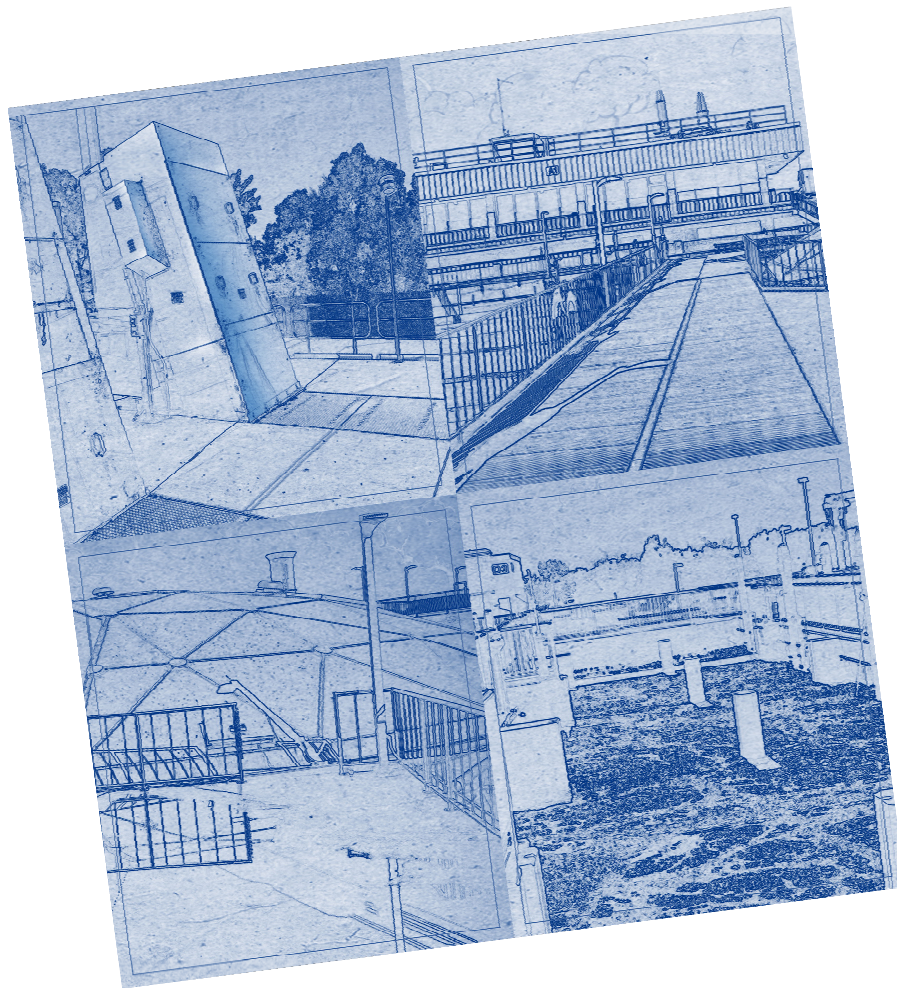




# Wastewater Treatment Plant Master Plan

Linear Generator Board  
Presentation

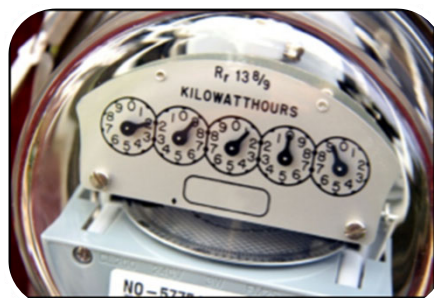
October 7, 2020



# Background



District has been working with Récolte Energy



Aim to reduce electrical bills



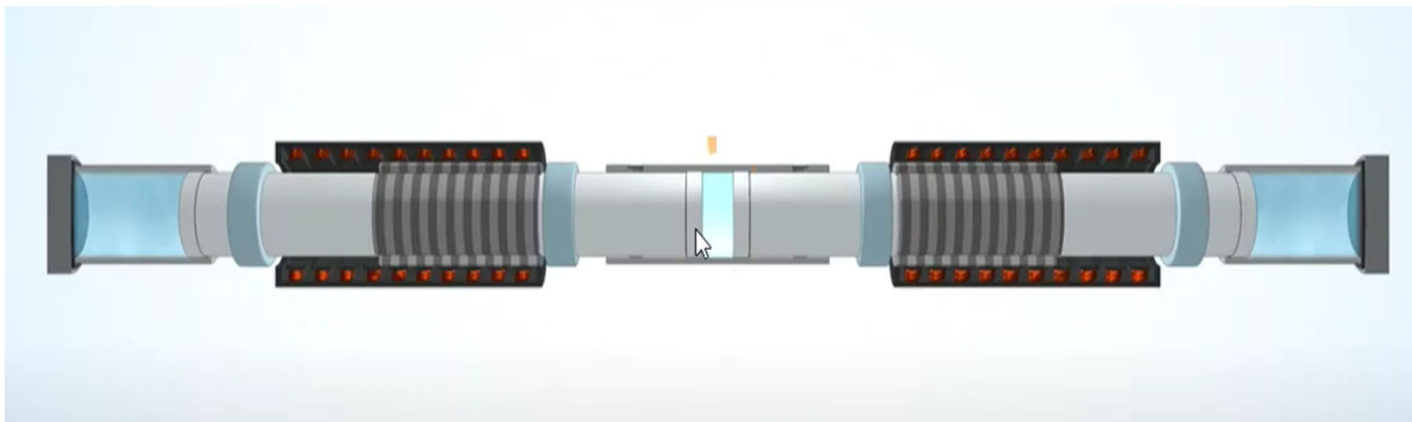
Looked at several options over the last few years



Linear Generator Opportunity

## Linear Magnetic Generator (Mainspring)

- Internal Combustion Engine
  - Low temperature
- Claims higher efficiency with less moving parts
- NextEra proposes to install, operate, finance, and manage the linear generator
  - Qualifies for Self Generation Incentive Funding (SGIP). NextEra intends to leverage this funding
- The District would purchase the electricity generated under a power purchase agreement (PPA) with NextEra



## Benefits to the District

- Better utilization of the existing biogas resource
- Increased capacity for additional waste stream co-digestion
- Reduced electricity bills
- Increased onsite-generation
- Reduced carbon footprint
- Low risk through public private partnership (with NextEra)

Initial evaluations show the linear generator and CHP as the only revenue positive alternative

Net Present Value - Difference From The Base Case		
Mid Offset \$0.12/kWh		
Existing CHP NPV (Base Case)	\$0	
Linear Gen NPV	(\$1,971,898)	
Existing + Linear Gen NPV	\$1,727,467	
New CHP NPV	(\$469,381)	
RNG NPV	(\$827,846)	



## Risks

- New technology in the water/wastewater industry
  - This project will be one of the first used in a biogas application
- NextEra's PPA must be acceptable to the District

### However

- The District is not obligated to move forward if the terms of the PPA are not favorable
- Operational risk will be on NextEra
  - The private partner is obligated to meet a minimum performance level
- The District will keep the existing CHP engine in operation

## Next Steps

- The District executes NextEra's Letter of Intent
- NextEra submits an Interconnection Application to PG&E
- NextEra applies for a Self-Generation Incentive Program rebate
- NextEra updates the starting PPA price for electricity
- The District reviews and approves the PPA
- Mainspring installs the linear generator in second or third quarter of 2021
- The District's first cash outlay will be after the linear generator starts producing electricity

It is important to execute the Letter of Intent while rebate funding is still available

## Recommendation

Authorize the General Manager to execute a Letter of Intent with NextEra Energy, Inc. to enter into a Power Purchase Agreement (PPA) for a linear generator project.