

Question and Answer



Charles Morris President | Chief Operating Officer Pine Chemicals Association, Inc.

Morris Close-Up

Education: Chemical engineering degree in 1964 from the Georgia Institute of Technology, Atlanta, GA.

Family: Wife, Connie. Three children, three grandchildren

Career: Officer in the Army Chemical Corps. Engineer in terpenes and tall oil fractionation, SCM Corp., Jacksonville, FL. Vice president and general manager, Sylvachem Corp., Panama City, FL. President, Chesapeake Biological Labs, Baltimore, MD. Vice president of the specialty chemicals group, Georgia Pacific Corp., Atlanta, GA.

Hobbies: Golf and saltwater fly-fishing.

As president and chief operating officer of the Pine Chemicals Association (PCA) in Fernandina Beach, FL, Charles Morris wants the biofuels industry to know that there are potential unintended consequences of the Renewable Fuels Standard (RFS).

The concern of the PCA and the pine chemicals industry, Morris explained, is that mandates and incentives established in legislation such as the RFS and the Renewable Energy Directive (RED) in the European Union may redirect the use of crude tall oil (CTO), which is a co-product of pulp and paper manufacturing used in high-value, bio-based chemical products that are found in hundreds of everyday products.

The CTO industry operates without incentives or mandates and can fairly compete for the raw materials in a free market, Morris told BioFuels Journal in a telephone interview and in written answers to questions. But, according to Morris, when the RFS became law, it created a competing demand for the woody biomass that CTO is made from.

The pine chemicals industry has been successfully using renewable raw materials for more than 80 years, Morris pointed out, which makes pine chemicals one of the first “green” manufacturing industries. It receives no subsidies. CTO, as a co-product, is in finite supply with a total annual production in the United States and Europe amounting to about two million metric tons annually, according to Morris.

The CTO fractionation industry employs about 2,000 people directly and generates direct revenues of more than \$2 billion in the United States. The indirect impact of the industry in the United States amounts to

more than 20,000 jobs and approximately \$8 billion in economic activity.

If the products made from CTO were not available, Morris added, they would be replaced by products that have a significantly higher carbon footprint.

The bottom line, he concluded, is that CTO should not be diverted to biofuels production.

Pine Tree Chemicals

Pine tree chemicals are essentially the sap of the tree and are separated from cellulose as co-products during the pulping process when paper is made and are recovered in the form of crude tall oil (CTO) and crude sulphate turpentine (CST).

These co-products have exceptional functionality and, when each is processed and purified into distinct components, they are used in many products that we see and touch every day.

Products utilizing pine chemicals include printing inks, adhesives, paints, coatings, papermaking additives, chewing gum, food additives to reduce cholesterol, soap fragrances, perfumes, food flavors, vitamin intermediates, drilling fluids, mining chemicals, and many other consumer goods.

Pine chemicals are also produced by tapping pine trees, collecting the resin or sap, and then purifying it into usable products that are used for these same applications.

The supply of CTO, a co-product of the pulping process, is directly tied to the demand for softwood-based paper and, thus, is a constrained raw material. With the global push to use biomass as

an energy source, CTO can be seen as an easy material to either burn or convert into a transportation fuel.

CTO, however, has five times the value if used as a chemical intermediate rather than as a fuel and its use as a chemical intermediate produces nine times the number of jobs.

The industry is technologically advanced, utilizing complex distillation plants to process the CTO into its components. Additionally, the industry constantly invests in research and development to develop new products and to keep up with technology in the ever-changing markets for ink, adhesives, coatings, and other products.

Our industry is a long-standing example of the development of high technology chemicals from a renewable source and of the efficient use of a biomass raw material.

Reducing CO₂

Mandates and incentives to use biomass fuels are, in part, driven by the goal of reducing CO₂ emissions. Utilizing CTO as a fuel either directly or indirectly, in the form of biodiesel or as an advanced biofuel, will have a net zero impact on CO₂ reduction.

Data from the recently released report, "Greenhouse Gas and Chemicals Derived From Crude Tall Oil and Their Substitutes," shows CO₂ emissions will be essentially the same if CTO is used as a fuel or in chemical products. Additionally, fossil fuel use will not be reduced, as substitutes for the pine chemical products will offset any gains from using CTO as a fuel.

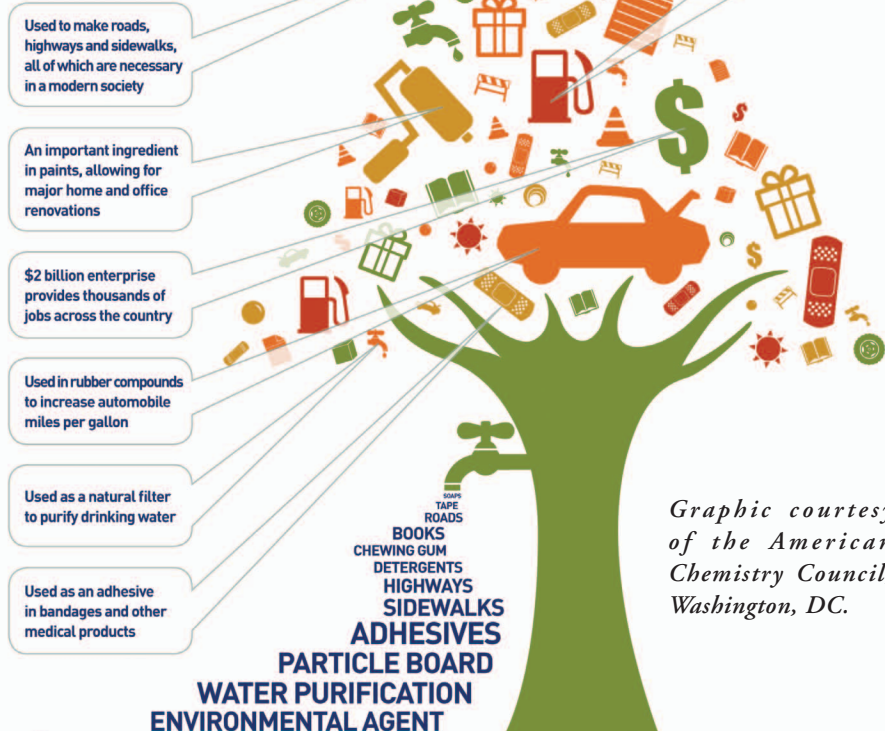
The report, which was sponsored by the American Chemistry Council, was prepared by Franklyn Associates and was peer-reviewed.

'Cascading Use'

Our industry supports the concept of "cascading use." What this means is that a process is used in which the valuable chemicals from a biomass raw material are extracted and then any usable co-products are further extracted and utilized until no more value can be extracted from the biomass. Residual products are then used as fuels.

This concept provides the maximum value and utilization of our natural bio-

Pine Chemistry: Essential to society for over 80 years.



*Graphic courtesy
of the American
Chemistry Council,
Washington, DC.*

mass raw materials.

We are opposed to incentives and mandates that do not take into account the differences in biomass raw materials and, in particular, the uniqueness of pine chemicals.

We are open to any new technologies or applications for pine chemicals that economically make sense without government incentives or assistance.

Consequences

The early phases of the RFS and RED have caused a number of unintended consequences.

The goal to reduce fossil fuel use and CO₂ emissions must be carefully monitored to make sure that solving one problem does not create another.

We are requesting that the RFS and RED policies clearly direct that CTO and CST are not eligible for incentives for use in fuels of any type.

Valuable biomass materials, such as our feedstocks, can be better utilized in a free market to produce value-added chemicals and consumer products and should not be burned as fuel to satisfy one policy goal at the expense of another.

We do not favor the repeal of the RFS or the RED, but we are advocating classifying CTO and CST as ineligible for incentives or mandates that would distort the market and redirect the use of CTO for use in a fuel.

Reaching Out

The PCA works with the Pine Chemistry Panel, a subgroup within the American Chemistry Council (ACC) formed by PCA member companies to access the extensive capability of the ACC in working with U.S. state and federal legislators. The PCA and our member companies work with European associations to make our concerns known to lawmakers in the EU.

Our industry is a long standing example of how biorenewable chemicals can be used efficiently and economically in industrial and consumer products.

Redirecting the use of CTO to fuels through subsidies or mandates will cost a significant number of jobs, increase CO₂ emissions, and have a minimal impact on fossil fuel use. It is a poor use of taxpayer dollars to redirect our critical raw material to fuel use.

Jerry Perkins, editor