Item 3

**COMMISSION FILE NO:** 26-033-3 **DATE INTRODUCED:** March 9, 2026

**INTRODUCED BY:** Executive Director (Signature on File in the Office of the Commission)

**REFERRED BY COMMISSION CHAIRPERSON TO:** Operations Committee

**RELATING TO**: Contract J06104E01, Preliminary Engineering Services, Jones Island Turbine Generator System Improvements

**SUMMARY:**

The Commission is requested to authorize the Executive Director to execute on behalf of the District Contract J06104E01, Preliminary Engineering Services, Jones Island Turbine Generator System Improvements, with Valdes Engineering Company (Valdes) in an amount not to exceed $410,080. Valdes was the highest scoring proposer based on a qualifications-based selection method among four proposals received.

In March 2024, the Commission adopted an Energy Plan that provides the framework to achieve the District's energy and greenhouse gas emission goals outlined in the 2035 Vision. The Vision establishes the following targets:

- Meet a net 100% of MMSD's energy needs with renewable energy.
- Meet 80% of MMSD's energy needs with internally generated renewable energy.
- Reduce MMSD's carbon footprint by 90% from the 2005 baseline.

In addition, water reclamation operations require significant energy, and the District spends about $12 million annually on energy (electricity, natural gas, and landfill gas), with nearly 80% of that spent at the Jones Island Water Reclamation Facility (JIWRF).

To meet the 2035 Vision goals while maintaining reliable plant operations, the Energy Plan identifies improvements at both JIWRF and the South Shore Water Reclamation Facility (SSWRF).

**ATTACHMENTS:** **BACKGROUND** ☐ **KEY ISSUES** ☐ **RESOLUTION** ☒
**FISCAL NOTE** ☒ **S/W/MBE** ☒ **OTHER** ☐ ____

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*02-19-26*

**COMMITTEE ACTION:** _____ **DATE:** _____

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## SUMMARY (Cont'd)

Contract J06104E01, Preliminary Engineering Services, Jones Island Turbine Generator System Improvements

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JIWRF relies on multiple power sources: two electrical feeds from We Energies (Harbor and Dewey), three Solar turbines that generate electricity for plant use by burning landfill gas or natural gas, and one natural gas-fired General Electric turbine (GE1), which also generates electricity for on-site operations. Plant operations often require a combination of these sources to maintain reliability and meet peak demand, particularly during wet weather.

GE1 provides greater electrical generation capacity than the Solar turbines and supports peak plant demand when the Inline Storage System pumps operate. It also helps to avoid costly peak demand charges from We Energies; however, GE1 is more than 50 years old, represents aging critical infrastructure, and requires continued investment to maintain reliable operation.

In addition to generating electricity, the District recovers waste heat from the Solar turbines and GE1 to dry biosolids and support Milorganite® production. Turbine reliability, therefore, affects not only electrical generation but also the District's resource recovery operations.

To advance the District's energy and greenhouse gas reduction goals, the Energy Plan recommends that the District install two new Solar turbines (identical to the units installed in 2012) and retire GE1. The additional Solar turbines require sufficient renewable fuel to operate effectively and are also necessary to support reliable electricity generation. These additions will increase internally produced renewable energy, reduce greenhouse gas emissions, replace aging infrastructure, improve equipment uptime, strengthen system reliability, and continue to support biosolids drying through efficient waste heat recovery.

The purpose of this project is to increase internally produced renewable energy, reduce greenhouse gas emissions, replace aging critical infrastructure, improve the District's electrical self-generation capacity, and strengthen overall power system reliability.

This proposed contract includes preliminary engineering services to verify the assumptions made in the Energy Plan, such as the availability of a new landfill gas supply source. The purpose of the contract is to review the JIWRF turbine generators as an interconnected system so that holistic recommendations can be made in the turbine generator system improvement plan.

## SUMMARY (Cont'd)

Contract J06104E01, Preliminary Engineering Services, Jones Island Turbine Generator System Improvements

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Under Contract J06104E01, Valdes will:

- Perform project management, coordination, scheduling, and quality control.
- Evaluate existing turbine generators and auxiliary systems.
- Develop and evaluate fuel source scenarios, including landfill gas, digester gas, and natural gas.
- Assess air permitting requirements and determine their impact on potential improvements.
- Provide a turbine generator system improvement plan.
- Develop and submit a final report documenting all work performed.

The contract duration is approximately 13 months.

**RESOLUTION**

Contract J06104E01, Preliminary Engineering Services, Jones Island Turbine Generator System Improvements

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**RESOLVED**, by the Milwaukee Metropolitan Sewerage Commission, that the Executive Director is authorized to execute Contract J06104E01, Preliminary Engineering Services, Jones Island Turbine Generator System Improvements, with Valdes Engineering Company in an amount not to exceed $410,080.