

CENTRAL FLORIDA WASTE TO ENERGY  
INITIATIVE LETTERS OF COMMITMENT

Darren Gray  
County Manager  
Seminole County, Florida  
1101 East First Street  
Sanford, FL 32771



21 March 2024

## Letter of Support

Dear Mr. Gray,

On behalf of Bioman Florida LLC, I am pleased to provide this letter of support as a project partner in the comprehensive Central Florida Waste-to-Energy program detailed in Seminole County's application to the Environmental Protection Agency's Climate Pollution Reduction Grants (CPRG) – specifically the Implementation Grants General Competition. Bioman Florida LLC will serve as the subrecipient of the CPRG, and will be responsible for managing the EPC contract, operations and maintenance agreement, and energy sales agreements.

Bioman Florida LLC is fully committed to supporting the grant application process and subsequent long-term project phases aimed at designing, constructing, commissioning and operating an anaerobic digestion (AD) unit dedicated to the biosolids stream at our proposed organic food waste AD site in Orlando for the proposed Central Florida Waste-to-Energy program. Renewable natural gas will be generated from these difficult waste streams providing an environmental solution to the municipal's wastewater systems challenges. The wastewater sludge will be biologically stabilized and then further treated by the 374Water's Supercritical Water Oxidation (SCWO) unit to destroy the PFAS and other environmentally challenging components of the wastewater sludge.

The project benefits through the synergized approach of the plant. The existing site (Orlando Bioenergy LLC\*) that will become operational in Q4 of 2025 will process residentially and commercially sourced food waste, industrial organic byproducts, and agricultural waste using the same AD technology. The addition of a wastewater sludge stream through the CPRG, allows the sharing of technology, personnel, expertise, and equipment giving a more economical and viable solution than would be possible on a standalone biosolids facility, and so contributing to the successful implementation of this pioneering initiative to reduce GHG emissions in the Central Florida region.

Bioman Florida LLC is a daughter company of the Danish biogas company, Bigadan A/S, established in USA as Bigadan Americas Inc. Bigadan has through its 40-year history developed into a global leader in the biogas industry. Bigadan has built more than 40 large RNG facilities in over 17 countries, and currently operates 12 large facilities in Denmark and Germany.

## Bioman Florida LLC

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20 N Orange Ave Ste. 1100  
Orlando, FL 32801, USA



(+1) 650 714 2650



[sjj@bigadan.dk](mailto:sjj@bigadan.dk)



[bioman.dk](http://bioman.dk)



Bigadan has built biogas plants in the United States (EPC) and is currently developing projects across three states – Florida, North Carolina, and Wisconsin. Bioman Florida LLC and the project will leverage the considerable experience and expertise of Bigadan and will draw on the entire global organization. Below are a few examples of Bigadan A/S's successful programs:

- Climate friendly heavy transport for Arla – 4th largest dairy company in the world: Bigadan A/S supplies carbon-neutral compressed biogas to Arla's biogas trucks, which is partly produced from the manure of the approximately 500,000 cows on Arla farms throughout Denmark.
- Turning food waste to refrigeration: Horsens Bioenergi in Denmark produces liquid biogenic CO<sub>2</sub> by capturing, refining, and liquefying the CO<sub>2</sub> generated during anaerobic digestion. In partnership with Nippon Gases, this liquid CO<sub>2</sub> fuels the refrigeration units of leading retail chain, REMA 1000's delivery trucks.
- Turning insulin waste to energy: Kalunborg Bioenergi in Denmark procures organic by-products from Novo Nordisk and Novozymes' insulin production, which is yeast cream. This is transformed into biogas, which is upgraded for the gas network, and into high-quality fertilizer for local agriculture.

To learn more about Bigadan's successful journey into becoming a global leader in the biogas industry, visit our website at [www.bigadan.com](http://www.bigadan.com).

The Operations Manager Mr. Erik Lundsgaard, who will manage the operation of Orlando Bioenergy LLC, has decades of highly relevant experience managing large biogas facilities. In our experience, biogas plants such as those we currently design and operate can be expected to be operational for more than 30 years. Bioman Florida LLC is actively developing biogas plants in Florida and the wider region and is committed to the successful implementation of this pioneering initiative to reduce greenhouse gas emissions in the Central Florida region.

Should you have any questions about the role of Bioman Florida LLC in this project, please feel free to reach out to Søren Juul Jørgensen, who is Chief Executive Officer for Bioman Florida at [sjj@bigadan.dk](mailto:sjj@bigadan.dk) or (650) 714-2650.

Sincerely,

**Bioman Florida LLC**

Søren Juul Jørgensen  
CEO, Bioman Florida

Cc: George Woodring, Financial Grants Administrator



Darren Gray  
County Manager  
Seminole County, Florida  
1101 East First Street  
Sanford, FL 32771

26 March 2024

## Letter of Support

Dear Mr. Gray:

On behalf of Orlando Bioenergy LLC, I am pleased to provide this letter of support as a project partner in the comprehensive Central Florida Waste-to-Energy program detailed in Seminole County's application to the Environmental Protection Agency's Climate Pollution Reduction Grant Program: Implementation Grants General Competition.

Orlando Bioenergy LLC is fully committed to supporting the grant application process and subsequent long-term project phases aimed at owning and operating an anaerobic digestion (AD) unit dedicated to the biosolids stream at our proposed organic food waste AD site in Orlando for the proposed Central Florida Waste-to-Energy program. Renewable natural gas will be generated from these difficult waste streams providing an environmental solution to the municipal's wastewater systems challenges. The wastewater sludge will be biologically stabilized and then further treated by the 374Water's Supercritical Water Oxidation (SCWO) unit to destroy the PFAS and other environmentally challenging components of the wastewater sludge.

Orlando Bioenergy LLC will synergize with the following project partners:

- Bioman Florida LLC: Provide OPEX funding for the operation and maintenance of the biosolids stream at the Orlando Bioenergy facility.
- Nopetro Energy: Sale of renewable identification numbers (RINs) and compressed natural gas (CNG).
- Utility companies: Grid connections for natural gas and water use at the Orlando Bioenergy facility.
- Hauling companies: CNG plant ownership and truck operation.
- 374Water: Maintenance of the incoming and outgoing liquid effluent as well as solid ash.

## Orlando Bioenergy LLC

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- Seminole County: Disposal of the ash residue and liquid effluent.

Orlando Bioenergy LLC is a daughter company of the Danish biogas company, Bigadan A/S, established in USA as Bigadan Americas Inc.

Bigadan has through its 40-year history developed into a global leader in the biogas industry. Bigadan has built more than 40 large RNG facilities in over 17 countries, and currently operates 12 large facilities in Denmark and Germany.

One of those biogas plants is Solrød Bioenergy in Denmark that transforms food waste from the Danish capitol Copenhagen among other local organic waste into renewable energy and high-quality fertilizer for organic farming. The Orlando Bioenergy LLC facility will model the Solrød Bioenergy plant. Mr. Erik Lundsgaard will manage the operation of Orlando Bioenergy LLC. Mr. Lundsgaard has decades of highly relevant experience managing large biogas facilities including the three aforementioned facilities.

To learn more about Solrød Bioenergy, visit our website at <https://bigadan.com/cases/solroed-bioenergy>.

Sincerely,

**Orlando Bioenergy LLC**

Erik Lundsgaard,  
Director of Biogas Operations

Cc: George Woodring, Financial Grants Administrator

03/01/2024

Darren Gray  
County Manager  
Seminole County, Florida  
1101 East First Street  
Sanford, FL 32771

Dear Mr. Gray:

On behalf of 374Water Inc., I am pleased to provide this letter of support as a project partner in the comprehensive Central Florida Waste-to-Energy program detailed in Seminole County's application to the Environmental Protection Agency's Climate Pollution Reduction Grant Program: Implementation Grants General Competition.

374Water Inc. is fully committed to supporting the grant application process and subsequent long-term project phases aimed at designing, constructing, and commissioning a 374Water's supercritical water oxidation unit (AirSCWO) for the proposed Central Florida Waste-to-Energy program. Our company is the sole provider of SCWO to the water/wastewater/waste industry in the US and will leverage this expertise to design and implement a viable AirSCWO system for waste management at the proposed facility. By partnering with us, the coalition will benefit from our extensive experience and long-term involvement in similar initiatives, enhancing the project's effectiveness in reducing greenhouse gas emissions in the Central Florida region.

Should you have any questions about 374Water's role in this project, please feel free to reach out to Sudhakar Viswanathan, Vice-President and Head of Solutions, 374Water at [sv@374water.com](mailto:sv@374water.com) or (919) 800-9221.

Sincerely,



Sudhakar Viswanathan  
Vice-President and Head of Solutions

Cc: George Woodring, Financial Grants Administrator

March 21, 2024

Darren Gray  
County Manager  
Seminole County, Florida  
1101 East First Street  
Sanford, FL 32771

Dear Mr. Gray:

On behalf of Nopetro Energy Holdings, LLC , I am pleased to provide this letter of support as a project partner in the comprehensive Central Florida Waste-to-Energy program detailed in Seminole County's application to the Environmental Protection Agency's Climate Pollution Reduction Grant Program: Implementation Grants General Competition.

Nopetro will design build and operate a CNG dispensing station for the project. We are committed to the Central Florida Waste-to-Energy program for the long term. We trust that this will be a successful project to reduce green house gas emission in the Central Florida region.

Should you have any questions about Nopetro Energy's role in this project, please feel free to reach out to John Slot, Chief Technology Officer, Administrator for Sustainability & Adaptability, Seminole County at [jslot@seminolecountyfl.gov](mailto:jslot@seminolecountyfl.gov) or (407) 665-7414.

Sincerely,



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R. Edward Hart  
Senior Vice President, Natural Gas Supply

Cc: George Woodring, Financial Grants Administrator



# Research Foundation

UNIVERSITY OF CENTRAL FLORIDA

March 15, 2024

Darren Gray  
County Manager  
Seminole County, Florida  
1101 East First Street  
Sanford, FL 32771

Dear Mr. Gray:

On behalf of the University of Central Florida Research Foundation, I am pleased to provide this letter of support as a project partner in the comprehensive Central Florida Waste-to-Energy program detailed in Seminole County's application to the Environmental Protection Agency's Climate Pollution Reduction Grant Program: Implementation Grants General Competition.

The University of Central Florida (UCF) will participate in the measurements and calculations of greenhouse gas emissions as well as the energy flows in the biosolids treatment plants, the renewable natural gas-powered fleet vehicles in the transport sector, and the supercritical water oxidation and steam turbine power generation processes. These efforts represent UCF's long-term involvement and commitment to the proposed project. They will be seamlessly integrated into the entire coalition's pioneering work plan to significantly reduce greenhouse gas emissions in the Central Florida region.

Should you have any questions about UCF's role in this project, please feel free to reach out to John Slot, Chief Technology Officer, Administrator for Sustainability & Adaptability, Seminole County at [jslot@seminolecountyfl.gov](mailto:jslot@seminolecountyfl.gov) or (407) 665-7414.

Sincerely,

Elena Chidester  
Proposal Specialist III  
Authorized Organizational Representative  
[elena.chidester@ucf.edu](mailto:elena.chidester@ucf.edu)  
407-823-0249

Cc: George Woodring, Financial Grants Administrator





# ORLANDO SCIENCE CENTER

777 East Princeton Street, Orlando, FL 32803 • [www.osc.org](http://www.osc.org)

March 22, 2024

Darren Gray  
County Manager  
Seminole County, Florida  
1101 East First Street  
Sanford, FL 32771

Dear Mr. Gray:

On behalf of Orlando Science Center (OSC), I am pleased to provide this letter of support as a project partner in the comprehensive Central Florida Waste-to-Energy Initiative detailed in Seminole County's application to the Environmental Protection Agency's Climate Pollution Reduction Grant Program: Implementation Grants General Competition.

As a leader in informal Science, Technology, Engineering and Mathematics (STEM) education and a vital community resource, OSC brings diverse visitors of all walks of life together to be immersed in STEM concepts. OSC's programs provide engaging and immersive experiences that inspire a personal connection with students, their caregivers, and our visitors. OSC will partner with Seminole County to deliver educational programming through our after-school outreach programs, school field trips, summer/break camps, and general program content in our interactive exhibit halls, labs, and theaters. With our mission to *inspire science learning for life* and nearly seventy years of experience serving the community, we will work to ensure the successful implementation of this pioneering initiative to reduce greenhouse gas emissions in the Central Florida region.

Should you have any questions about Orlando Science Center's role in this project, please feel free to reach out to John Slot, Chief Technology Officer, Administrator for Sustainability & Adaptability, Seminole County at [jslot@seminolecountyfl.gov](mailto:jslot@seminolecountyfl.gov) or (407) 665-7414.

Sincerely,

JoAnn Newman  
President & CEO

Cc: George Woodring, Financial Grants Administrator

**Congress of the United States**  
**House of Representatives**  
**Washington, DC 20515-0907**

March 26, 2024

The Honorable Michael S. Regan  
Administrator  
Environmental Protection Agency  
1200 Pennsylvania Avenue NW  
Washington, DC 20460

Dear Administrator Regan:

I am pleased to offer my endorsement of Seminole County's application to the Environmental Protection Agency's Climate Pollution Reduction Grant Program: Implementation Grants General Competition in support of the Central Florida Waste-to-Energy Initiative (CFWEI).

The Central Florida Waste-to-Energy Initiative is poised to revolutionize biosolid management, mitigate environmental risks, and foster sustainable energy generation. Rather than directing the biosolids generated by wastewater treatment facilities towards landfills, land application, or incineration, the proposed solution will capture methane gas from biosolids and convert it into Renewable Natural Gas (RNG) through well-established anaerobic digestion technology. This RNG will be seamlessly integrated into the natural gas pipeline and utilized as compressed natural gas (CNG) for transportation purposes throughout the region. Moreover, the innovative Super Critical Water Oxidation (SCWO) process will be employed to address contaminants such as PFAS in the residual digested solids, concurrently generating clean steam power.

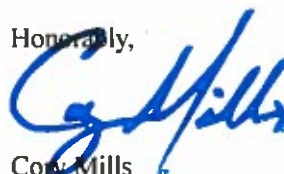
In addition, once the biosolids anaerobic digestion complex is operational, the region may explore diverting other digestible materials, such as food waste and grease trap pumping waste, to the facility to expand gas production opportunities, which may be used by local municipal power providers to offset demand for non-renewable gas for power production.

By leveraging waste resources for energy production, the proposed project not only addresses pressing environmental challenges but also establishes a sustainable model for resource management. This comprehensive approach to Waste-to-Energy not only reduces greenhouse gas emissions and mitigates harmful biosolid contaminants but also creates multiple revenue streams, positioning the region as a trailblazer in sustainable energy innovation.

Florida's seventh congressional district is a leader in innovation, and by harnessing new ways of clean energy creation and waste management, this project will more effectively protect this community, while addressing critical needs that remain with the area's growing population.

Thank you for your thoughtful consideration of this pioneering project. Should you have any questions, please feel free to reach out to me at [catherine.treadwell@mail.house.gov](mailto:catherine.treadwell@mail.house.gov) or 202-225-4035.

Honorably,



Cory Mills  
Member of Congress



CITY OF  
**SANFORD**  
OFFICE OF THE CITY MANAGER

March 25, 2024

George Woodring  
Financial Grant Administrator  
Resource Management Department, Seminole County  
1101 East First Street  
Sanford, FL 32771

Dear Mr. Woodring:

On behalf of the City of Sanford, I am pleased offer my endorsement of Seminole County's application to the Environmental Protection Agency's Climate Pollution Reduction Grant Program: Implementation Grants General Competition in support of the Central Florida Waste-to-Energy Initiative (CFWEI).

The Central Florida Waste-to-Energy Initiative is poised to revolutionize biosolid management, mitigate environmental risks, and foster sustainable energy generation. Rather than directing the biosolids generated by wastewater treatment facilities towards landfills, land application, or incineration, the proposed solution will capture methane gas from biosolids and convert it into Renewable Natural Gas (RNG) through well-established anaerobic digestion technology. This RNG will be seamlessly integrated into the natural gas pipeline and utilized as compressed natural gas (CNG) for transportation purpose throughout the region. Moreover, the innovative Super Critical Water Oxidation (SCWO) process will be employed to address contaminants such as PFAS in the residual digested solids, concurrently generating clean steam power.

In addition, once the biosolids anaerobic digestion complex is operational, the region may explore diverting other digestible materials, such as food waste and grease trap pumping waste, to the facility to expand gas production opportunities, which may be used by local municipal power providers to offset demand for non-renewable gas for power production.

By leveraging waste resources for energy production, the proposed project not only addresses pressing environmental challenges but also establishes a sustainable model for resource management. This comprehensive approach to Waste-to-Energy not only reduces greenhouse gas emissions and mitigates harmful biosolid contaminants but also creates multiple revenue streams, positioning the region as a trailblazer in sustainable energy innovation.

Thank you for your thoughtful consideration of this pioneering project.

Sincerely,



Norton N. Bonaparte, Jr., ICMA-CM  
City Manager

Art Woodruff  
Mayor

Sheena Britton  
District 1

Kerry S. Wiggins, Sr.  
District 2

Patrick Austin  
District 3

Patty Mahany  
District 4

Norton N. Bonaparte, Jr.  
City Manager





**MINISTRY OF FOREIGN AFFAIRS  
OF DENMARK**  
*The Trade Council*

**EMBASSY OF DENMARK  
IN WASHINGTON, D.C.**

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March 14, 2024

## **LETTER OF SUPPORT**

### **Bigadan A/S**

Since 2020, it has been a strategic priority for the Danish government to support and engage in initiatives, activities and projects that contribute to the green transition and a reduction in greenhouse gas emissions. It is also a key objective for the Danish government to promote Danish know-how and expertise and to contribute to a strengthened effort within export promotion, consultancy and government-to-government collaborations in areas related to green projects.

I provide this letter of support for Bigadan A/S for their application to the Climate Pollution Reduction Grant, as part of the consortium led by Seminole County, FL. Bigadan A/S has proven to be a reliable and responsible supplier of biogas solutions with a 40-year track record of successful project implementation and operation in Denmark, and more than three decades of international experience with building, owning and operating large-scale co-digestion plants in 17 countries. In Denmark alone, they operate 11 waste-to-energy plants, including one of the world's largest biogas plants, handling 1 million metric tons of organic waste annually, and a plant treating the organic waste from the Capital of Copenhagen through anaerobic digestion producing Renewable Natural Gas for pipeline injection. The solutions provided by Bigadan A/S have made significant contributions to the green transition through renewable energy production, manure and organic waste management, and nutrient recycling.

I, therefore, confirm our support to the endeavors of Bigadan A/S, as they contribute to create value and realize green projects in North America.

Sincerely,

Jesper Møller Sørensen,  
Ambassador of Denmark to the United States