

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**



**COMMENTS OF PLASCO ENERGY GROUP IN RESPONSE TO FIRST TRIENNIAL
INVESTMENT PLAN FOR THE CEC'S ELECTRIC PROGRAM INVESTMENT
CHARGE (EPIC)**

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Introduction & Summary

Plasco Energy Group (Plasco) respectfully submits its comments on the first triennial investment plan for the Electric Program Investment Charge (EPIC), and establishing funding for commercialization of innovative Advanced Conversion Technologies (ACT) that recover energy from post recycled municipal solid waste (MSW). We strongly believe that support for these innovative conversion technologies aligns with key EPIC program objectives, namely:

- Ratepayer and societal benefits;
- GHG emission mitigation (AB 32 and Executive Order S-3-05 goals)
- Safe, reliable, and affordable energy services;
- Economic development; and
- Efficient use of ratepayer funds.

We believe that innovative technologies that recover value from MSW are now positioned for commercial deployment, and benefits from the commercialization of ACTs align with objectives set by the staff for the EPIC program. Commercialization of these innovative ACT technologies will:

- Provide direct benefit to ratepayers and society by ensuring highest value energy recovery from residual waste. These technologies will reduce dependence on landfills and create energy for everyday use with superior environmental benefits. Reducing dependence on landfills greatly reduces the risk of land and water contamination.
- Reduce GHG emissions by reduced dependence on landfills given significant methane generation from landfills even with landfill gas collection.
- Provide non-intermittent electricity supply for consumption in the form of distributed generation, which in turn supplies utilities with a longer term low carbon non-intermittent power with some flexibility.
- The commercialization of ACTs will further initiate advanced R&D in the field of 'synthetic fuels'. We know today that synthetic fuels from these ACT facilities can be used to generate electricity and with commercialization over time will generate bio-fuels and other valuable products.
- Support local economies with long term job creation in infrastructure development and cleantech industry
- Provide efficient use of ratepayer funds, as these technologies are ready for commercialization after years of pre-commercialization research and development.

Discussion – Need for the commercialization of ACT

Innovative technologies are a critical component in the search for new forms of alternative clean energy. California has been a global leader in this initiative and EPIC can provide true value in support of innovative systems that are ready for commercial deployment. An emerging industry that is well positioned in this regard involves gasification conversion technology that can maximize energy recovery from post recycled municipal waste. For the State of California this could be a significant development in clean energy production and economic growth given an annual volume of 40 million tons¹ per year of MSW that goes to landfill. Even a 25% conversion of this feedstock to clean energy would represent a potential of 1000 MW² of clean non-intermittent power, 3000 jobs and 5000MT of reduced GHG emissions.

During the past twenty years existing methods of dealing with society's waste have resulted in overall improved value recovery. Again California has been a policy leader. But in many communities where increased recycling benchmarks have been met, there remains the toughest issue of all: residual municipal waste. This feedstock continues to be sent to landfill with resulting GHG emissions. But the search for superior technologies has been ongoing and these technologies are now ready for initial commercial application.

In the United States, New York, Florida, and Nevada are supporting innovative waste conversion projects. In some instances US DOE and USDA are playing key supportive roles. Moreover, in Europe, landfill directives³ and renewable energy support⁴ have enabled innovative technologies in ACT to commercialize which in turn will solve the issue of treatment of residual waste, risk of contamination by landfills and GHG emission level. Meanwhile in California, a number of communities are showing interest in pursuing these new technologies. CEC's BioEnergy Strategy and CalRecycle's ongoing policy interest in conversion technologies are key policy drivers in this development.

We believe that the timing is right for California to support commercialization of innovative technologies in the ACT sector. Most innovative technologies companies are at 'Stage 3 – Product Development' or at 'Stage 4 – Early Commercialization' phase, as per the technology maturity curve shown in slide-3 of 'CPUC EPIC Introduction' presentation at the EPIC Workshop⁵. Support by EPIC by setting up a category for innovative ACTs will help them

¹ Based on California Department of Resources, Recycling and Recovery (CalRecycle) annual data.

² Based on Plasco conversion system technology

³ http://ec.europa.eu/environment/waste/landfill_index.htm, Council Directive 99/31/EC

⁴ For e.g. Renewable Obligation in UK under European renewable energy support, <http://www.ofgem.gov.uk/Sustainability/Environment/RenewablObl/Pages/RenewablObl.aspx>

⁵ http://www.energy.ca.gov/research/epic/documents/2012-08-02-03_workshop/presentations/CPUC_EPIC_Introduction.pdf

commercialize and get to 'Stage 5 - Commercial Maturity', which in turn will bring benefits to the ratepayers. Furthermore, after commercial maturity has been achieved by these ACT's they will be able to invest more in R&D to further improve the technologies and complement California's innovation market. These R&D activities may include developing smaller facilities appropriate for smaller communities, secondary usage of synthetic fuel for transportation and higher value products for example.

Recommendation

We believe that each community has a unique set of requirements and they should be in a position to select from several new and innovative clean technologies (Solar, Wind, Advanced Conversion, etc) to build greener communities. Supporting distributed generation technologies (including clean innovative ACT) will enable industry to offer a range of clean technology solutions to the community of the future. The timing is right for California to support commercialization of the innovative ACT technologies, as there is demand by communities, government, and regulatory authorities; and innovative Advanced Conversion Technology companies are ready to be commercialized. We respectfully recommend CEC to assign a category for innovative ACT technology in EPIC 1st triennial investment plan.