

Calgren Bioenergy Project Experience

Ethanol and first of two cogeneration plants – 2008

On-site mesophilic dairy digester – 2014

Lagoon-cover dairy cluster project (SD 1383) including
pipeline injection – 2018

Supercritical biodiesel production – 2019

Green vehicle refueling facility – est 2020

Build upon prior bioenergy processing experience if possible

- Successful industrial track record lends credibility
 - With permitting authorities
 - With commercial customers
- Operational experience is hard to beat
 - Process startups are always challenging
 - Capable process operators are invaluable
- Product flexibility helpful in mitigating uncertainties regarding policy-driven incentives
 - Competiveness might not be enough
- Tough to get financing without a track record

Site selection – far more important than we could have imagined

- Contiguous agricultural and industrial zoning
- Community must either be supportive or must be won over – ignore this at your peril
- Utility issues are huge
 - Capacity
 - Ability to interconnect
 - Cost
 - Timing can be a problem

Permitting

- CEQA – this is the big one
 - Almost always misused
 - Consider who will be the best lead agency
 - Advantages/disadvantages of doing an EIR
- Air permits
 - Major emissions thresholds
 - Co-location issues
- Building permits – don't scrimp on engineering
- Water Board – easy for us, not sure about others

Recommendations

- Look to build upon prior industrial experience
 - Policy makers should focus on objectives
 - Incentivize process operators to best determine how to meet those objectives
- Consider CEQA changes
 - Find a way to put those who misuse the system at risk
- Don't look to utilities to be entrepreneurial
 - Utilities need to help set standards, then step back
 - Private industry is more efficient and responsive