

BEFORE THE ENERGY COMMISSION OF THE STATE OF CALIFORNIA

In the matter of:

Electric Program Investment Charge (EPIC)

Docket No. 12-EPIC-01

California Energy Commission

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COMMENTS OF THE

AGRICULTURAL ENERGY CONSUMERS ASSOCIATION

On the Commission's Development of the EPIC Investment Plan

Michael Boccadoro
925 L Street, Suite 800
Sacramento, CA 95814
Telephone: (916) 441-4383
Facsimile: (916) 441-4132
E-Mail: mboccadoro@dolphingroup.org

For Agricultural Energy Consumers Association

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INTRODUCTION

The Agricultural Energy Consumers Association (AECA) appreciates this opportunity to offer comments on the California Energy Commission's (CEC or Commission) development of the initial Electric Program Investment Charge (EPIC) triennial investment plan. AECA represents the state's leading agricultural associations and the interests of over 40,000 farmers throughout the state. AECA participated in the California Public Utilities Commission (CPUC) EPIC Program development proceeding and supports the CPUC's efforts to provide appropriate funding to continue the important social benefits associated with renewable energy programs under the EPIC. AECA also has a keen interest in the successful development of California's bio-energy industry. AECA has been deeply involved in the public policy discussions surrounding bio-energy development issues in California and at the forefront of efforts to establish a 250 MW biogas incubation program to facilitate development of a commercial bio-energy industry in the state.

The CEC has an immediate and unique opportunity to provide the support necessary to support and incubate a commercial bio-energy industry in California. AECA looks forward to working with the CEC toward that goal as it implements the EPIC program.

Toward this end, AECA has two primary recommendations for the Commission as it develops the initial Triennial Investment Plan:

1. Provide substantial funding (at least \$3 million annually) in the Market Facilitation Program to streamline permitting and interconnection of new biogas facilities which face significant hurdles and barriers.
2. Establish a capital expenditure grant program for new biogas projects with the 20% Technology Demonstration & Deployment (TD&D) set aside for bio-energy technologies.

It is critical that the funding be targeted to new bio-energy facilities to maximize environmental, economic, societal and ratepayer benefits. Targeting funding to new development will also maximize GHG reduction by incentivizing new and additional greenhouse capture and destruction.

BACKGROUND

California has a significant and largely untapped opportunity to generate substantial renewable energy (well over 2,000 MWs or biomethane production equivalent) from dairy livestock manure, wastewater treatment, byproducts of sustainable forest management, organic waste from food processing facilities and other agricultural operations, and urban organic waste. While there are a number of statutory, regulatory and technology deployment hurdles that have hindered the advancement of bio-energy projects in California, these challenges can be addressed through additional research, improvements in

permitting processes and utility interconnection practices, and economic efficiencies that come with increased development, investment and experience.

The primary reason that bio-energy is not being fully utilized in California is the lack of clear economic incentives to encourage its development and deployment.

BIO-ENERGY IS NOT BEING WIDELY ADOPTED IN CALIFORNIA

AECA and Sustainable Conservation submitted significant documentation to the CPUC as part of the EPIC proceeding highlighting the lack of biogas procurement by California’s investor-owned utilities (IOUs). Recent reports from the IOUs on their progress in meeting Renewable Portfolio Standard (RPS) goals shows that the percentage of biogas procured is nearly zero, and is not expected to increase any time soon under the current policies and programs. For Pacific Gas & Electric (PG&E), using current and forecasted data, bio-energy by 2020 will comprise just over 8% of PG&E’s total renewable procurement, a significant decline from current levels. Most of that 8% is existing biomass plants. Digester gas, landfill gas, and municipal solid waste, which currently are just over 1% of total procurement, will be about the same. Digester gas is expected to make up just 0.01% of PG&E’s renewable energy portfolio in 2020.

PG&E RPS Procurement: Biopower as Subset of Overall Renewable Procurement¹

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Biomass	21.15%	22.18%	17.87%	15.56%	13.93%	12.99%	11.67%	10.92%	9.75%	7.12%
Digester Gas	0.14%	0.03%	0.02%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
Biodiesel	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Landfill Gas	0.60%	0.60%	0.54%	0.45%	0.98%	1.03%	1.00%	1.06%	1.10%	1.14%
Muni Solid Waste	0.79%	0.16%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Biopower Subtotal	22.68%	22.97%	18.42%	16.02%	14.93%	14.03%	12.68%	12.00%	10.86%	8.27%

Southern California Edison (SCE) has even fewer digester gas projects in its RPS portfolio, as is shown below. SCE has 1/100 of one percent of its RPS procurement coming from digester gas. Last year 5% of SCE’s renewable energy came from biopower overall, the vast majority of that being landfill gas; by 2020 just 2% of SCE’s renewable energy is forecast to come from bio-energy.

¹PG&E RPS Procurement Report, March 1, 2012.

SCE RPS Procurement: Biopower as Subset of Overall Renewable Procurement²

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Biomass	2.26%	2.76%	2.47%	2.22%	1.99%	1.93%	1.77%	1.84%	1.93%	1.47%
Digester Gas	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.00%	0.00%	0.01%	0.01%
Biodiesel	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Landfill Gas	3.25%	3.04%	2.82%	2.53%	2.27%	2.20%	0.61%	0.63%	0.65%	0.61%
Muni Solid Waste	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Biopower Subtotal	5.51%	5.81%	5.30%	4.76%	4.27%	4.14%	2.39%	2.48%	2.58%	2.09%

San Diego Gas & Electric (SDG&E) has an even worse record on utilizing biogas. While landfill gas is forecast to peak at close to 8% of SDG&E's RPS procurement in 2012, by 2020 it is forecast to be down to just over 2%. Digester gas drops from less than one percent in 2011 to zero in 2013, and municipal solid waste is not used at all. The only reason biopower is near 17% in 2011 and 21% in 2012 is because SDG&E's overall renewable procurement for 2012 drops. Starting in 2013, SDG&E forecasts it will significantly increase the amount of solar PV (from 2,364 MWh to 3,493,532 MWh), and nearly double the amount of wind heading in to 2020.

SDG&E RPS Procurement: Biopower as Subset of Overall Renewable Procurement³

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Biomass	10.46%	12.82%	7.16%	5.29%	5.06%	4.78%	4.78%	0.14%	0.14%	0.15%
Digester Gas	0.61%	0.63%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Biodiesel	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Landfill Gas	5.78%	7.73%	3.10%	2.28%	2.40%	2.27%	2.01%	2.14%	2.32%	2.33%
Muni Solid Waste	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Biopower Subtotal	16.85%	21.17%	10.26%	7.58%	7.47%	7.05%	6.79%	2.28%	2.46%	2.48%

These woeful utility forecasts for bio-energy procurement document the immediate need for EPIC funding to facilitate the siting, interconnection and development of biogas projects. Without targeted funding and programs to incubate the biogas industry in California this technology will continue to fail to be competitive and successful in utility procurement efforts.

² SCE RPS Procurement Progress Report, March 1, 2012.

³ San Diego Gas & Electric, RPS Procurement Progress Report, March 1, 2012

BIOGAS BENEFITS

Advance the Loading Order

The direct benefits of biogas energy are significant and exceed those of other renewable energy sources. Solar and wind are intermittent. Biogas from all types of projects can provide baseload power and as a result can deliver power when other renewables cannot. Some dairy digesters also have the unique ability to store gas for 1-2 days and can generate electricity when it is most needed. This dispatchability is unique among renewable energy projects.

GHG Reduction and Environmental Benefits

Biogas renewable energy projects also have the greatest potential to reduce greenhouse gas (GHG) production and facilitate California's ambitious AB 32 goals, one of the key principles identified by the CPUC to guide investments of the EPIC program. Solar, wind and other forms of renewable energy reduce GHGs by displacing the need for conventional fossil-fuel based forms of energy generation such as natural gas. Biogas projects have the significant added benefit of directly capturing and destroying methane, a potent greenhouse gas, 21 times more potent than CO₂. As a result, a typical dairy biogas project provides 6-8 times the greenhouse gas benefits per MW of renewable energy produced. The environmental benefits of bio-energy are significant. Dairy digesters, for example, enable California dairy farms to achieve other air and water quality benefits. Similarly, urban and agricultural organic waste diversion projects enhance state efforts to reduce dependence on landfills. Forestry biogas projects also greatly reduce the incidence and consequences of forest and other wildfires.

Economic Development and In-State Job Creation

Biogas projects are also capital intensive, with significant local construction dollars being spent creating economic development and local green jobs, another key principal outlined by the CPUC. Biogas projects also likely create more long-term green jobs due to the complexity of project operations. Potential bio-energy green job creation is statewide as the industry commercializes with a significant benefit to rural and agricultural economies which have been especially hard hit by the economic slump. San Joaquin Valley counties with the greatest potential for dairy biogas development suffer from chronic double-digit unemployment and high rates of poverty. Many northern California forestry communities have also been especially hard hit due to reduced logging activity.

Support Clean Transportation

The development of new community scale biogas projects will also enhance the state's renewable transportation fuel goals and efforts. As more biogas projects become operational new opportunities for making renewable transportation fuel also materialize.

The benefits of biogas are clearly broad and far reaching and justify significant investment of EPIC resources. No other renewable energy technology can match the significant societal, environmental, and ratepayer benefits associated with development of California's bio-energy industry and represent a highly effective use of ratepayer funds under the EPIC Program.

TARGETED BIOGAS FUNDING

EPIC funding for bio-energy support and funding is critical. While biogas is clearly poised for commercial deployment, a number of other challenges are impeding market uptake, including market barriers, high environmental permitting costs and cost competitiveness issues. Even after a technology has proven to be commercially viable, market adoption is far from guaranteed. California's fledgling biogas industry currently finds itself wandering in the "valley of death" described the CPUC's EPIC discussion. Targeted funding is now critically necessary for the biogas industry to find its way out of the aptly referenced "valley of death" and on to successful market commercialization in California. Both the solar and wind industry in California have benefitted from significant programs to encourage their development and commercial viability. It is now time for state policymakers to do for the biogas industry what it has successfully accomplished for solar and wind. California's biogas industry needs a comprehensive incubation program, including RD&D and market facilitation activities, which are designed to get new projects built so that the technology can compete more effectively with other renewable projects and become more sustainable in the longer-term.

The CPUC EPIC Decision correctly recognizes the substantial interest in expanding the role of bio-energy in meeting state energy demand, and designated a minimum of 20% of the Technology Demonstration and Deployment funding for bio-energy technologies. AECA recommends that the CEC expand this funding as \$9 million annually is not sufficient to support the industry in the short-term. "Bio-energy" projects include forest biogas and biomass, wastewater and organic waste diversion projects as well as dairy, agricultural and food processing biogas projects and \$9 million is simply insufficient. Achieving commercial viability will require California to develop at least 250 megawatts of biogas and other bio-

energy projects. Funding will be best and most appropriately spent actually deploying, not further demonstrating, the technology. Research and demonstration funds are available through other state and federal programs. Market facilitation funding and direct capital expenditure grants, designed to incubate a commercial biogas industry in California, are now necessary. Funding should be limited to new project development to maximize ratepayer and societal benefits including the additional capture and destruction of GHG in California.

MARKET FACILITATION FUNDING

Project siting hurdles and barriers continue to plague development of biogas projects in California. Efforts to streamline environmental permitting are helpful, but projects in certain regions of California still face significant additional environmental compliance costs that can add 2-3 cents/kWh to the cost of renewable bio-energy. Utility interconnection procedures are also lengthy and costly, taking up to one-year and potentially adding millions of dollars to the capital costs of individual projects.

The EPIC program can best address these issues by providing funding to facilitate the permitting, siting and interconnection of bio-energy projects in California. AECA recommends that at least \$3 million be set aside annually for this purpose. Funds could be utilized for permit streamlining and facilitation efforts, project siting assistance and utility interconnection facilitation. The time, cost and other hurdles associated with utility interconnection procedures must be addressed to successfully commercialize the biogas industry in California. In addition to expediting utility interconnection procedures funding should also be made available to directly reduce the costs of interconnecting new bio-energy projects in the state.

BIO-ENERGY RD&D FUNDING

Direct capital expenditure grant funding should be provided to bio-energy projects that best address the state's goals and objectives. A capital grant program should be created and sufficient funding (\$10-20 million annually) provided to achieve the development of 250 MWs of bio-energy over the next 5 -7 years. Reduction of capital expenditures is the best way to encourage bio-energy project development since it directly reduces cost and the need for project financing. As previously discussed, funding should be targeted to new project development to ensure the greatest ratepayer and societal benefits.

CONCLUSION

While California leads the nation in many aspects of renewable energy development, our state has fallen far behind in the development of biogas and other bio-energy projects. Despite being the number one dairy production state, California lags in the development of dairy biogas digesters. Similarly, while municipal wastewater agencies in California have aggressively pursued renewable energy projects, the development of biogas projects has been limited to date. Community scale forestry bio-energy projects have also found it difficult to compete with commercially advanced renewable energy technologies. Simply put, California's significant potential to develop a robust biogas industry is being wasted.

Over the last decade, there has been significant attention and public policy discussion focused on the benefits of widespread deployment of biogas projects in California. The interest in biogas projects has increased in recent years as state policymakers identify potential opportunities to reduce GHG emission under the landmark "Global Warming Solutions Act of 2006" – AB 32 and to meet other critical state goals such as landfill diversion, forest and wildfire reduction, local environmental enhancement and green job creation.

The CEC's July 2006 Bioenergy Action Plan for California (Publication number CEC-600-2006-010) recognized that key challenges to the development of bio-energy in California, including a failure of the market to adequately recognize and compensate its benefits, and a range of other impediments, many of which can be addressed by State action. Toward this end, California regulators have finalized a programmatic EIR to streamline environmental permitting challenges that have hobbled the industry to date. A joint state-federal task force, the Bio-Digester Working Group, is also meeting to further address barriers to project development. Efforts to create a targeted bio-energy procurement program are also advancing. The final areas that need to be addressed is the creation of a targeted capital expenditure program to enhance competitiveness and reduce ratepayer costs and the dedication of funds and efforts to enhance siting and interconnection of new biogas facilities in California.

Biogas can be a long-term sustaining renewable technology in California, but only if the state has the foresight needed to nurture the industry in the short term.

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Respectfully submitted,

/s/ MICHAEL BOCCADORO

Michael Boccadoro

On behalf of

Agricultural Energy Consumers Association

925 "L" Street Suite 800

Sacramento, CA 95814

Telephone: (916) 447-6206

Fax: (916) 441-4132

mboccadoro@dolphingroup.org