

## **Comment 1 for Innovative Crude Oil Applications for LCFS (innovative-crude-ws) - 2nd Workshop.**

First Name: ANDY

Last Name: APPAN

Email Address: ANDY\_APPAN42@YAHOO.COM.SG

Affiliation: amarappan

Subject: NO CARBON TRANSPORT, PP

Comment:

STOP EV, HYBRID, PETROL, DIESEL, LPG, KERSENE, COAL, OIL,  
GAS VEHICLES. BS X, EUR X ENGINES. NO CO2e.  
START NO CO2e AUTOMOTIVE . CAPEX 70 %. OPEX 40 %  
IDEA STAGE VC FUND 3 Cr, 2 Yrs  
Climate Change. 120 ppm  
Global GHG Emission 36 BnT/yr  
Catapult Renewable Energy 1.23 mn lbs/sft Thrust  
from 6000 m Water depth reduces it by 25 Bnt/yr  
Net GHGe 11 BnT/yr. 30%  
GHGe: 120 ppm from 400 ppm  
Stop Solar, Wind, Coal, Oil, Gas,  
Nuke, Geothermal energy  
Saves 14,410 Bn\$/yr by Parts, Fuel in  
Transport, Power Plant  
  
INV 100 mn\$ get back 200 mn\$ in 2 yrs  
INV 1000 mn\$ get back 2000 mn\$ in 3 yrs  
INV 120 bn\$.ROI=500%.PAT=240bn\$/yr in 4 yrs

Attachment: [www.arb.ca.gov/lists/com-attach/1-innovative-crude-ws-WzUHbgFfBDQBZgd1.png](http://www.arb.ca.gov/lists/com-attach/1-innovative-crude-ws-WzUHbgFfBDQBZgd1.png)

Original File Name: NO CARBON TRANSPORT, POWER PLANT CER 25 BnT.Yr.png

Date and Time Comment Was Submitted: 2017-12-12 13:41:40

No Duplicates.

**Comment 2 for Innovative Crude Oil Applications for LCFS (innovative-crude-ws) - 2nd Workshop.**

First Name: robillard

Last Name: decady

Email Address: rdecady@twupgs.com

Affiliation:

Subject: % 100 co2 pollution free power plant.

Comment:

WE NEED IF POSSIBLE FORMS APPLICATIONS REGARDING  
PURE GREEN PROJECTS PLEASE.THANKS

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2017-12-12 22:54:58

No Duplicates.

**Comment 3 for Innovative Crude Oil Applications for LCFS (innovative-crude-ws) - 5th Workshop.**

First Name: David

Last Name: Hovermale

Email Address: dhovermale@nopa.org

Affiliation: National Oilseed Processors Association

Subject: NOPA Comments Regarding CARB September Board Meeting

Comment:

Attachment: [www.arb.ca.gov/lists/com-attach/4-innovative-crude-ws-UDMAaVc7WGYEZwRq.docx](http://www.arb.ca.gov/lists/com-attach/4-innovative-crude-ws-UDMAaVc7WGYEZwRq.docx)

Original File Name: Comments for 9-28-23 CARB Meeting v1.docx

Date and Time Comment Was Submitted: 2023-09-28 10:26:46

No Duplicates.

## **Comment 4 for Innovative Crude Oil Applications for LCFS (innovative-crude-ws) - 5th Workshop.**

First Name: Jesse

Last Name: Holman

Email Address: seneryoilag@gmail.com

Affiliation:

Subject: Consider Innovative Production Method Lowers CI >60%

Comment:

We kindly request consideration of adding to CCR Section 95489(c)(1)(A), Chemistry Replace Steam, as an innovative production method. This will incentive crude producers to stop using steam to extract heavy oil, reducing emissions in California's most disadvantaged communities while reducing overall fossil fuel demand.

Approving this incentive could reduce oil extraction emissions 61 million tons of CO<sub>2</sub>e, eliminating 1.1 billion mcf of natural gas burned by 2030. Reducing the dirtiest oil's carbon intensity over 60%. California producers will deliver the cleanest crude to California refineries, reducing emissions, imports, costly refinery upgrades all while supporting a cleaner transition.

The chemistry proposed is plant based, pH neutral and biodegradable. This is safer, cleaner and more expensive than steam. Which is why approval of this innovation is necessary to accomplish the mission of CCR Section 95489. All approved innovations in 95489(c)(1)(A) are aimed at reducing, replacing or eliminating burning natural gas, either for steam or electricity. Approved innovations are reducing around 55,000 tons CO<sub>2</sub>e per year. Approving this innovation reduce millions of tons within the first two years.

This chemistry has so many other applications than just oil and gas. The biggest opportunities in O&G are the dirtiest production methods, which is steam in California and Canada. Next would be heavier oils from Alaska North Slope.

This chemistry outside O&G is an all-natural firefighting suppression innovation, lower emissions in agriculture, water treatment, enhanced oil recovery, eliminating solvents and harmful cleaning products, soil remediation, and the opportunities keep growing.

Attached is how chemistry replaces steam, and an application for approval. The chemistry proposed is plant based, pH neutral and biodegradable, that is 13x lower carbon intensity than steaming.

Thank you for your consideration for creating California's clean transition.

Attachment: [www.arb.ca.gov/lists/com-attach/5-innovative-crude-ws-AGNdMwZiBzkHaAJx.zip](http://www.arb.ca.gov/lists/com-attach/5-innovative-crude-ws-AGNdMwZiBzkHaAJx.zip)

Original File Name: Chemistry Replaces Steam\_ICPM.zip

Date and Time Comment Was Submitted: 2023-12-17 08:53:42

No Duplicates.

**There are no comments posted to Innovative Crude Oil Applications for LCFS (innovative-crude-ws) that were presented during the Workshop at this time.**