CULBERTSON & CO.

WHY I DEVELOPED NATIONAL FUEL ENHANCEMENT,

FLEET FUEL ENHANCEMENT AND

INDUSTRIAL FUEL ENHANCEMENT

By John Culbertson

The programs listed above have a commonality of purpose and components arranged in such a way that they fulfill their mission.

They all have as their mission statement: “To Clear the Air”

The Advanced Carbon Modeling Project “ACMP” has been a part of Culbertson & Co. for about 10 years now. It was a program run by the company to develop new solutions revolving around CO_2e and pollution in general.

For the number of years, we worked with agricultural based solutions and carbon storage methodologies and small scale solar.

Then one day a few years back I got an elevator pitch, literally, on using catalysts to treat the fuel supply. It was a pitch that would ultimately change the focus of the program and hopefully the world, although it was like many others with many promises presented during a short elevator ride it ultimately presented the new opportunity.

The product itself was at that time being sold mainly to individual truckers and users to extend their fuel range. I tried some of the product and found that it at least met the expectations from the elevator pitch.

Further use of the product served to impress upon me about its usefulness and efficacy.

And so, my mind went to work, there was a useful product, how could it be packaged and sold on a large scale to make a difference? After all one vehicle would be a minor difference but thousands of vehicles, that could make a difference.

WHY THIS IS MATTERS

Reducing GHG's is the desired outcome. Reducing emissions is an ongoing project for major oil companies and the auto industry. By considering the chemistry we have achieved at a low cost many of the goals of these research programs. They constantly look at post engine chemistry, ever heard of a catalytic converter or Diesel Exhaust Fluid? Our catalysis approach reduces emissions far more and more dependably than mechanical systems or fixing the problems on the exhaust end, burning less fuel results in fewer emissions.

ACMP stands for Advanced Carbon Modeling Project, and so I set about within the confines of the original ACMP vision and sought a way to develop something new and useful and really life-changing for people around the world. More on that later.

We acquired some basic rights to the product and began fussing, fiddling, and all of the things that happen when you're developing something new. We tweaked the formulas and did a lot of math and studied a lot of demographics.

What the program came up with in the end was an industrial level approach which was new and exciting and potentially life-changing for many people. These three programs promised to change lives. After all, it would take an industrial approach for what was essentially an industrial product.

It wound up becoming the biggest potential tool in the fight against air pollution in modern times.

Reduced Carbon Fuel

What's important to look for in the emissions is the outcome of the fuel your using in relation to CO_2 and Green House Gasses "GHG" the amounts of GHG in relation to the use of the fuel.

As for GHG's in fuel treated by the catalyst we found.

Reduced levels of CO_2e, by 12% to 30% according to findings in United States government testing.

And, increasing the range of a liter of fuel by 5% to 23.67% in the same tests.

And it has similar results in industrial applications such as heavy oil, biomass, and coal.

You can imagine what the effects would be in the crowded streets of Mumbai or Beijing. Suddenly buildings can be seen again and people, this is the best result, you can see the people. They don't have to wear masks anymore.

The health benefits are enormous, particularly for children and the elderly.

Suddenly pollution can be easily reduced at the source rather than attempt to clear from the air after the smog has become thick and unhealthy.

It goes to the common wisdom, if you want to stop or reduce something go to the source. It's easier to prevent something from happening than clean up the mess afterward. You know the saying "Well the toothpaste is out of the tube". It is really tough to clean up polluted air just like getting the toothpaste back in the tube.

Here we see an attempt to clean the air in a city in India by shooting water into the atmosphere, the effect is temporary.

ADVANCED CARBON MODELING PROJECT 11890 Sunrise Valley Drive Reston, VA 20191 www.culbco.com
www.acmproject com

This is what Greenpeace had to say:

> *"This is definitely not the solution. You can use it occasionally at sensitive locations but the solution to pollution lies in controlling it at the source rather than spraying water on it,"*
>
> Greenpeace's Sunil Dahiya

While we agree wholeheartedly with Greenpeace in this instance, and they do not endorse nor have we sought their endorsement of our programs, they are spot on about reducing pollution at the source.

WHY THIS IS MATTERS

It's hard to treat emissions once they are in the air. You can wash some the emissions out with artificial rain, but in India where potable water is scarce, this makes absolutely no sense. It takes 100 gallons of water per minute to run one of these cannons. It takes just six drops of catalyst per liter to prevent the smog. Which is more resource efficient? Which takes care of more GHG's the water only catches particulates which are reduced by the catalyst along with NOX which is the glue for smog. ACMP programs are more sustainable than after-treatment.

In treating the fuels, one stubborn fact emerges, ACMP programs are very cost-effective. There is a cost-benefit for consumers just about anywhere on the planet. If you passed the cost of treatment on to consumers they still benefit, even in a country like Algeria, where gasoline is about $.37 a liter, consumers still benefit. Even at 5% fuel savings. We typically see consumers leveraging the cost at about seven to one, meaning they receive $7.00 for every one dollar of cost. Of course, this is variable, the more the cost of the fuel the more the more the consumer saves.

So, the cost vs. the benefit is large even at 5%, so you can imagine what the benefit would be in a country like Iceland where gasoline is about $2.08 a liter.

That's the power of National Fuel Enhancement, as a consumer, it's almost like getting paid to clean the air, no water cannon needed!

ACMP
ADVANCED CARBON MODELING PROJECT 11890 Sunrise Valley Drive Reston, VA 20191 www.culbco.com
www.acmproject com

But what does this mean for national governments trying to meet emission requirements?

Let's look at a few countries, I'll call them the U's because they all start with a "U" and come from various parts of the world.

First, we have the United Arab Emirates; 5,256,043

Then we have the United Kingdom: 16,183,295

And finishing our list we have the United States: 224,274,397

But you ask what do these numbers represent?

The numbers represent the amount of carbon in tons that would be saved from polluting the atmosphere if each country adopted National Fuel Enhancement. Just for the road sector.

WHY THIS IS MATTERS

It's vitally important, by adopting National Fuel Enhancement each country eliminates millions of tons of carbon. We have carefully calculated this from records kept by the United Nations. And according to Wikipedia The United Arab Emirates reduces its carbon emissions by 2% to 5%, the United Kingdom reduces its emissions by 3% to 7.5% and the United States by 6% to 15% based on performance ranges in tests conducted by a U.S. Government Department for over the road vehicle use. Imagine what other applications could add to this total. And as for fuel savings, we calculate that Ireland would save a minimum of 44,284,058 liters of fuel.

Every nation must make a choice: remain stuck in the past or move toward the future. It's a future where many tell you about electric cars, they see the cars but not the electric grid problems. Where does the electricity come from? will it be a hydrocarbon fuel power plant? How much carbon will it release?

ACMP
ADVANCED CARBON MODELING PROJECT 11890 Sunrise Valley Drive Reston, VA 20191 www.culbco.com
www.acmproject com

Well, as we have shown, hydrocarbon fuels are not necessarily a bad thing. They will serve us well for many years to come with proper treatment, A single Tesla Semi-Tractor on the fast charger is reported to require as much electricity as 4,000 homes.

Then there is the cost of ownership, you can't simply replace cars and trucks with electric versions, the cost would be prohibitive. Certainly, that new truck rolling off the dealership lot will require many miles before it is fully amortized. What is needed is a balance between economic necessity and the move toward zero-emissions.

This is where ACMP programs come in. They can provide powerful tools both economic and scientific to a nation's economy. They are a bridge to the future.

And they will reduce the emissions significantly as well.

So, there you have it, with National Fuel Enhancement I have created a program which is easy to deploy, reduces emissions and saves fuel at a cost that leverages the consumers benefit and improves the economic health of a nation.

How can National Fuel Enhancement improve the economy? Excellent Question, here's how.

Every kilogram of carbon which is reduced adds up. When you don't release carbon but do the same amount of work, that's an offset that can be monetized. It's a major asset of the programs.

So once again a there was a requirement to develop a methodology for monetizing the carbon that would be saved from application of the programs. So, the wheels turned and Amazon is not the only one with a flywheel. The term flywheel is applied to a methodology at Amazon which requires working backwards to a product even if it requires inventing solutions along the way, to arrive at the final product.

Working backwards from the point of issue, the Culbertson Process was developed to provides a methodology for determining an entire countries carbon offset through using test fleets and inference.

ACMP
ADVANCED CARBON MODELING PROJECT 11890 Sunrise Valley Drive Reston, VA 20191 www.culbco.com
www.acmproject com

Once the nation in question has carbon credits issued by the Culbertson Process, they are high quality credits certified by strenuous accounting and the government. It is adaptable for Fleet Fuel Enhancement Subscribers and Industrial Fuel Enhancement Subscribers.

Then the carbon moves through the marketplace, to be sold to organizations that require coverage for their carbon emissions and obligations.

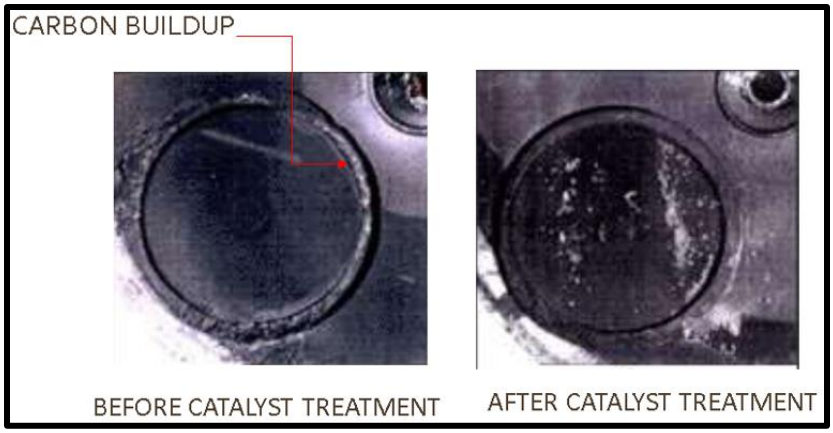
Next was the creation a cryptocurrency or token for the credits known as a “Quart” to make transfers secure and confidential.

One only need look at Capetown, South Africa to see the result of not planning for and embracing the future. The water situation is dire without a solution on the horizon. The cost of not taking action when it’s possible is immense. Let’s hope that in the area of emissions management that the matter does not experience what we could call the “Capetown abyss”.

WHY THIS IS MATTERS

National Fuel Enhancement provides each subscribing nation the means to freely trade the carbon they have eliminated. It’s a source of revenue for the national treasuries that can bring in millions of dollars. Fleet operators and industrial subscribers have access to the carbon trade as well making a new source of revenue possible. Citizens can benefit both directly and indirectly by the program, it extends their travel range and gives their country new revenue. With National Fuel Enhancement everybody wins. The programs help you move forward solving problems which are on the horizon and provide readably deployable solutions today.

Fleet Fuel Enhancement was created for operators of fleets of vehicles to provide a methodology for operators to utilize the catalyst for their fleets.



In the photograph above you can see the result of using one of our programs. This is the cylinder head of a truck, in it you can see the carbon build up and then the result of using the catalyst. The carbon deposits are removed because the catalyst has involved them in a chemical reaction during combustion thus removing them from the valve. It is important to point out that this is not a detergent action but the normal action of the catalyst behaving normally.

The catalytic action has benefits for all of the components in the exhaust stream. EGR valves and fuel injectors are just two components that benefit from the treatment. They however represent potential repair bills which rob Fleet Operators of profits.

As a fleet operator this represents fewer maintenance issues providing savings. For a nation it means cleaner burning vehicles and for those using Industrial Fuel Enhancement it means cleaner operating facilities.

Industrial operations can benefit from our programs as well. Because they represent another source of emissions and thus another opportunity. If you have a facility that uses hydrocarbon fuels our programs provide a robust solution that will save you money and cut emissions.

This includes fuels like crude oil, biomass and coal.

No matter what fuel you burn we can provide an effective treatment to lower your consumption and reduce emissions.

ACMP
ADVANCED CARBON MODELING PROJECT 11890 Sunrise Valley Drive Reston, VA 20191 www.culbco.com
www.acmproject com

As can be seen in the photograph above, the facility after 250 hours on the catalyst is producing fewer particulates and gaseous emissions.

Now to summarize, the programs provide for meeting the stringent criteria of ACMP.

Any solution must be useful and uncomplicated: *The programs are easy to implement fuel can be treated by addition of the catalyst.*

Any solution must be cost effective: *The programs are low cost and return benefits to consumers and operators and governments in excess of their cost of application.*

Any solution must be readably deployable in the immediate future: *The programs are ready to deploy; the science is mature and well understood.*

Any solution must benefit as many people as possible: *The programs can benefit millions of people when deployed.*

Any solution must be needed: *Nothing says needed more than polluted skies and carbon mitigation requirements. The programs offered by ACMP have a definite need.*

And so, you have it, ACMP criteria have been met and exceeded. I have produced three programs addressing the biggest challenge of the day: Clean Air.

ACMP
ADVANCED CARBON MODELING PROJECT 11890 Sunrise Valley Drive Reston, VA 20191 www.culbco.com
www.acmproject com

So, for you the question is:

Is this the future that you want?

Or

Do you want to embrace a future with clean air and no masks?

With the programs I have designed you certainly have the tools available to reduce emissions and cut maintenance cost. Fuel savings is an additional bonus that pays you back with every tankful.

The programs presented here were designed to be useful and relevant to national economies.

To reduce emissions, clear the air.

ACMP
ADVANCED CARBON MODELING PROJECT 11890 Sunrise Valley Drive Reston, VA 20191 www.culbco.com
www.acmproject com

With our programs in place everybody wins, unless of course you manufacture or distribute face masks. Somebody has to lose, and these are the folks that will take the hit. Sorry but cleaner air makes these products unnecessary.

Embrace an ACMP future.

Contact ACMP today to learn more about the programs designed for positive change..

Website: acmproject.com

Email: acmp@culbco.com

We can help you face the future and provide a rational well thought out program that can make the future bright.

ACMP
ADVANCED CARBON MODELING PROJECT 11890 Sunrise Valley Drive Reston, VA 20191 www.culbco.com
www.acmproject com