

Dairy and Livestock Working Group
 Digester Subgroup
 DRAFT Working Recommendations for Discussion
 September 20, 2018

Deliverable #5: Potential Investments for Research/Development and Emerging Technologies

Identification of key current and emerging technologies and approaches for converting manure and digestate into useful products including fuel/energy. The assessment will characterize products by technology readiness and outline general opportunities and issues.

Deleted: Identification of Value Added Products from Manure and Digestate

Issue	Discussion	Recommendation
<p>A) Investment is needed to identify and demonstrate emerging technologies that can convert manure and digestate into useful products including fuel/energy</p>	<p>a) CEC has issued various grants under the: 1) Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP) and 2) California Energy Commission’s Research and Development Program (EPIC and PIER funding) for low carbon fuels production facilities (both for commercial and for pilot/demonstration scale projects).</p> <p>b) Recently, annual ARFVTP funding for biofuel and biogas fuel production plants has been ~\$25M and R&D funding has been ~\$4M. Starting July 1, 2018, ARFVTP funds will no longer be allocated for biofuel and biogas fuel production plants, but the FY 2018-19 state budget allocated \$12.5M from GGRF for these purposes (\$25M AFTVT funds being moved to support zero emission vehicles).</p> <p>c) <u>The CEC is currently implementing the Food Production Investment Program (FPIP). The program will provide nearly \$120 million in funding for eligible food processors, including dairy processing facilities in California, to implement projects that reduce greenhouse gas emissions.</u></p>	<p>1) The legislature should allocate \$XM annually to expand research, demonstration and <u>testing funding</u>: 1) for process technologies and biomethane delivery alternatives capable of producing clean, low carbon renewable fuels from dairy manure, and 2) on approaches to integrate covered lagoon digesters and other solutions with nutrient export.</p> <p>2) <u>The legislature should allocate \$XM annually to expand and enhance the commercialization of technology that has completed the RD&T phase of development, but which has not yet been brought to market because of cost/economy of scale barriers. Particular emphasis should be placed on technologies that have received public funding from California and successfully completed RD&T.</u></p>

Deleted: commercialization

Deleted: A one-time FY 2017-18 allocation of \$66M for food processing plants (potentially including dairies) energy RD&D projects has been augmented by \$68M in FY 2018-19 from GGRF.

	<p>d) <u>Improve flexibility of how incentive funding can be spent with the goal of displacing petroleum.</u></p> <p>e) Programs that integrate digester deployment with <u>on-going water quality requirements</u> will be important.</p>	
--	--	--

Deleted: future

Deleted: restrictions