

October 09, 2008

<b>DOCKET</b>	
<b>08-IEP-1</b>	
DATE	OCT 09 2008
RECD.	OCT 10 2008

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The following comments are submitted to the 2009 IEPR- Feed-in Tariffs, Docket No. 08-IEP-1 and Docket No. 03-RPS-1078. These comments address the report by Kema Inc. "California Feed-in Tariff Design and Policy Options" (CEC300-2008-009-D); the presentation "Policy Paths and Interactions, and Trigger Mechanism" by Robert Grace, Sustainable Energy Advantage, LCC made at the October 1, 2008 Workshop; and the CEC Staff's Opening Remarks made at the October 1, 2008 Workshop.

**Report by Kema Inc. "California Feed-in Tariff Design and Policy Options"**  
**(CEC300-2008-009-D)**

On Page 24, the Table #3 has three headings: Driver, Rational and Priority for Policy Drivers described early in the paper. For Policy Driver #4, the "Rational" box contains the statement "rates designed to help with market penetration..." This "Rationale" statement needs to be expanded beyond market penetration to include: potential to reduce carbon emissions; helping to offset global warming; and creation of economic opportunities. Rate penetration is only one of several criteria to be considered when discussing the sustainability of the renewable energy industry.

Again for Policy Driver #4, the Priority box contains the statement: “Medium.” Given the magnitude and urgency of the expanded “Rational,” the “Priority” should be moved from “Medium” to “High.”

On Page 46 of this report, the authors define, under the heading “Policy Path 5,” a path for applying feed-in tariff to sustainable biomass. As written, this “Policy Path 5” has three problems. First, it fails to recognize work that defines sustainable biomass. Second, it limits the definition of sustainable biomass to feedstocks. Third, it ignores the biomass industries’ need for long term contracts.

### #1 Definition of Sustainability

There are many attempts to craft a definition of “sustainability” and “sustainable biomass.” In April 1987, the World Commission on Environment and Development published a report. Chairman Gro Harlem Brundtland observed in the “Forward” to that report: “the ‘environment’ is where we all live; and ‘development’ is what we all do in attempting to improve our lot within that abode. The two are inseparable.” (Brundtland, G.H., 1987, *Our Common Future*, World Commission on Environment and Development, Oxford University Press, Oxford New York, ISBN 0-19-282080, pp: xi.). Later, in the reports “Overview” section, sustainable development is defined: “Humanity has the ability to make development sustainable – to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs.” (Brundtland, G.H., 1987, *Our Common Future*, World Commission on Environment and Development, Oxford University Press, Oxford New York, , ISBN 0-19-282080, p: 8.). Catherine Clark and Yao Yin of Oregon State University have addressed the concept of sustainability of biomass energy in the Pacific Northwest. They have concluded that there are four dimensions of the sustainable development: economic, social, environmental, and institutional (Clark, C., and Yin, Y., 2007, *The sustainability of Biomass Energy in the Pacific Northwest: A framework for the PNW Region of the Sun Gran Initiative*, Biomass Feed Stock Partnership Workshop, August 27-29, Oregon State University, Sun Grant, Portland Oregon ).

For the biomass industries and their feedstock suppliers, I have developed the following definition of sustainable biomass: Use practices to produce biomass conversion products, energy and bioproducts, in a manner that is secure, renewable, accessible locally, and with mitigation of pollution. (Matteson, G.C., 2008, Incentives, and Market Development to establish Sustainable Biomass Systems, Proceedings of the Third International Meeting on Environmental Biotechnology and Engineering, code 2485, Universitat de les Illes Balears, September 25, 2008, pp: 2.)

## #2 Sustainable Biomass

In my June 30, 2008, comments to the CEC on feed-in tariffs, I provided the work underway on the development of sustainable biomass best practices or standards. These best practices or standards go well beyond feedstocks.

It is also important to note that the goal for sustainable production of energy crops is different than the goal for biomass conversion of waste residuals to energy and bioproducts. For energy crops, the goal is to grow renewable resource for biomass to energy conversion in a sustainable manner and in sustainable quantities. For forestry, agriculture, urban residues, the goal is to utilize the energy or molecular constituents of the waste stream in a sustainable manner, to the fullest extent possible. For energy crops, the emphasis has been on feedstock, but clearly the standards of sustainability apply to the conversion process. Of course, for waste residues the standards of sustainability largely apply to the conversion process.

## #3 Length of Feed-in Tariff Contract Term

One of the critical barriers to investment in biomass to energy and bioproducts industry is the lack of long term contracts. Demonstrating to bondholders an ability to repay debt service is critical to the issuance of debt instruments. The two factors are: continued viability of the market, and long term contracts for power. Feed-in tariff's have the potential of providing the necessary long term contract for power.

### **CEC Staff's Opening Remarks made at the October 1, 2008 Workshop**

Opening remarks by CEC staff included a slide entitled “Rationale for Medium Priority Drivers.” The fourth point on the slides states: “Sustainable Renewable Energy – develop a self-sustaining renewable energy industry.” The slide goes on to state; “Rate designed to increase market penetration.” My comments on the KEMA report (CEC300-2008-009-D), page 24, Table #3, apply to this last quotation. Again, rate penetration is only one of several criteria to be considered when discussing the sustainability of the renewable energy industry.

