



J&A

**JANECEK
& ASSOCIATES**

LANDFILL GAS RECOVERY IN CALIFORNIA

PRESENTATION TO RURAL COUNTIES' ENVIRONMENTAL SERVICES JOINT
POWERS AUTHORITY

OCTOBER 21, 2010

PROFILE – ALAN JANECEK, P.E.

- REGISTERED CIVIL ENGINEER
- TWENTY YEARS EXPERIENCE EXCLUSIVELY IN LANDFILL GAS INDUSTRY
- DESIGN WORK ON OVER 100 LANDFILL GAS PROJECTS WORLDWIDE
- ALL ASPECTS OF THE LFG PROJECT
 - DESIGN- LFG COLLECTION, FLARES, PROCESS EQUIPMENT, SILOXANE REMOVAL, POWER PLANT, PIPELINE
 - PERMITTING – LFG MODELING, AIR QUALITY PERMITS, BUILDING CODE PERMITS
 - CONSTRUCTION – CONSTRUCTION MANAGER
 - OPERATIONS & MAINTENANCE – MANAGED LFG OPERATIONS & MAINTENANCE PROJECTS FOR TWENTY YEARS. CO-AUTHOR OF SWANA O&M MANUAL
- SOLE OWNER OF JANECEK & ASSOCIATES SINCE 1997

REGULATORY ENVIRONMENT

- IC ENGINES DIFFICULT BUT NOT IMPOSSIBLE TO PERMIT
 - PERMIT AGENCIES ARE REQUIRING POST-COMBUSTION CONTROLS IN SOME CASES
- MICROTURBINES ARE RELATIVELY EASY TO PERMIT
 - REQUIRE ADDITIONAL LFG CLEANUP
 - LOWER EFFICIENCY
- FUEL CELLS
 - EASY PERMITTING/ HIGH FUEL EFFICIENCY
 - COST FOR LFG CLEANUP IS VERY HIGH
 - UNPROVEN OVER LONG-TERM

CHALLENGES FOR LFG RECOVERY AT SMALLER LANDFILLS

- ECONOMY OF SCALE LACKING
- REVENUE BENEFITS TO LANDFILL OWNER MAY BE INADEQUATE
- COST OF LFG TREATMENT MAY PROHIBIT DEVELOPMENT
- RECYCLING EFFORTS HAVE REDUCED LFG PRODUCTION
- UNCERTAIN REGULATORY AND INCENTIVE ENVIRONMENT



IMPORTANT CONSIDERATIONS

- FEED-IN TARIFFS FOR SMALLER FACILITIES
 - FIXED RATE PURCHASE FOR UP TO 20 YEARS
 - BASED ON CURRENT YEAR NATURAL GAS PRICE
- PROXIMITY TO RETAIL USER



CONCLUSION

- LFG RECOVERY CAN BE AN ECONOMIC BENEFIT BUT IT MUST BE A COMMUNITY BENEFIT

