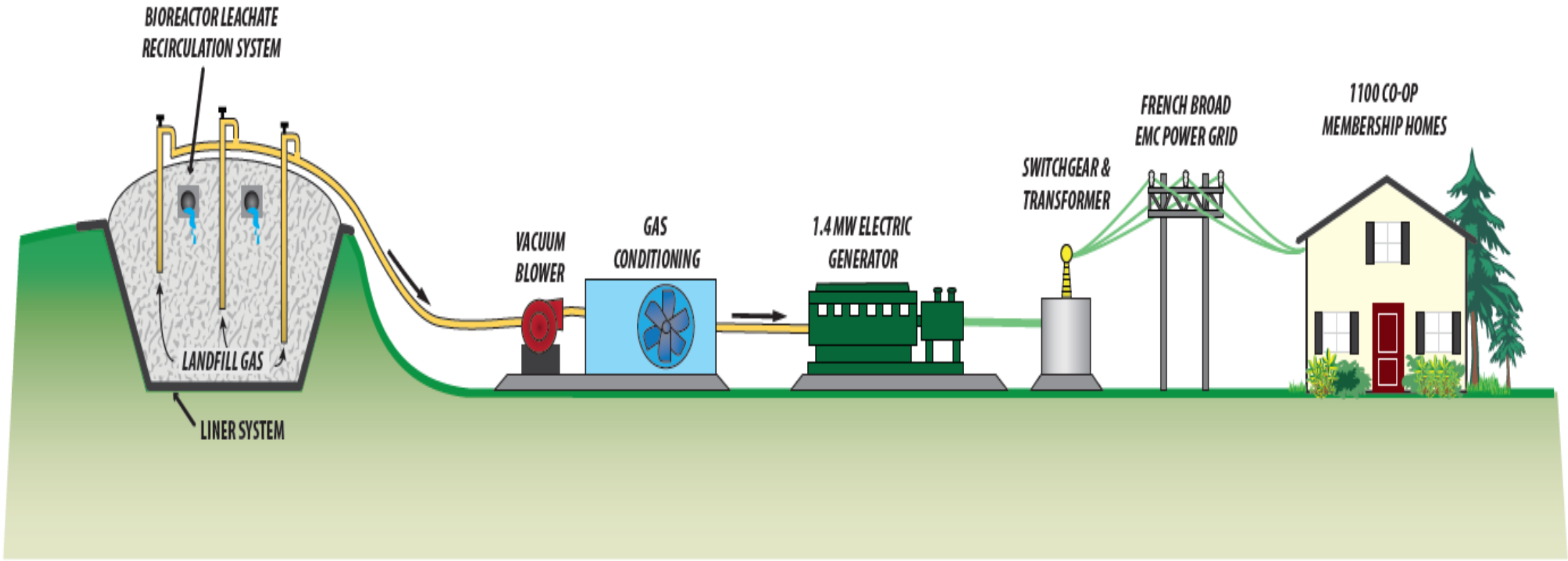
SOLID WASTE

Landfill Gas to Energy Update

September 21st, 2021

Diagram of LFGTE Process



Landfill Gas to Energy Background

- 10-Year, PP4 agreement with Duke Energy expires 11/2021
- New energy pricing from Duke (PP-5):
  - New energy price is 50% less than previous
  - New capacity price is essentially gone
- Notice of Commitment letter needed to negotiate PPA
- New contract and PPA expected from Duke within 30 days of signed Notice of Commitment
- November 2021: Goal to lock in new rate (Duke changes pricing structures annually in November)

Price Comparison

EXISTING PPA PRICING

ENERGY PRICE	10-YEAR RATE
On peak kWh ($/MWh)	$67.88
Off peak kWh ($/MWh)	$50.85

CAPACITY PRICE	10-YEAR RATE
On peak kWh ($/MWh)-summer	$35.69
Off peak kWh ($/MWh)-non summer	$29.45

MONTHLY CHARGE TO SELLER	$278/MONTH

FUTURE PP-5 PRICING

ENERGY PRICE	VARIABLE RATE
On peak kWh ($/MWh)-summer	$29.10
On peak kWh ($/MWh)-winter am	$21.70
On peak kWh ($/MWh)-winter pm	$38.40
On peak Premium Peak ($/MWh)-summer	$38.40
On Peak Premium Peak ($/MWh)-winter	$42.20
On Peak Shoulder ($/MWh)	$30.70
Off Peak kWh ($/MWh)-Summer	$28.40
Off Peak kWh ($/MWh)-winter	$27.60
Off Peak kWh ($/MWh)-Shoulder	$22.90

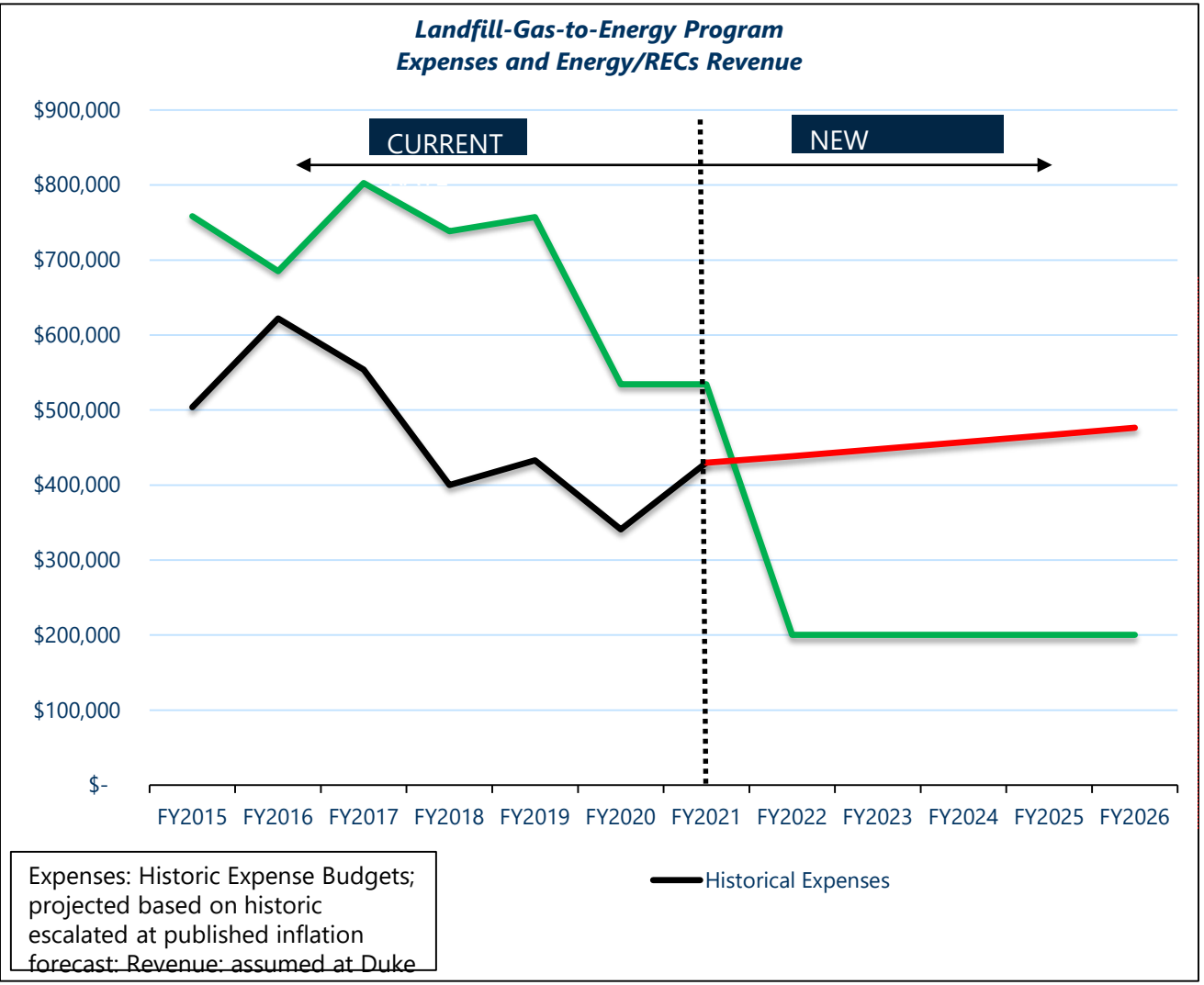
CAPACITY PRICE	
On peak kWh ($/MWh)-summer	$0.00
On peak kWh ($/MWh)-winter am	$0.00
On peak kWh ($/MWh)-winter pm	$0.00

MONTHLY CHARGE TO SELLER	$23.06

Key Model Assumptions

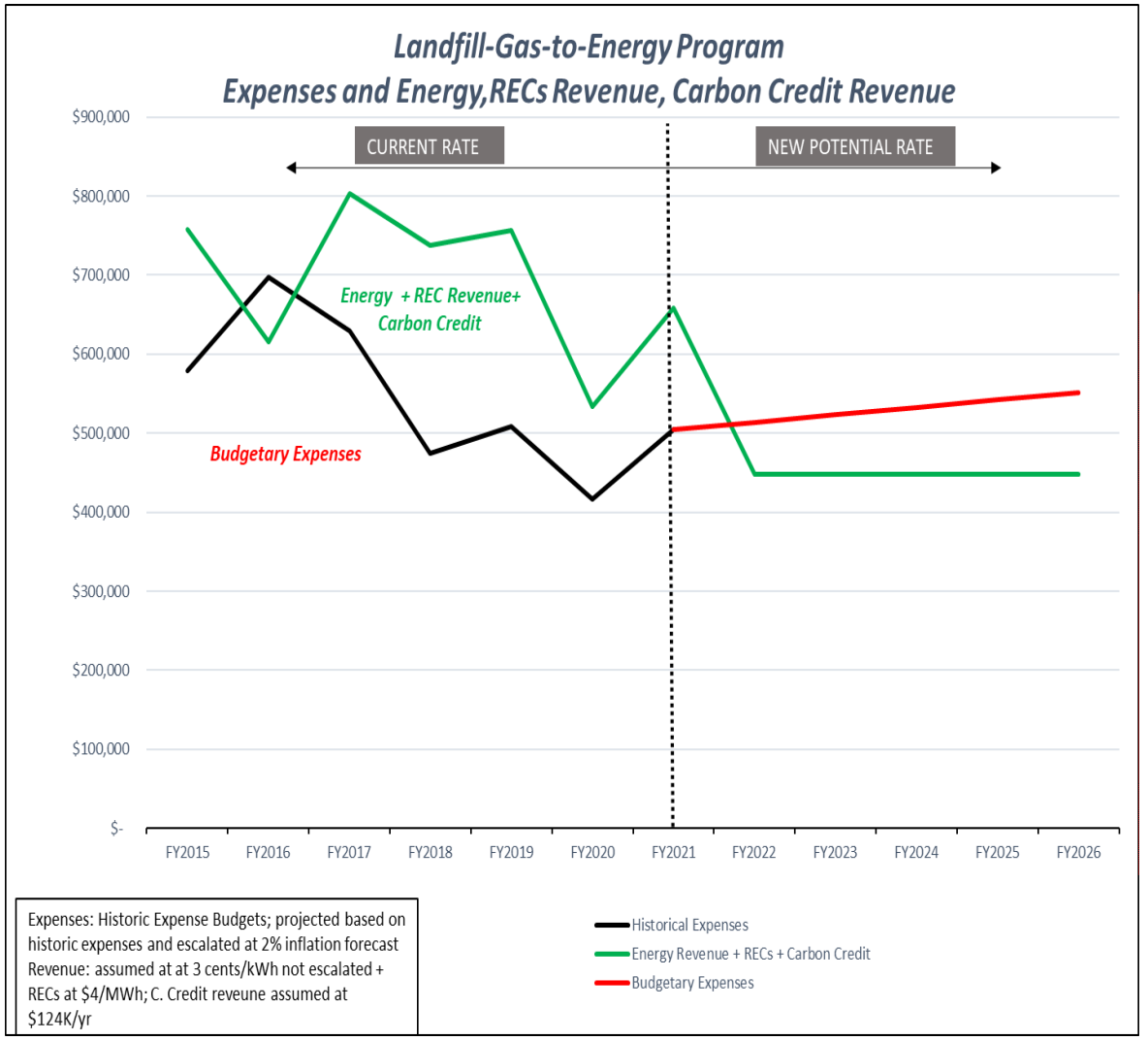
- Duke's PP-5 Pricing is significantly less than historic
- Revenue assumptions: (1300 kW rated engine with 10% downtime)
  1. Energy Sales - $0.03/kWh
  2. REC's - $4.00/MWh
  3. Carbon Credits - $124,000/year
- Expense assumptions:
  1. Generator, Operational and staff expense- Average annual expense of $430,000/year since FY13 with inflation
  2. Annual loan repayment-$75,000/year (debt obligation until 2031)

February BOC 2021 Graph



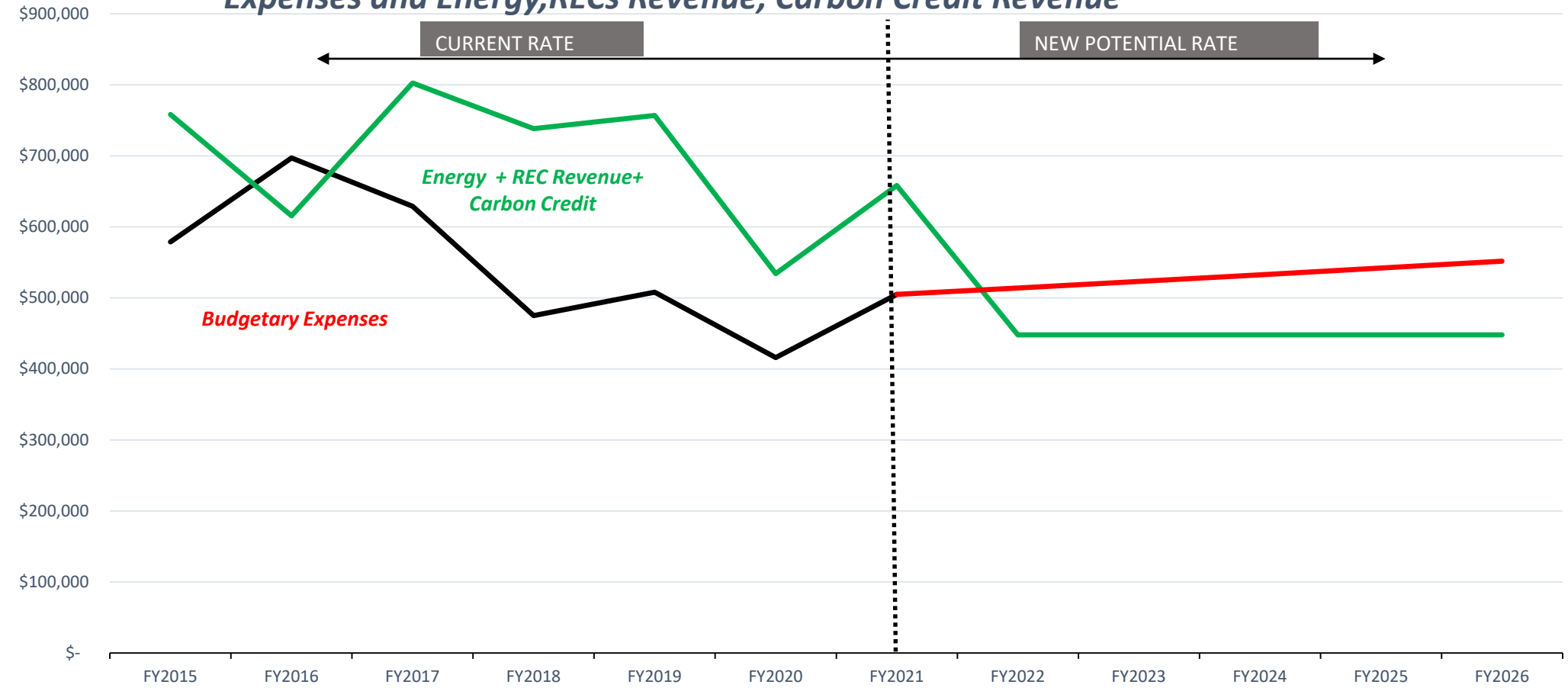
Expenses: Historic Expense Budgets; projected based on historic escalated at published inflation forecast; Revenue: assumed at Duke

September 2021 Updated Graph



Expenses: Historic Expense Budgets; projected based on historic expenses and escalated at 2% inflation forecast
Revenue: assumed at at 3 cents/kWh not escalated + RECs at $4/MWh; C. Credit reveune assumed at $124K/yr

Landfill-Gas-to-Energy Program
Expenses and Energy,RECs Revenue, Carbon Credit Revenue



Expenses: Historic Expense Budgets; projected based on historic expenses and escalated at 2% inflation forecast
Revenue: assumed at at 3 cents/kWh not escalated + RECs at $4/MWh; C. Credit reveune assumed at $124K/yr

Key Model Takeaways

- If LFGTE generator is retired, Solid Waste plans to operate the landfill gas collection and control system (flare) for the life of the landfill to reduce odor and GHG reductions
  - Carbon Credit sales are the sole revenue source for this scenario
- Additional revenues from RECs and Energy sales help offset the expense of the LFGTE generator
  - Average generator, operational and staff (100%) expenses: $430,000/year
  - Annual loan repayment: $75,000/year
  - Average energy sales at $0.03/kWh: $285,900/year
  - RECs $4.00/MWh : $38,000/year
  - Carbon Credits: $124,000/year

Our goal is for the energy sales and RECs to pay for the annual generator expense; ultimately we hope to get paid more than the $4.00/MWh for RECs

Next Steps

- Sign Letter of Commitment Letter
- Negotiate New PPA
- Present final contract to BOC in Oct.
- Sign new PPA by November 2021