Proposed Abstract for Inclusion at 7th Conference on Carbon Dioxide as Feedstock for Fuels, Chemistry and Polymers – March 2019

Presented for Consideration
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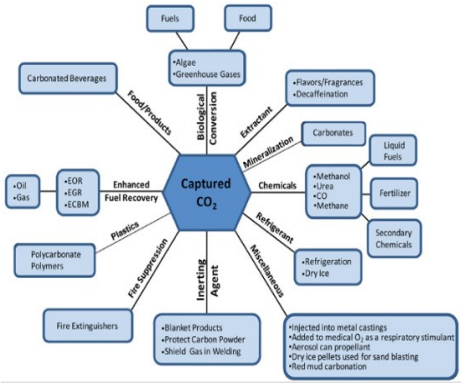
Matching Carbon Conversion Technologies to Carbon Capture Technologies to Catalyze the Carbon Economy

Carbon dioxide, as a feedstock, is a potentially valuable commodity for future chemicals manufacturing. The National Energy Technology Laboratory (NETL), for example, has developed a robust list of potential uses and products starting with CO_2 as a feedstock (Figure 1). With over 40 billion tons of CO_2 emitted annually, effective offsets to CO_2 emissions will require a host of technological solutions applied in parallel. As efforts continue in the development of capture and utilization of CO_2 from anthropomorphic sources, it is clear that no one solution provides the 'silver bullet' in mitigating rising atmospheric CO_2.



It is well publicized that the key to cost effective carbon mitigation is the need for a cost-effective carbon capture technology. Yet only a few efforts continue that provide a scalable, economic solution to carbon capture and therefore, very few solutions exist that can service a wide variety of carbon conversion\utilization solutions.

With the advent of Enviro Ambient's scalable, cost effective carbon capture technology, this paradigm has changed. EAC has previously presented/published the results of its ground-breaking carbon capture technology. With a very small parasitic load, the EAC solution provides a cost-effective, modular means of capturing CO_2 from industrial emitters. It can be deployed to match the conversion/utilization technology chosen to monetize the business model.

This presentation will discuss the development of "load matching" of CO_2 between the EAC carbon capture technology and various conversion solutions to monetize the utilization. We will also discuss the balance of market size for various utilization products against CapEx and OpEx, to show potential ROIs generated with the benefit of EAC's low capture costs. Up to three examples of conversion derived chemicals will be presented showing CO_2 utilization levels if 100 percent of the market is converted, together with costs and ROIs.

End-Use Chemical	Current Annual Global Market $	Current Annual Global Market Mt	Annual CO_2 Converted to Displace 100% of Existing Market MT	Annual Coal Power Production That Emit Required CO2 GW
A	9+ B	9.25M	16.9M	3.4
B	5+ B	9.8 M	17.2M	3.5