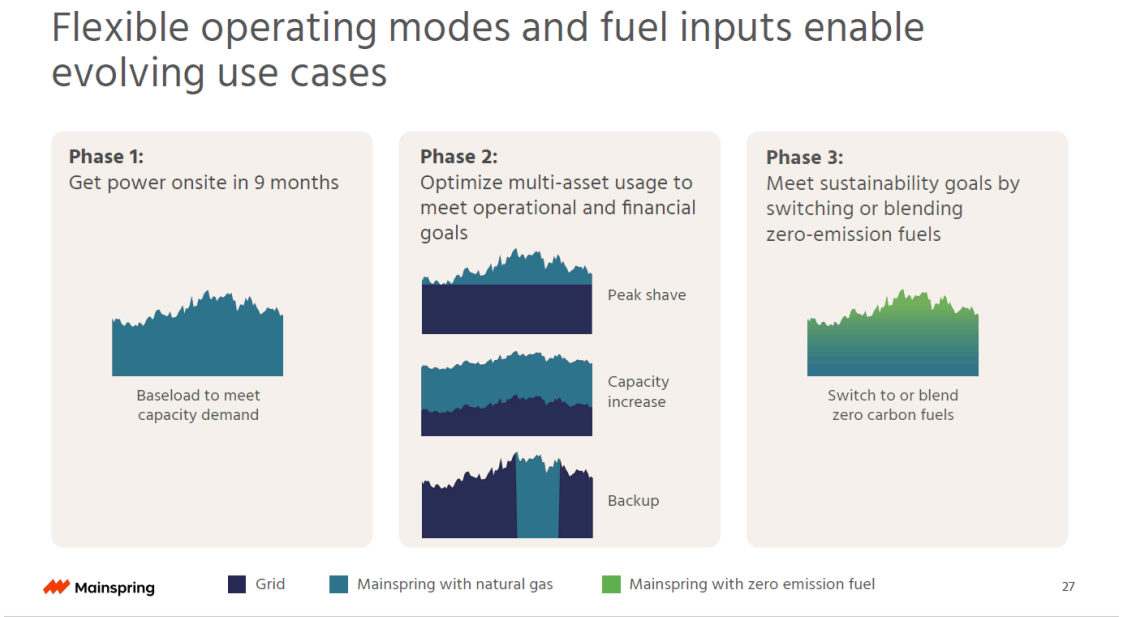
How does this enable low emissions

The low temperature reaction used in Mainspring Linear Generators keeps peak temperature below the temperature at which nitrogen oxides (NOx) form. This results in near-zero NOx emissions (<0.04lb/MWh) when running on natural gas, biogas or hydrogen. A testament to the environmental impact is the many units installed in the South Coast Air Quality Management District (SCAQMD), which has some of the most stringent emission requirements in the US. .

Product Benefits

Mainspring Energy's linear generator offers a revolutionary approach to onsite power generation, providing numerous benefits to diverse industries:

- Fuel flexibility: Linear generators can seamlessly switch between a variety of fuels, including natural gas, biogas, hydrogen, and propane. This flexibility ensures a future-proof solution that can adapt to evolving energy sources and sustainability goals. There are no other commercially available technologies that can switch between fuels on the fly without any hardware or software changes.



- High efficiency and low emissions: The unique design of linear generators allows for the direct conversion of linear motion into electricity, achieving high efficiency. Mainspring's Linear Generators are the only near zero emission technology with no efficiency or output degradation over it's useful life.

Comparison of non-combustion generators

	Linear Generators	PEM Fuel Cells	Solid Oxide Fuel Cells
Fuels	Natural gas, biogas, hydrogen, propane, any blend	Hydrogen Only (99.95% purity)	Natural gas, biogas, hydrogen (99.90% purity)
Fuel Switching	Seamlessly blend or switch any gaseous fuel	None	Asset replacement required to change fuel, no switching
Start Time	Seconds	Minutes	Hours
Output Range	Full (0-100%), without affecting asset life	Full range but with accelerated degradation	Very limited due to thermal properties and accelerated degradation
Degradation	None	Efficiency and output degradation	Efficiency and output degradation
Overbuild required due to degradation	None	40-60%	30-40%
Core technology life	20 years	~5 years	~5 years

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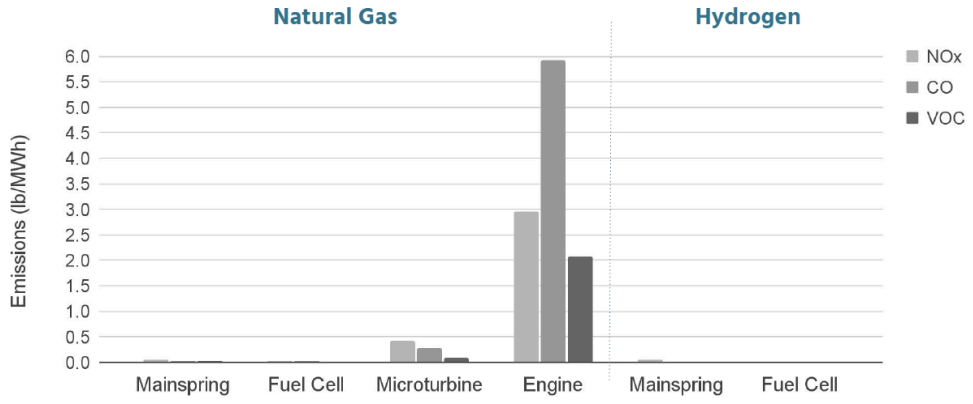
- Ultra-low emissions: The non-combustion, low-temperature chemical reaction results in near-zero nitrogen oxides (NOx) emissions and negligible particulate matter, making it an environmentally friendly option. There is no other dispatchable fuel based power generation technology that can achieve the near-zero emission profile of a linear generator without costly secondary aftertreatment systems.

Criteria emissions comparison



Assumptions: Mainspring emissions based on third party source tests; natural gas fuel cell emissions based on Bloom Energy and Doosan data sheets; microturbine emissions based on Capstone data sheets; and engine emissions based on EPA NSPS emissions limits for SI engines

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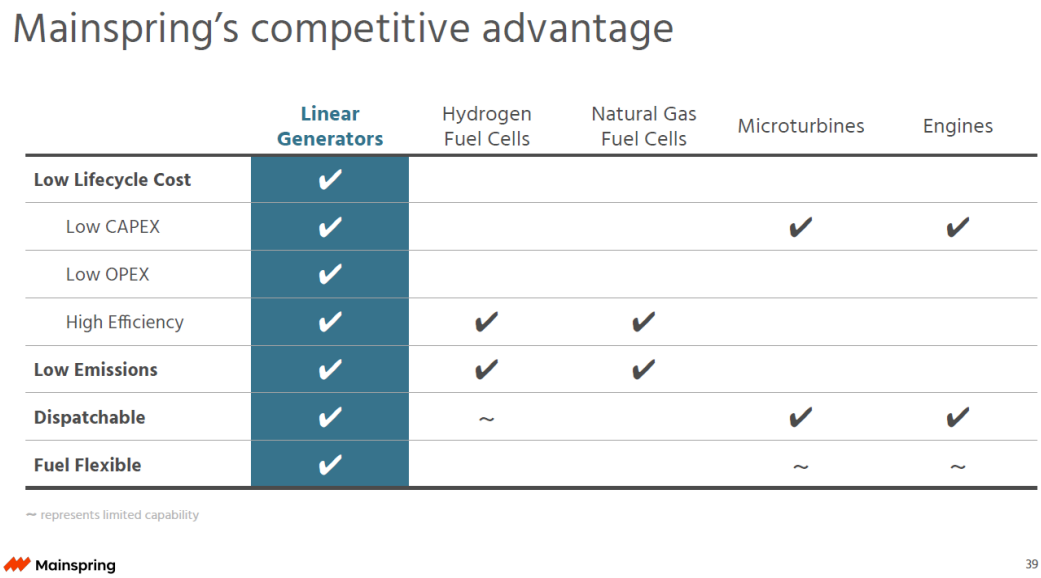
- Scalability and modularity: Linear generators are modular, enabling easy scalability to meet specific power needs. This modularity ensures resilience through redundancy, as multiple units can operate in parallel, enhancing reliability and uptime.

- Dispatchability: Mainspring's technology is fully dispatchable, capable of rapid ramping to match power output with demand. This feature is essential for integrating with renewable energy sources and maintaining system stability during fluctuating power demands.



Mainspring's competitive advantage

	Linear Generators	Hydrogen Fuel Cells	Natural Gas Fuel Cells	Microturbines	Engines
Low Lifecycle Cost	✔				
Low CAPEX	✔			✔	✔
Low OPEX	✔				
High Efficiency	✔	✔	✔		
Low Emissions	✔	✔	✔		
Dispatchable	✔	~		✔	✔
Fuel Flexible	✔			~	~

~ represents limited capability

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- Low operating and maintenance costs: Designed with only two moving parts and built from standard materials, Mainspring's generators operate without the need for oil, expensive catalysts, or complex mechanical systems. This simplicity translates to lower maintenance costs and a longer operational life. Mainspring's all inclusive Operations and Maintenance Agreement accompanying all installations provides guaranteed performance at a lower cost/kWh than any other competitor.

PROJECT SALE AGREEMENT

This PROJECT SALE AGREEMENT ("Agreement"), dated as of _____, 20__, ("Effective Date") is between MAINSPRING ENERGY, INC., a Delaware corporation ("Mainspring"), and , a _____ ("Buyer" and, together with Mainspring, the "Parties", and individually, a "Party"). Capitalized terms used in this Agreement have the meaning given in Exhibit A, the General Terms and Conditions ("GTCs") and, on a Unit and Site-specific basis, in the applicable Unit Purchase Supplement.

A. Mainspring is the manufacturer of linear generator power generators.

B. Buyer is the owner of one or more facilities which will benefit from on-site conversion of gas to electricity using Mainspring's linear generators.

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt and sufficiency of where are hereby acknowledged, the Parties agree as follows:

1. Suitability. Commencing on or after the Effective Date, at no cost to Buyer, Mainspring will assist Buyer in investigating whether a Site is suitable for Units and does not have any impediments to installation of a Facility. Execution of this Agreement does not guarantee that the Parties will identify any suitable Site(s), and Mainspring makes no representations or guarantees as to whether any particular Site is, or will remain, suitable for a Unit.

2. Agreement. If the Parties agree on a suitable Site, and Buyer wishes to purchase a Unit for the Site (including assuming any risks that may have been revealed through the processes described in Section 1, above), the Parties will complete and execute a Unit Purchase Supplement in the form of Exhibit B, including its Annex A (Linear Generator Specifications) and other applicable Annexes (upon completion and due execution by each Party, each a "UPS"). The Agreement is comprised of this cover page, the GTCs, each UPS with its Annexes, and each and every other Exhibit and Annex noted below in the Exhibit List or otherwise incorporated by reference into the GTCs or any UPS. Subject to the terms and conditions of the Agreement, following execution of a UPS, Mainspring will manufacture one or more Mainspring linear generators which complies with the Specifications set forth in Annex A to such UPS (each, a "Unit"), deliver each Unit to the Site, and install the Unit and BOF. For the avoidance of doubt, any references to a "Unit" at a Site shall include all Units installed at such Site.

IN WITNESS WHEREOF, the Parties by their respective duly authorized personnel have executed and delivered this Project Sale Agreement as of the Effective Date.

MAINSPRING ENERGY, INC.

By: _____
Name:
Title:

[BUYER]

By: _____
Name:
Title:

EXHIBITS

Exhibit A	General Terms and Conditions

OPERATION AND MAINTENANCE AGREEMENT

This OPERATION AND MAINTENANCE AGREEMENT ("Agreement"), dated as of _____, 20__, ("Effective Date") is between MAINSPRING ENERGY, INC., a Delaware corporation ("Mainspring"), and _____, a _____ ("Owner" and, together with Mainspring, the "Parties", and individually, a "Party"). Capitalized terms used in this Agreement have the meaning given in Exhibit A, the General Terms and Conditions ("GTCs") and, on a Unit and Site-specific basis, in the applicable Unit Schedule.

A. Mainspring has sold or has agreed to sell linear power generator(s) (as more particularly described herein, each a "Unit") to Owner.

B. The Parties desire to enter into this Agreement pursuant to which Mainspring will operate, maintain and monitor specified Units on behalf of Owner (as more particularly defined herein, the "Services").

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt and sufficiency of where are hereby acknowledged, the Parties agree as follows:

1. Agreement. Commencing on the Effective Date and continuing through the expiration of the latest expiring Operation and Maintenance ("O&M") Term (the "Term"), Owner hereby engages Mainspring to perform Services pursuant to this Agreement for each Unit identified on a Unit Schedule (the form of which is attached hereto as Exhibit B) and for the applicable O&M Term stated in each Unit Schedule, and Owner agrees to pay Mainspring for performance of such Services, all on the terms and conditions set forth herein, including in the GTCs and other Exhibits hereto, which are hereby incorporated by reference. The Agreement is comprised of this cover-page, the GTCs, each Unit Schedule, and each and every other Exhibit and Annex noted below in the Exhibit List or otherwise incorporated by reference into the GTCs or any Unit Schedule.

IN WITNESS WHEREOF, the Parties by their respective duly authorized personnel have executed and delivered this Operation and Maintenance Agreement as of the Effective Date.

MAINSPRING ENERGY, INC.

By: _____
Name:
Title:

[Owner Name]

By: _____
Name:
Title:

EXHIBITS

Exhibit A	General Terms and Conditions
Exhibit B	Form of Unit Schedule
Exhibit C	Insurance Coverages