Dairy Digester Emissions Matrix

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The Original Matrix

DRAFT - FOR DISCUSSION PURPOSES ONLY **December 13, 2017**

Dairy Digester Pollutant Emissions Impacts/Benefits

Typical California Covered Lagoon Digester

DIGESTER ENERGY PATHWAY	CH_4 / CO_2E	NOx	PM	H_2S	NH_3	CO	SOx	VOCs	N_2O	WQ
Electricity 	↓	↑	↑	↓	↓	↑	↑	↓	↓	↓
Pipeline biomethane RNG 	↓	↑	→	↓	↓	↑ →	↑ → ↓	↓	↓	↓
Transportation Fuel R-CNG 	↓	↓	↓	↓	↓	↑ →	↑ → ↓	↓	↓	↓

Categories:

Methane (CH_4)
Greenhouse Gas (CO_2E)
Nitrogen Oxide (NOx)
Particulate Matter (PM)
Carbon Monoxide (CO)
Ammonia (NH_3)
Hydrogen Sulfide (H_2S)
Sulfur Dioxide (SO_x)
Volatile Organic Compounds (VOCs)
Nitrous Oxide (N_2O)
Water Quality (WQ)

↓ = Reduction/Improvement

↑ = Increase/Impact

→ = No change

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Quantitative Estimates *

- CH_4
- Products of combustion
  - NOx
  - PM
  - CO
  - SOx

* to the extent feasible

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Qualitative Evaluations *

- H_2S
- NH_3
- VOCs
- N_2O
- Water Quality (WQ)

* Quantification may be possible for some emission points

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Next Steps

- Refine the list of pathways
- Document assumptions used in matrix
- Estimate/evaluate emissions
- Progress update - April 9th

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