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- About EPIC
- Biogas Project Overview
- Perspectives on the Issue
- Regulatory Issues
- Possible Areas of Change
- Regulatory Issue Matrix



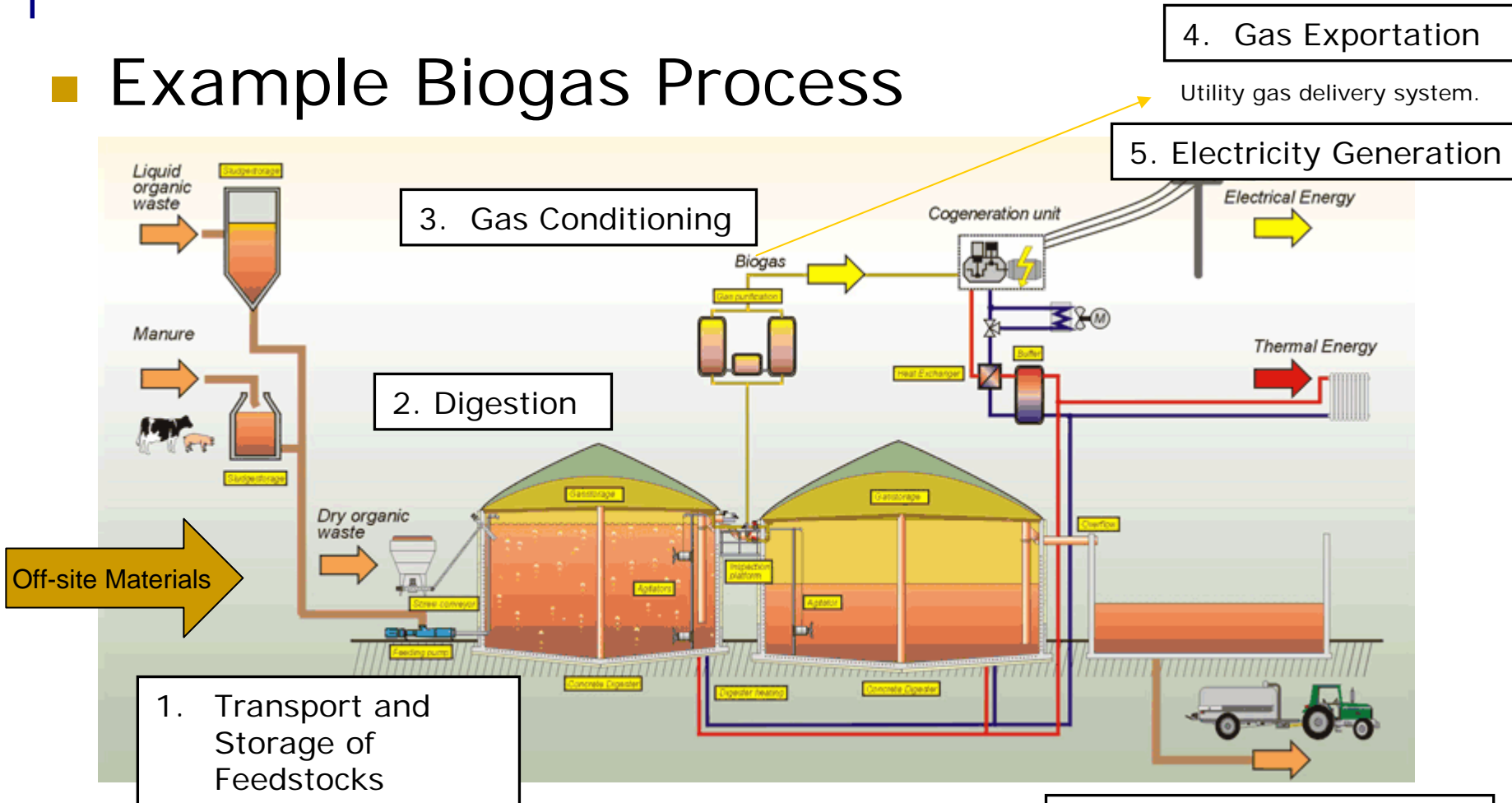
- Academic and Research Center
 - University of San Diego School of Law
- Mission
 - Educate the public and public officials concerning energy issues and policies;
 - Educate law school students about energy law and policy;
 - Conduct research and analysis on energy trends, policy options and their implications; and,
 - Encourage the use and development of less costly and more environmentally-friendly energy resources.



- Objective
 - Identify regulatory challenges to producing biogas on dairy farms via co-digestion
 - Assess the entire production cycle
- Method
 - Literature Review
 - Statutory Review
 - Regulatory Code Review
 - Stakeholder Interviews



Example Biogas Process



Source: http://www.biogas-nord.de/img/fliessbild_glitz_en.gif

- WASTE
 - CA Integrated Waste Management Board (CIWMB)
 - Implementing Local Enforcement Agencies
- WATER
 - State Water Resources Control Board
 - 9 Regional Boards
 - Region Board 5 has a significant number of dairy farms
- AIR
 - CA Air Resources Board (ARB)
 - 35 Local AQMDs / APCDs
- ELECTRICITY / GAS
 - CA Public Utilities Commission (CPUC)

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- Bottom Line is to Protect
 - Human Health
 - Environment
- Enforcing Current Laws/Rules
- Accommodating New technologies in the Absence of Specific Regulations
- Working on Solutions
- Need for Deliberative, Public Process

3 ~~QUESTIONS~~

- Innovative Technology
- Net Environmental Benefit
- Regulations not Keeping Pace with Technology
- Inaction is a Barrier to Progress
- Trying to Fulfill Policy Directions



- Region 5 General Order for Existing Dairy Farms Pending
- Requirements for New Lagoons
- Regulations Focus on Lagoons
- Concern over Off-site Materials (CEQA)
- Salt is Significant Issue

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- Anaerobic Digestion Considered Composting
- Lack of Regulations for Anaerobic Digestion
- Lack of Anaerobic Digestion or Biogas Definitions
- Exclusions and Exemptions
 - Exclusions exist for:
 - Conversion
 - Manufacturing
 - Beneficial Use



- NOx Emissions Requirement for Distributed Generation
- SB 1298 Standards Create a Gray Area for Biogas Generators
- Can't Increase Criteria Pollutants Even if Lower GHG Emissions
- Possible Need for H₂S Scrubbers and Catalytic Controls



- Interconnection Cost and Complexity
- Rule 21 Implementation Inconsistency
- Net Metering Tariff Disadvantages
- Self-Generation Incentive Program Complexity
- Rules for Excess Power



- Interconnection Protocols
- Gas Quality Specifications
- Gas Conditioning

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- Legislative
 - Medium Term
 - Uncertainty in Legislative Process
- Regulatory
 - Possibly Faster
 - Scope may be Constrained
- Implementation (Agency)
 - Near term
 - Impact may be Limited
- Project Design
 - May be Costly and Affect Project Economics



- List of Regulatory Issues for Discussion
- Intention is to
 - Introduce issues for discussion and possible resolution
 - Determine whether issues have merit
- We Are Certain That...
 - List is incomplete
 - List does not capture all the nuances of every issue