**CITY OF MCFARLAND**
**PLANNING COMMISSION AGENDA**

**REGULAR MEETING**
**CITY COUNCIL CHAMBERS** **January 18, 2022**
**103 W. SHERWOOD AVE, MCFARLAND, CA** **6:00 PM**

**In Person Meeting**

**How to submit public comments:**

The meetings of the Planning Commission and all municipal entities, commissions, and boards ("the City") are open to the public. At regularly scheduled meetings, members of the public may address the city on any item listed on the agenda, or on any non-listed matter over which the city has jurisdiction. At special or emergency meetings, members of the public may only address the city on items listed on the agenda.

There is a time limitation of two minutes per person. For any item that is not on the agenda and within the jurisdiction or interest of the city, please come to the podium at this time. The Brown Act does not permit any action or discussion on items not listed on the agenda. If you wish to speak regarding a scheduled agenda item, please come to the podium when the item number and subject matter are announced, and the Chairman opens Public Comment on the item. When recognized, please begin by providing your name and address for the record (optional). Anyone wishing to submit written information at the meeting needs to furnish ten (10) copies to the City Clerk in advance to allow for distribution to Planning Commission, staff, and the media. Willful disruption of the meeting shall not be permitted. If the Chairman finds that there is in fact willful disruption of any Planning Commission Meeting, he/she may order the disrupting parties out of the room and subsequently conduct the Commission's business without them present.

**Americans with Disabilities Act:**

In compliance with the ADA, if you need special assistance to participate in a city meeting or other services offered by the City, please contact the City Clerk's office, at (661) 792-3091 ext. 2135. Notification of at least 48 hours prior to the meeting, or time when services are needed, will assist the city staff in assuring those reasonable arrangements can be made to provide accessibility to the meeting or services.

**CALL TO ORDER:** Chairman Marco Martinez

**ROLL CALL:**

Chairman, Marco Martinez
Vice Chairman, Jose Hernandez Jr.
Commissioner, Jose "Jay" Hernandez
Commissioner, Luis Sarabia
Commissioner, Jim White

**PLEDGE OF ALLEGIANCE:**

**INVOCATION:**

**PRESENTATIONS:**

1. **San Joaquin Renewables Presentation by**: T. J. Paskach President - (via Zoom)

**PUBLIC COMMENT:** This Portion of The Meeting Is Reserved for Persons Desiring to Address the Commission on Any Matter NOT on This Agenda and Over Which the Commission Has Jurisdiction. Speakers Are Limited to Two (2) Minutes. Please State Your Name and Address for The Record Before Making Presentation.
No Action or Discussion Shall Be Taken on Any Item Not Appearing on The Agenda, Except That Any Planning Commissioner May Briefly Respond to Statements Made, Or Questions Posed, By Members of The Public. Concerns Or Complaints Will Be Referred to The Community Development Director's Office.

**PUBLIC HEARINGS:**

None

**CONSENT ITEMS:** The Consent Agenda consists of items that in staff's opinion are routine and non-controversial. These items are approved in one motion unless the Planning Commission removes a particular item.

2. Approval Of December 21, 2021 Regular Planning Commission Meeting Minutes.

**PLANNING DISCUSSION ITEMS:**

None

**COMMISSIONER COMMENTS:**

On Their Own Initiative, Commission Members May Make an Announcement or A Report on Their Own Activities. They May Ask a Question for Clarification, Make Referral to Staff, Or Take Action to Have Staff Place a Matter of Business on A Future Agenda (Government Code Section 54954.2(A)).

**ADJOURNMENT:**

This Is to Certify This Agenda Was Posted at McFarland City Hall on **January 13, 2022**.

*Francisca Alvarado, City Clerk*

*Peter Cosentini, Assistant City Manager*

*Kenneth Williams, City Manager/ Chief of Police*

Next Regular Planning Commission Meeting **February 15, 2022**.

The City of McFarland Does Not Discriminate Based on Disability and Complies with The Provisions of The Americans with Disabilities Act (Ada). If You Need Special Assistance to Participate in This Meeting, Please Contact the City Clerk's Office At (661) 792-3091 At Least 48 Hours Prior To The Meeting to Make Reasonable Arrangements to Ensure Accessibility to This Meeting.

**CITY OF MCFARLAND REGULAR PLANNING COMMISSION MINUTES**

**In Person Meeting**

**December 21, 2021**

## CALL TO ORDER

Chairman Marco Martinez called the meeting to order at 6:00 p.m.

## ROLL CALL

Commissioners Present: Martinez (Chairman), White, Jose "Jay" Hernandez, J. Hernandez Jr., L. Sarabia

Commissioners Absent: None

## OFFICIALS PRESENT

Interim Community Development Director Ronk, City Clerk Alvarado

## PLEDGE OF ALLEGIANCE

Commissioner White

## INVOCATION

Commissioner J. Hernandez Jr.

## PRESENTATIONS AND PROCLAMATIONS

1. **San Joaquin Renewables Presentation by**: T. J. Paskach President – *Presentation was cancelled/ postponed T.J Paskach did not connect to Zoom at the time of the meeting.*

Interim Community Development Director Ronk gave commission a brief update and overview on pending presentation.

## PUBLIC COMMENTS

None

## PUBLIC HEARINGS

None

## CONSENT ITEMS

1. Motion was made by: **Commissioner J. "Jay" Hernandez** to approve the November 16, 2021, Regular Planning Commission Meeting Minutes 2nd by: **Commissioner White**.
   **Vote: 5/0**
   **Ayes: J. L. Hernandez, White, J. Hernandez Jr., Sarabia, Martinez (Chairman)**
   **Nays: None**
   **Absent: None**
   **Abstentions: None**

## PLANNING DISCUSSION ITEMS

None

## COMMISSIONER COMMENTS

Commissioner J. Hernandez Jr.- requested update about Planning Commission compensation.

Interim Community Development Director L. Ronk responded that he is working finalizing draft ordinance that the Commission requested to establish an ordinance that would state commission compensation amount and change from $30 a month to $50 a month.

Commissioner J. Hernandez Jr- asked about past due Planning Commission meeting compensation.

City Clerk Alvarado apologized for the delay and stated they would be receiving a check for Planning Commission meetings compensation shortly.

## ADJOURNMENT

Motion by: **Martinez (Chairman)** to adjourn the meeting; 2nd by: **J. L. Hernandez**.

**Meeting adjourned at 6:15 p.m.**

_____

***Francisca Alvarado, City Clerk***

# PLANNING COMMISSION STAFF REPORT
## December 21, 2021

**TO:** Chair and Planning Commissioners

**FROM:** Brianahi De Leon
City Planner

**DATE:** January 18, 2022

**PROJECT NAME:** San Joaquin Renewables

**ENVIRONMENTAL DOCUMENT:** None

| Agenda Item | |
|---|---|
| Presentation | |
| Consent | |
| Unfinished Business | |
| New Business | |
| Public Hearing | |
| Other | x |
| **Action Requested** | |
| Ordinance | |
| Resolution | |
| Motion | |
| Other | x |

**PROJECT DESCRIPTION**
San Joaquin Renewables

**BACKGROUND**
T.J. Paskach, President of San Joaquin Renewables, will be presenting on the new San Joaquin Renewable Biomass Project. The project initially sat on a City owned property. Through a Certificate of Compliance, the project was parceled in early November. A Mitigative Negative Declaration is currently in progress under the Environmental Review. The next steps in the planning phase are a rezone. This will occur once the CEQA process has been completed by consultants. The presentation will describe the project and the current progress.

**FISACL IMPACT:**
There are no fiscal impacts.

**STAFF RECOMMENDATION**
The staff recommends the Planning Commission take notes and ask any questions.

**ATTACHMENTS**
Attachment A – San Juaquin Renewables Project PowerPoint

San Joaquin Renewables

NATURAL GAS FROM BIOMASS

# Transportation Biofuel Project

## Cleaning the air in California's San Joaquin Valley with BECCS

McFarland Planning Commission Meeting, 1/18/2022

TJ Paskach, PhD, President

San Joaquin Renewables

NATURAL GAS FROM BIOMASS

# Forward-Looking Statements Safe Harbor Disclaimer

THIS IS NOT AN OFFERING FOR ANY SECURITIES NOR A SOLICITATION FOR ANY INVESTMENT. ANY OFFER OR SALE OF SECURITIES BY SAN JOAQUIN RENEWABLES, LLC WILL ONLY BE MADE PURSUANT TO A SEPARATE CONFIDENTIAL PRIVATE PLACEMENT OFFERING TERM SHEET AND ALL EXHIBITS THERETO AND SUCH OTHER DOCUMENTATION AS MAY BE REQUIRED BY SAN JOAQUIN RENEWABLES, LLC. ANY STATEMENTS OR PROJECTIONS PERTAINING TO EVENTS OR CIRCUMSTANCES THAT HAVE NOT ALREADY OCCURRED ("FORWARD-LOOKING STATEMENTS") ARE SPECULATIVE AND THE OPINION OF THE COMPANY, FRONTLINE, AND ITS MANAGERS. ACTUAL RESULTS OF OPERATIONS MAY MATERIALLY DIFFER FROM THE FORECASTED INFORMATION PROVIDED OR REFERENCED HEREIN. ACCORDINGLY, NO PARTY SHOULD PLACE UNDUE RELIANCE ON FORECASTED INFORMATION. EACH PARTY IN RECEIPT OF ANY INVESTMENT OFFERING MATERIALS SHOULD RELY ON THEIR OWN ANALYSES, AND NOT RELY ON FORWARD-LOOKING STATEMENTS.

# Carbon Happens!

Sunshine + water + $CO_2$ = biomass

It is natural.

It is inevitable.

It is… HUGE

Both agriculture and forest growth produce an enormous amount of biomass that is not digestible and is perfect for gasification.

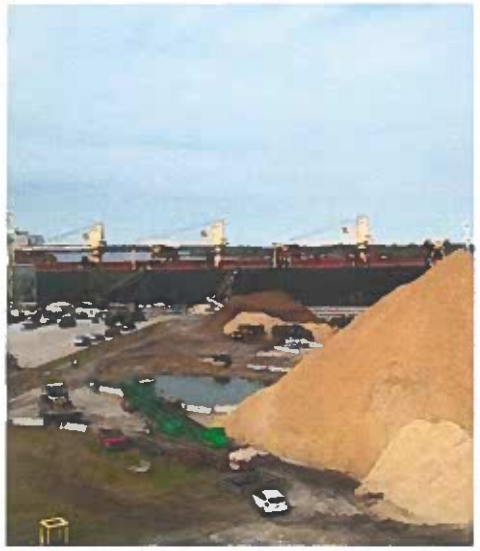
Electrifying transportation will not eliminate carbon. (unless renewable fuels made from carbon are used for that end)

Bioenergy Association of California

Biogas Potential from technically available organic waste, prepared by Rob Williams, UC Davis

| Feedstock | Technically Available Amount | Billion Cubic Feet of Methane | Million Gasoline Gallon Equivalents |
|---|---|---|---|
| Landfill Gas | 106 BCF | 53 | 457 |
| Animal Manure | 3.4 M BDT | 19.5 | 168 |
| Waste Water Treatment Gas | 11.8 BCF | 7.7 | 66 |
| Fats, Oils and Greases | 207,000 tons | 1.9 | 16 |
| Municipal Solid Waste (food, leaves, grass) | 1.2 M BDT | 12.7 | 109 |
| Municipal Solid Waste lignocellulosic fraction) | 6.7 BDT | 65.9 | 568 |
| Agricultural Residue (Lignocellulosic) | 5.3 M BDT | 51.8 | 446 |
| Forestry and Forest Product Residue | 14.2 M BDT | 139 | 1,200 |
| FUEL POTENTIAL | | 351 | 3,030 |

Non-digestible organics



# Existing Options for Biomass

## Incineration with heat recovery for electric power (cogen plants)

- Large water consumption, emissions

## Shipping biomass to Japan and other far-flung points

- Highly inefficient and expensive

## Grinding and soil incorporation:

- Currently being promoted heavily with subsidies
- Decomposition is very slow
- May hurt yields
- Increase in fungus, bacteria, and nematodes
- Larger chunks of wood may hamper replanting and harvest

## Open burning of biomass

- Highly polluting – worsening air quality
- Discouraged – soon to be banned in CA

# What about conversion to renewable fuel?

Solid Fuel Feedstock

Gasification Process

Synthesis gas (Syngas)

$CO$

$H_2$

$CO_2$

$H_2O$

Methane

Light hydrocarbons

# Fueling the Energy Transition™

- Founded in 2005, Frontline BioEnergy has been developing and demonstrating scalable, pressurized gasification, pyrolysis, and integrating many related technologies for renewable energy.

Frontline develops projects and serves others with advanced conversion technologies:

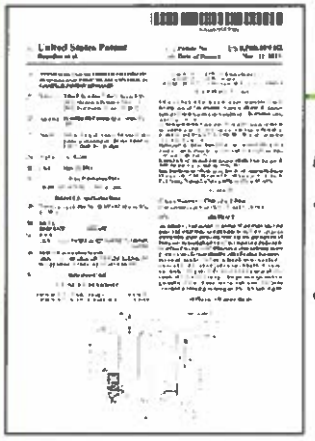
Biomass to biofuels (e.g. biomethane)

Biomass to chemicals (e.g. methanol)

Biomass to electricity

FRONTLINE™ BIOENERGY, LLC

*Renewable Energy & Products*



## PMFreeGas®

***High Efficiency Filtration of Produced Gas***

- Patents granted in United States, Canada, South Korea, Europe
- Patent pending in several other countries

## TarFreeGas®

***Minimizes Gasifier-Produced Contaminants***

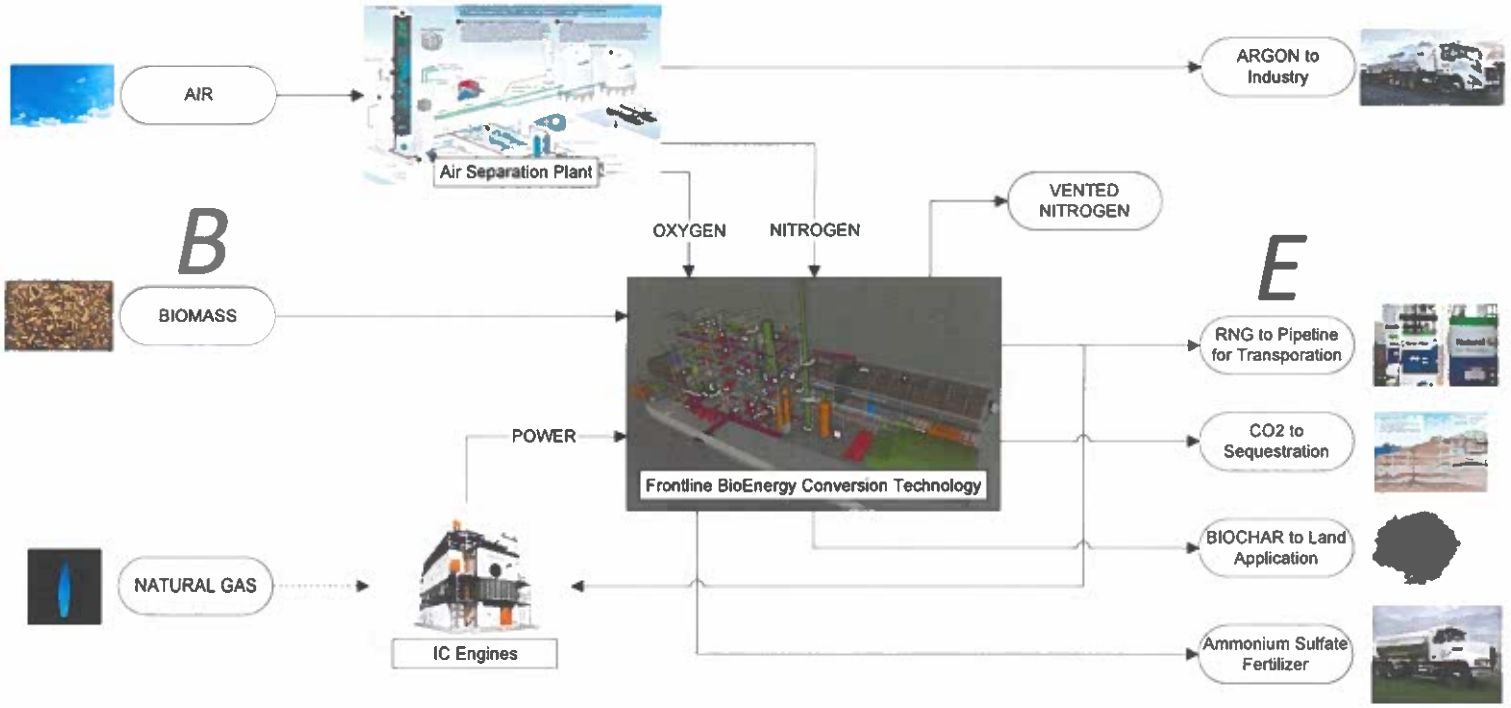
- Patents granted in United States, Canada, China, South Korea, Europe, India
- Patent pending in several other countries

San Joaquin Renewables
NATURAL GAS FROM BIOMASS

FRONTLINE BIOENERGY, LLC
Renewable Energy & Products

# BING® Process

## Biomass Energy with Carbon Capture and Storage



San Joaquin Renewables
NATURAL GAS FROM BIOMASS

# Project Facts

- Will be of the first **B**iomass **E**nergy with **C**arbon **C**apture and **S**torage (BECCS) projects in California
- Will create 125 jobs in economically disadvantaged communities
- Will provide an air quality benefit equivalent to eliminating the NOx emissions from 2,400 diesel trucks

San Joaquin Renewables
NATURAL GAS FROM BIOMASS

# Project Facts

- Annually, the project will:
  - consume 400,000 tons/year of ag waste
  - consume no water
  - produce 22,000 tons per year of ammonium sulfate 40% fertilizer
  - produce 29 million gasoline-gallon equivalents of pipeline-quality renewable natural gas (RNG)
  - produce 50,000 tons/year of biochar
  - Produce 5,000 tons/year of liquid argon using renewable power
  - safely store approximately 400,000 tons/year of $CO_2$ in a class VI geologic sequestration well
- Project Status:
  - EPA D3 RIN pathway approved by EPA (May, 2020)
  - Executed feedstock agreements
  - Executed site purchase agreement with McFarland city, escrow opened, periodic payments being made
  - Executed offtake agreements
  - Air permit and CEQA initial studies drafted
  - Funding secured in October, 2021
  - Detailed engineering underway

San Joaquin Renewables
NATURAL GAS FROM BIOMASS

# Simply put…

- We create value from biomass
- We don't use any water
- We create jobs
- We clean the air

# Uses of RNG

San Joaquin Renewables
NATURAL GAS FROM BIOMASS

**RNG as direct transportation fuel**

- **Replaces diesel-fueled trucks**

**RNG for traditional and advanced biofuel plants**

- **Replacing fossil natural gas lowers CI of produced biofuel**
- **SMR's can make renewable hydrogen with negative CI**

**RNG for EV charging stations**

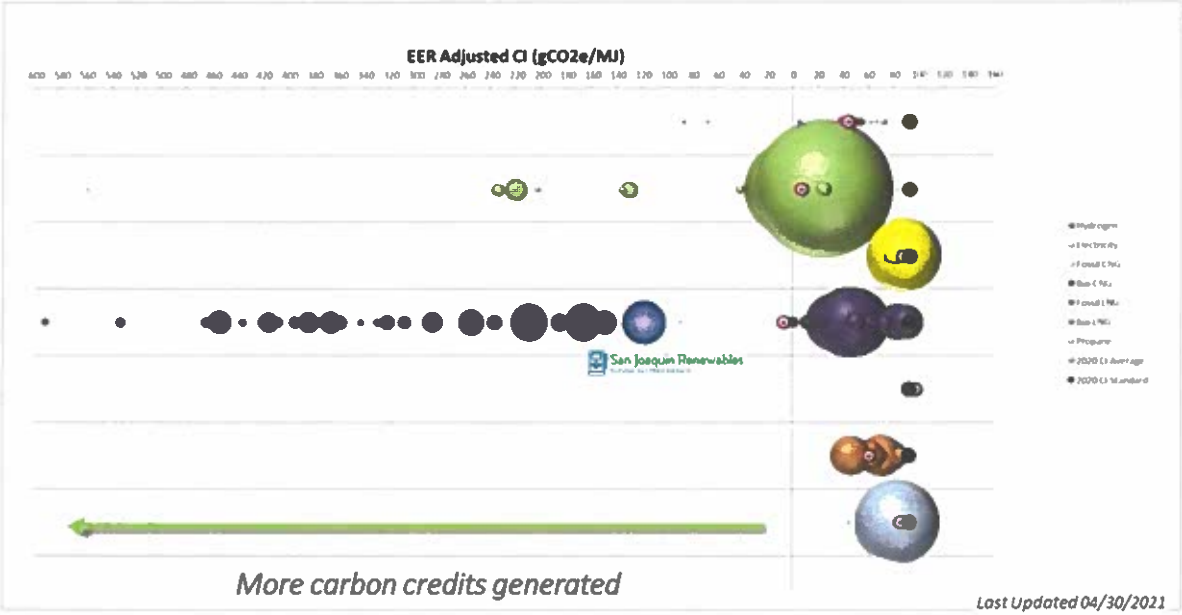
- **RNG fuels engines or fuel cells**

**Anything else natural gas is used for!**

- **Cooking, heating, etc.**

# Size and Carbon Intensity Values of Non-Liquid Fuel Pathways

**2020 Volume-weighted Average Carbon Intensity by Fuel Type for Non-Liquid Fuels**




This figure provides perspective on the performance of actual quantities of fuel consumed in California
Each sphere represents a certified fuel pathway, the size of the sphere represents the reported volume of the fuel in 2020, while its position on the horizontal axis indicates the carbon intensity of that fuel

The alternative fuel's CI value is divided by its Energy Economy Ratio (EER) in order to obtain the EER-adjusted CI value representing the emissions which occur from the alternative fuel per MJ of conventional fuel displaced

The alternative fuel's CI value is divided by its Energy Economy Ratio (EER) in order to obtain the EER-adjusted CI value, representing the emissions which occur from the use of alternative fuel per MJ of conventional fuel displaced.

Each marker represents an individual certified fuel pathway carbon intensity (CI), adjusted by the Energy Economy Ratio (EER). The length of each bar indicates the range of carbon intensity that may be achieved by a fuel pathway. The wide range of carbon intensities is due to the lifecycle emissions methodology of the LCFS, variations in feedstock types, origin, raw material production processing efficiencies, and transportation all contribute to an individual producer's fuel pathway CI. All valid CI values shown here are certified including the legacy, Tier 1, Tier 2, and Lookup Table Pathways.

Frontline's BING™ pathway is not yet approved by the California Air Resources Board.

*(as of April 30, 2021)*

*Source: California Air Resources Board:*
*https://ww3.arb.ca.gov/fuels/lcfs/dashboard/dashboard.htm*

San Joaquin Renewables
NATURAL GAS FROM BIOMASS

# Feedstocks

Orchard Wood Waste
- 300,000 dry tons/year

Pistachio shells
- 40,000 dry tons/year

Almond shells
- 40,000 dry tons/year

Walnut shells
- 20,000 dry tons/year

# Project Site

80 acres in the heart of the biomass zone

Directly on Southern California Gas transmission pipeline and lower pressure distribution line

Directly on Pacific Gas and Electric high voltage transmission line

Directly over the Vedder Sand deep saline aquifer

San Joaquin Renewables
NATURAL GAS FROM BIOMASS

# Permitting

## California Environmental Quality Act

- Holistic look at environmental impact
- Final drafting

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

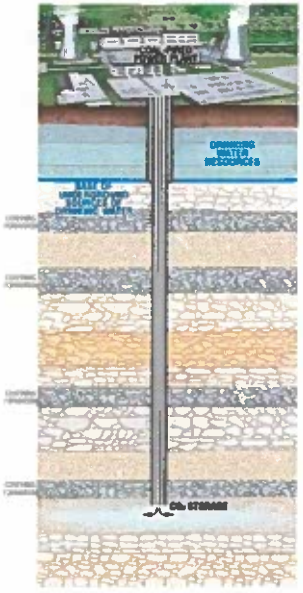
## Air permit

- Emissions estimates, monitoring requirements
- Final drafting

## Class VI well permit (EPA)

- Protecting underground sources of drinking water
- Submitted 11/2021

# Class VI Well for $CO_2$ Sequestration



Regulated by US EPA's Underground Injection Control (UIC) Region 9

Regulations govern:

- Site characterization and pre-injection logging and testing;
- Area of Review (AoR) modeling and corrective action
- Well construction and operation
- Financial responsibility demonstrations
- Testing and monitoring during the injection and postinjection phases
- Well plugging and site closure, including non-endangerment demonstrations
- Emergency and remedial response.

Extensive geology studies have been performed, site appears suitable.

- Application for San Joaquin Renewables has been submitted

Well will also comply with California CCS protocol to qualify for LCFS carbon credits

# San Joaquin Renewables Project Air Quality Impact

*by the numbers:*

## RNG Production

| | Pile Burning Emissions | | SJR Max Emissions ton pollutant /yr | Reduction | Reduction |
|---|---|---|---|---|---|
| | lb pollutant/ dry ton biomass | ton pollutant /yr | | tons /yr | |
| $PM_{2.5}$ | 10.5 | 1,670 | 10 | 1,660 | 99% |
| NOx | 3.9 | 624 | 10 | 614 | 98% |
| CO | 132.6 | 21,004 | 100 | 20,904 | 99.99% |
| Non-Methane VOC | 3.0 | 469 | 10 | 459 | 98% |
| Methane ($CH_4$) | 10.0 | 1,584 | 1 | 1,583 | 99.9% |

## RNG Use in Transportation

| | Estimated Diesel Tailpipe Emissions | | Estimated CNG Tailpipe Emissions | | Reduction | Reduction |
|---|---|---|---|---|---|---|
| | lb/ truck•yr | Emissions from fueled trucks ton/yr | lb/ truck•yr | ton/yr | tons /yr | |
| $PM_{2.5}$ | 50.1 | 68 | 0.5 | 0.7 | 67.5 | 99% |
| NOx | 3751.0 | 5,064 | 375 | 506 | 4,557 | 90% |
| CO | 3205.4 | 4,327 | 160 | 216 | 4,111 | 95% |
| NM-VOC | 96.8 | 131 | 24 | 33 | 98 | 75% |

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# San Joaquin Renewables Project Potential Air Quality Impact

*OVERALL:*

| | Pile Burning Reduction | Tailpipe Reduction | TOTAL Reduction |
|---|---|---|---|
| | tons /yr | tons /yr | tons /yr |
| $PM_{2.5}$ | 1,660 | 67 | 1,727 |
| NOx | 614 | 4,557 | 5,172 |
| CO | 20,904 | 4,111 | 25,015 |
| NM-VOC | 459 | 98 | 557 |
| $CH_4$ | 1,583 | -276 | 1,307 |

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# Questions?

For more info or to contact us, visit:

www.sjrgas.com

www.frontlinebioenergy.com