

Biocom Energia Algemesi, Spain CA-GREET Model

The applicant has conducted its analysis of direct effects on carbon intensity for this pathway using CA-GREET 1.8b.

(See <http://www.arb.ca.gov/fuels/lcfs/ca-greet/ca-greet.htm>). The standard inputs and parameters specified in CA-GREET remain unchanged except as noted in the input table below. The input table below specifies the spreadsheet location of the CA-GREET inputs and other parameters that were claimed as confidential business information or trade secret by the applicant, but it does not disclose the actual value of such inputs and parameters because they are claimed to be confidential business information or trade secret.

Biocom Energia Input data table (Locations of cells containing Confidential Business Information are shown, but the actual values of such confidential information are not disclosed):

Spain Pathway

Parameter	Cell location	Default US value	Biocom UCO value	Units	Notes
Select Region for Analysis	Regional LT!C2	Midwest	[redacted]		
Res. oil electric generation	Regional LT!J83	2.7%	[redacted]	%	
Natural gas electric generation	Regional LT!J84	18.9%	[redacted]	%	
Coal electric generation	Regional LT!J85	50.7%	[redacted]	%	
Nuclear electric generation	Regional LT!J86	18.7%	[redacted]	%	
Biomass electric generation	Regional LT!J87	1.3%	[redacted]	%	
Other (renewables)	Regional	7.7%	[redacted]	%	

electric generation	LT!J88				
UCO use	UCO BD!B21	1.05	[redacted]	lb UCO/lb BD	
Glycerin coproduct yield	UCO BD!C41	0.105	[redacted]	lb/lb BD	
NG for FFA transesterification	UCO BD!E189	155	[redacted]	btu/lb BD	
Electricity for FFA transesterification	UCO BD!E192	16	[redacted]	btu/lb BD	
NG for UCO transesterification	UCO BD!F189	889	[redacted]	btu/lb BD	
Electricity for UCO transesterification	UCO BD!F192	47	[redacted]	btu/lb BD	
Ocean tanker transport distance from Valencia			[redacted]		
to New York City, NY	T&D!GB93	NA	[redacted]	miles	
to Charleston, SC	T&D!GB93	NA	[redacted]	miles	
to New Orleans, LA	T&D!GB93	NA	[redacted]	miles	
to Houston, TX	T&D!GB93	NA	[redacted]	miles	
to California (Option II)	T&D!GB93	NA	[redacted]	miles	
Rail transport distance to Los Angeles, CA			[redacted]		
from New York City, NY	T&D!GF93	1,400	[redacted]	miles	
from Charleston, SC	T&D!GF93	1,400	[redacted]	miles	
from New Orleans, LA	T&D!GF93	1,400	[redacted]	miles	
from Houston, TX	T&D!GF93	1,400	[redacted]	miles	
Biodiesel truck transport distance (miles)	T&D!GC93	50	[redacted]	Miles	
Biodiesel ocean tanker payload (tons)	T&D!V5	--	[redacted]	Tons	
Biodiesel ocean tanker horsepower requirement	T&D!T12	--	[redacted]	Hp	
Column for biodiesel ocean tanker	T&D!GB90:132	Move right (insert new transport column)			

Title	T&D!GB91	--	[redacted]		
Ocean tanker fraction diesel power	T&D!GB95	--	[redacted]	%	
Ocean tanker fraction residual oil power	T&D!GB96	--	[redacted]	%	
Ocean tanker outbound energy intensity	T&D!GB108	--	[redacted]	btu/ton-mile	
Fraction of biodiesel transported by ocean tanker	T&D!CL138	0	[redacted]	%	
Fraction of biodiesel transported by ocean tanker	T&D!CL141	0	[redacted]	%	
Fraction of biodiesel transported by truck	T&D!CL142	80	[redacted]	%	
UCO transport distance by truck	T&D!II93	50	[redacted]	Miles	

European Union (Including Spanish Islands) Pathway

Parameter	Cell location	Default US value	Biocom UCO value	Units	Notes
Select Region for Analysis	Regional LT!C2	Midwest	[redacted]		
Res. oil electric generation	Regional LT!J83	2.7%	[redacted]	%	
Natural gas electric generation	Regional LT!J84	18.9%	[redacted]	%	
Coal electric generation	Regional LT!J85	50.7%	[redacted]	%	
Nuclear electric generation	Regional LT!J86	18.7%	[redacted]	%	
Biomass electric generation	Regional LT!J87	1.3%	[redacted]	%	
Other (renewables) electric generation	Regional LT!J88	7.7%	[redacted]	%	
UCO use	UCO BD!B21	1.05	[redacted]	lb UCO/lb BD	
Glycerin coproduct yield	UCO BD!C41	0.105	[redacted]	lb/lb BD	

NG for FFA transesterification	UCO BD!E189	155	[redacted]	btu/lb BD	
Electricity for FFA transesterification	UCO BD!E192	16	[redacted]	btu/lb BD	
NG for UCO transesterification	UCO BD!F189	889	[redacted]	btu/lb BD	
Electricity for UCO transesterification	UCO BD!F192	47	[redacted]	btu/lb BD	
Ocean tanker transport distance from Valencia			[redacted]		
to New York City, NY	T&D!GB93	NA	[redacted]	miles	
to Charleston, SC	T&D!GB93	NA	[redacted]	miles	
to New Orleans, LA	T&D!GB93	NA	[redacted]	miles	
to Houston, TX	T&D!GB93	NA	[redacted]	miles	
to California (Option II)	T&D!GB93	NA	[redacted]	miles	
Rail transport distance to Los Angeles, CA			[redacted]		
from New York City, NY	T&D!GF93	1,400	[redacted]	miles	
from Charleston, SC	T&D!GF93	1,400	[redacted]	miles	
from New Orleans, LA	T&D!GF93	1,400	[redacted]	miles	
from Houston, TX	T&D!GF93	1,400	[redacted]	miles	
Biodiesel truck transport distance (miles)	T&D!GC93	50	[redacted]	Miles	
Biodiesel ocean tanker payload (tons)	T&D!V5	--	[redacted]	Tons	
Biodiesel ocean tanker horsepower requirement	T&D!T12	--	[redacted]	Hp	
Column for biodiesel ocean tanker	T&D!GB90:132	Move right (insert new transport column)			
Title	T&D!GB91	--	[redacted]		
Ocean tanker fraction diesel power	T&D!GB95	--	[redacted]	%	
Ocean tanker fraction residual oil power	T&D!GB96	--	[redacted]	%	
Ocean tanker outbound energy intensity	T&D!GB108	--	[redacted]	btu/ton-mile	
Fraction of biodiesel transported by ocean tanker	T&D!CL138	0	[redacted]	%	

Fraction of biodiesel transported by ocean tanker	T&D!CL141	0	[redacted]	%	
Fraction of biodiesel transported by truck	T&D!CL142	80	[redacted]	%	
UCO transport distance by truck	T&D!II93	50	[redacted]	Miles	
Column for UCO ocean tanker	T&D!IJ90:132	Insert new transport column			
UCO transport distance by ocean tanker	T&D!IJ93	--	[redacted]	miles	

World Pathway

Parameter	Cell location	Default US value	Biocom UCO value	Units	Notes
Select Region for Analysis	Regional LT!C2	Midwest	[redacted]		
Res. oil electric generation	Regional LT!J83	2.7%	[redacted]	%	
Natural gas electric generation	Regional LT!J84	18.9%	[redacted]	%	
Coal electric generation	Regional LT!J85	50.7%	[redacted]	%	
Nuclear electric generation	Regional LT!J86	18.7%	[redacted]	%	
Biomass electric generation	Regional LT!J87	1.3%	[redacted]	%	
Other (renewables) electric generation	Regional LT!J88	7.7%	[redacted]	%	
UCO use	UCO BD!B21	1.05	[redacted]	lb UCO/lb BD	
Glycerin coproduct yield	UCO BD!C41	0.105	[redacted]	lb/lb BD	
NG for FFA transesterification	UCO BD!E189	155	[redacted]	btu/lb BD	
Electricity for FFA transesterification	UCO BD!E192	16	[redacted]	btu/lb BD	
NG for UCO transesterification	UCO BD!F189	889	[redacted]	btu/lb BD	
Electricity for UCO transesterification	UCO BD!F192	47	[redacted]	btu/lb BD	
Ocean tanker transport distance from Valencia			[redacted]		
to New York City, NY	T&D!GB93	NA	[redacted]	miles	
to Charleston, SC	T&D!GB93	NA	[redacted]	miles	

to New Orleans, LA	T&D!GB93	NA	[redacted]	miles	
to Houston, TX	T&D!GB93	NA	[redacted]	miles	
to California (Option II)	T&D!GB93	NA	[redacted]	miles	
Rail transport distance to Los Angeles, CA			[redacted]		
from New York City, NY	T&D!GF93	1,400	[redacted]	miles	
from Charleston, SC	T&D!GF93	1,400	[redacted]	miles	
from New Orleans, LA	T&D!GF93	1,400	[redacted]	miles	
from Houston, TX	T&D!GF93	1,400	[redacted]	miles	
Biodiesel truck transport distance (miles)	T&D!GC93	50	[redacted]	Miles	
Biodiesel ocean tanker payload (tons)	T&D!V5	--	[redacted]	Tons	
Biodiesel ocean tanker horsepower requirement	T&D!T12	--	[redacted]	Hp	
Column for biodiesel ocean tanker	T&D!GB90:132	Move right (insert new transport column)			
Title	T&D!GB91	--	[redacted]		
Ocean tanker fraction diesel power	T&D!GB95	--	[redacted]	%	
Ocean tanker fraction residual oil power	T&D!GB96	--	[redacted]	%	
Ocean tanker outbound energy intensity	T&D!GB108	--	[redacted]	btu/ton-mile	
Fraction of biodiesel transported by ocean tanker	T&D!CL138	0	[redacted]	%	
Fraction of biodiesel transported by ocean tanker	T&D!CL141	0	[redacted]	%	
Fraction of biodiesel transported by truck	T&D!CL142	80	[redacted]	%	
UCO transport distance by truck	T&D!II93	50	[redacted]	Miles	
Column for UCO ocean tanker	T&D!IJ90:132	Insert new transport column			
UCO transport distance by ocean tanker	T&D!IJ93	--	[redacted]	miles	