RESOURCE RECOVERY COOPERATIVES

Tempe, AZ and Beyond

WSA FOG Forum
Hood River, OR
April 16, 2018
The Problem: Traditional FOG Regulation

DISPOSITION (unregulated)
The Opportunity: Resource Recovery

WE&RF awards research contract to support co-digestion

FATS, OILS, AND GREASE (FOG) TO BIODIESEL DEMONSTRATION PROJECT

Creating Renewable Energy

Breakthroughs in Anaerobic Digestion,

Fat, Oil, and Grease (FOG)

Source: Sustainable Brands Issue January 2012

WEF conference proceedings

Source: WaterNet

Pilot-scale Demonstration of Spectrum BioEnergy's BioBeetle BioGas

Recapturing costs and reducing harm

Anaerobic co-digestion of fat, oil, and grease (FOG): A review of gas production and process limitations

Innovative anaerobic digestion of wastewater

WEF conference proceedings

Tempe Grease Cooperative

Anaerobic Co-Digestion of Fats, Oils and Grease (FOG) with Waste Activated-Sludge

Energy, Sav
Challenges for Codigestion

Limited control over:
- Feedstock quality
- Feedstock security
- Receiving logistics
- Economics of tipping
Traditional FOG Regulation
Preferred Pumper Program
Retailers’ Cooperative

A group of independently owned businesses that pool their resources to purchase in bulk, usually by establishing a central buying organization.
Resource Recovery Cooperative
Resource Recovery Cooperative

REQUIRED SERVICE

SERVICE TRANSACTION

DISPOSITION

Tempe Grease Cooperative
Effective Resource Recovery

- Quality
- Security
- Logistics
- Economics

= Certainty

Codigestion

Tempe Grease Cooperative
Tempe’s Experience

- 2010: EPA/ADEQ Audit
- 2011: Stakeholder Engagement
- 2012: Ordinance Modifications
- 2013: Resolution: Terms of Enrollment
- 2014: First TGC Service

Additional Points:
- EECBG Study
- Vendor Procurement
- Marketing Strategy
Results to Date

- 200 members
- $89,544.67 in savings to restaurants (CY17)
- Virtual inspections of 1,445 services (CY17)
- Diverted 600,000 gallons of grease trap waste (CY17)

Ownership: 1,600 gallons/day
Observations / Lessons Learned

- Effective enforcement for non-members
- Administration and staffing
- Procurement efficiency
- Recruitment
  - interns
  - chains
- Infrastructure assessment & the “double-edged sword”
- Recovery / AD opportunities
Goals

TGC core goals:
• Sustainable infrastructure
• Explore resource recovery

Goals made measurable:
• >500 members by 2023
• Roadmap to 100% recovery by 2023

How do we get there?
Strategic Initiatives

1. Conduct a cost/benefit analysis of the TGC

2. Development and deployment of software solution

3. Infrastructure Assistance Program for TGC

4. Develop a commercial food waste/scrap collection and recovery program
Strategic Direction: Regionalization

- Existing regional partnerships
- Regional infrastructure (Collection, WRFF)
- Connect FOG collection and digestion
- Scale benefits & ease of administration
- Regional / national chain restaurants
- Bundled procurements
- 91st Avenue Biogas Project
What is the “Bridge”?

Building partnerships for clean water & resource recovery
This is your sewer…

This is your sewer on partnership

Any Questions?

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