

**Indian River County, Florida  
Solid Waste Disposal District  
Board Memorandum**

**Date:** May 11, 2021

**To:** Jason E. Brown, County Administrator

**From:** Vincent Burke, PE, Director of Utility Services

**Prepared By:** Himanshu H. Mehta, PE, Managing Director, Solid Waste Disposal District

**Subject:** Amendment No. 2 to Landfill Gas Agreement with Indian River Eco District, LLC

**Descriptions and Conditions:**

On February 5, 2019, the Indian River County (IRC) Solid Waste Disposal District (SWDD) Board directed staff to enter negotiations with the Indian River Eco District, LLC (IREDD) for their purchase of landfill gas (LFG) created at the County's landfill. The SWDD Board agreed that the landfill-generated gas, which is currently being flared off, posed a potential health and safety risk and that it could be better used for other purposes rather than flaring. On July 16, 2019, the SWDD Board approved the Landfill Gas Agreement with IREDD wherein they purchase the LFG for the production of electricity and/or conversion to Renewable Natural Gas (RNG).

The initial term of the LFG agreement is for 20 years following the LFG commencement date, and there are two consecutive 10-year renewal terms included in the agreement. The original LFG commencement date was one year from the effective date of the agreement (July 16, 2019), or July 15, 2020. Otherwise, SWDD can issue a written notice to IREDD electing to terminate the agreement within six months unless force majeure events, or the acts or omission of SWDD, allow for a cure. If IREDD is able to commence within the six months cure period, then the agreement does not terminate.

IREDD submitted a request for an extension of the LFG commencement date from July 15, 2020, to September 30, 2021, based on their desire to pursue a RNG project. Recognizing that an RNG project could generate substantially more income for SWDD (for the sale of its landfill gas) than the originally planned project for producing electricity from the LFG, the SWDD Board approved IREDD's request to extend the LFG commencement date to September 30, 2021, as well as to increase the landfill gas for a potential leachate project and to reduce the cure period from six months to three months for any further delay in the commencement date. This was authorized on July 14, 2020, as Amendment No. 1 to the Landfill Gas Agreement.

On January 13, 2021, IREDD submitted a letter requesting an additional extension in time for the LFG commencement date to start June 30, 2022. In the letter, IREDD expressed that they have made progress on the RNG project; however, Covid-19 continued to play a part in reducing the project efficiency and that social distancing requirements imposed on their European manufacturer, who is a world-leader in gas conditioning equipment for RNG projects, has resulted in delay to the forecast for delivery of project equipment.

On January 19, 2021, staff held an internal meeting with our consultant, Tetra Tech, to discuss IRED's request and subsequently held meetings with IRED on February 18, 2021, and February 24, 2021. During these meetings, IRED openly expressed a concern regarding the recent significant reductions in the volumes of landfill gas and notified staff that their RNG facility would not be economically viable unless it could receive a minimum of 1,150 standard cubic feet per minute (SCFM) of landfill gas. In an effort to ensure the success of the RNG facility, IRED also expressed a desire to amend additional terms of the LFG agreement to include mutual targets to optimize the quantity and quality of the landfill gas to the financial benefit of both parties. They also requested that the LFG commencement date be 18 months from the effective date of the amendment to the LFG agreement. Subsequently, they requested that it be 15 months from when the landfill can achieve at least 900 SCFM for at least seven days. Currently, we are at approximately 500 SCFM.

On March 2, 2021, IRED provided the first draft of the Amendment No. 2 to the Landfill Gas Agreement, which staff met to review on March 3 and 4, 2021. Based on staff input, IRED provided an updated draft on April 5, 2021, which, after thorough review, staff responded to on May 7, 2021. IRED provided a response on May 10, 2021. Both parties have negotiated in good faith to present the attached Amendment No. 2 to the Landfill Gas Agreement for approval by the SWDD Board.

### **Analysis:**

The attached Amendment No. 2 to the Landfill Gas Agreement has been prepared with the acknowledgment that the overall success of the RNG project is contingent upon both SWDD and IRED working together to ensure that the target goals for the quantity and quality of the landfill gas are optimized to the financial benefit of both parties. The request by IRED for an extension of the LFG commencement date is supported by staff with the understanding that there were unforeseeable delays due to Covid-19.

The following summarizes the key elements of the Amendment No. 2 to the Landfill Gas Agreement:

**Definitions:** Certain definitions were clarified and others added to avoid future misinterpretation of the agreement.

**Term:** The initial term for this project is 20 years from the commencement date with two (2) optional ten-year renewal terms upon mutual agreement to extend the term. The commencement date is 18-months from the effective date, which is now the date of approval of the Amendment No. 2 to the Landfill Gas Agreement by the SWDD Board, or 15 months from the date when the landfill achieves an average flow rate of 900 SCFM for at least seven days. In essence, this is an updated 20-year initial term with a "new effective date". The allowance of the three-month cure period remains.

**Milestones:** IRED has agreed to the following milestones and the associated penalties if such milestones are not met:

| <b>Milestone</b>   | <b>Due Date</b>             | <b>Penalty</b>    |
|--|-----------------------------|-------------------|
| 1. Submit Air Permit   | 6 months of Effective Date  | \$5,000 per month |
| 2. Proof of Contracts for Compressors, gas conditioning system and nitrogen rejection unit | 8 months of Effective Date  | \$5,000 per month |
| 3. Groundbreaking of foundations   | 15 months of Effective Date | \$5,000 per month |

**Future Expansions:** SWDD would continue to fund its annual gas system escrow account as required by Florida statutes. However, IRED would be allowed the opportunity to also request and fund expansion of the SWDD’s landfill gas control and collection system (LFG assets) in order to enhance the quantity or quality of the landfill gas. These requests would not be unreasonably refused, and if approved, would be funded by IRED and become SWDD property upon completion of the improvements.

**Gas Target Expenditure Fund:** Both parties have agreed to a matching annual funding allocation to make immediate repairs or emergency repairs to SWDD’s LFG assets that inhibit the quantity or quality of the landfill gas. SWDD would include the request for such funds during the annual budget process, and if approved, IRED would match 100% up to \$125,000 annually as a reimbursement grant. SWDD would follow County purchasing procedures for such repairs and invoice IRED for their share upon completion of the work.

**Payment:** Due to the change by IRED from a power generation project to an RNG project, which is more susceptible to the quantity and quality of the landfill gas, the initial set royalty payment of 10% of the gross receipts and the royalty payment generated by the RNG project for the sale of renewable natural gas was modified to incentivize SWDD and IRED as follows:

- 1) Quantity Royalty Payment: On the months where the average gas flow rate of acceptable LFG meets a certain quantity criteria, IRED shall pay SWDD a royalty payment as follows:

| <b>Average Gas Flow Target Per Month</b> | <b>% of RNG Gross Receipts</b> |
|--|--------------------------------|
| ≥ 1,150 scfm                             | 12%                            |
| Between 800 and 1,150 scfm               | 9%                             |
| < than 800 scfm                          | 5%                             |

- 2) Quality Incentive Payment: On the months where the average gas flow rate is at a minimum of 1,150 scfm, IRED shall pay SWDD an additional gas quality-based incentive payment as follows:

| Average Gas Flow Target Per Month | % of RNG Gross Receipts |
|-----------------------------------|-------------------------|
| >57.01%                           | 3.0%                    |
| 54.01 to 57.0%                    | 2.0%                    |
| 51.01 to 54.0%                    | 1.5%                    |
| 48.01 to 51.0%                    | 1.0%                    |
| 45.01 to 48.0%                    | 0.5%                    |
| < 45.0%                           | 0.0%                    |

**Flow for Leachate Treatment:** The original agreement contemplated the use of up to 250 scfm of LFG for the use in a potential leachate treatment project. In Amendment No. 1, this use was increased to 350 scfm; however, in Amendment No. 2, IRED has requested that the first 1,150 scfm be reserved for the viability of the RNG project in order to achieve a target annual contract quantity.

**Financial Analysis:** In the original agreement, which was focused on a LFG to electricity project, staff had estimated revenues of \$46,000 to \$265,000 per year from the use of LFG based on certain assumptions. However, over a 20-year term, factoring in a built-in annual LFG price adjustment of 2% and a gradual increase of flow from 250 SCFM to 750 SCFM, this was a potential of \$3.2 million in revenues for SWDD.

Now with IRED pursuing an LFG to RNG project, staff has estimated that the royalties above may potentially increase to SWDD from \$84,000 to \$1.4 million per year and over a 20-year period, this could total \$1.7 million to \$27.5 million.

**Annual Cash Flow for Company Developed LFG to RNG System**

| Monthly Average LFG Flow to Company from District (scfm) | Average Methane Content (%) | District Royalty Percentage (%) | Company Royalty Payment (\$ per Month) | Company Incentive Payment for Methane Content (\$/Month) | Company Payment for Gas Targets Expenditure Fund (\$/Month) | Total District Monthly Income from Company | Total District Annual Income from Company | Total District 20-Year Income from Company |
|--|-----------------------------|---------------------------------|--|--|---|--|---|--|
| 300  | 45.00%                      | 5.00%                           | \$ 6,988                               | \$ -   | \$ -  | \$ 6,988                                   | \$ 83,861                                 | \$ 1,677,211                               |
| 800  | 45.00%                      | 9.00%                           | \$ 36,125                              | \$ -   | \$ -  | \$ 36,125                                  | \$ 433,495                                | \$ 8,669,892                               |
| 1151   | 45.00%                      | 12.00%                          | \$ 74,249                              | \$ 6,187   | \$ 10,417   | \$ 90,853                                  | \$ 1,090,235                              | \$ 21,804,702                              |
| 1400   | 45.00%                      | 12.00%                          | \$ 96,332                              | \$ 8,028   | \$ 10,417   | \$ 114,776                                 | \$ 1,377,318                              | \$ 27,546,355                              |

**Issues/Concerns:** Overall, the project provides both an environmental and economic benefit to SWDD. However, there are a few concerns as detailed below:

1. It is incumbent on SWDD to deliver acceptable landfill gas in term of quantity and quality. This is very challenging as the production of landfill gas is dependent on a biodegradation of organics in the landfill, which SWDD has no control in terms of the quantity or quality received in any given year. These goals place a big burden on SWDD for sufficient quality and quantity of LFG.

2. There would be additional operation and maintenance costs. It is estimated that this could be an additional \$50,000 to \$125,000 per year.
3. The expansion of the LFG well system will result in additional leachate, which will require treatment and corresponding additional treatment costs. At this time via a separate agenda item, staff is requesting approval of a leachate treatment project with IRED, which has a potential cost of \$1.1 million per year to as high as \$2.38 million per year over a 20 year term.

### **Funding:**

No funding is requested in this agenda item, as this is a potential revenue project.

However, additional funding would be needed in the future because of this agreement for infrastructure upgrades and operational costs to our LFG system to ensure reliable production and delivery of LFG to IRED. Staff is currently assuming the need for these additional funds should be offset by the revenue generated over the life of this project.

### **Recommendation:**

Staff recommends that its Board approve the Second Amendment to Landfill Gas Agreement with the Indian River Eco District, LLC and authorize the Chair to execute the amendment.

### **Attachment:**

- 1) Request for Extension Letter by IRED
- 2) Second Amendment to Landfill Gas Agreement with Indian River Eco District, LLC