

Tracy Renewable Energy, LLC CA-GREET Model

The applicant has conducted its analysis of direct effects on carbon intensity for this pathway using CA-GREET1.8b

(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.

Tracy Renewable Energy Input data table (Locations of cells containing Confidential Business Information are shown, but the CBI is denoted as XXX):

Pathway Step	Description	Sheet	Cell	Value	Units
Beet Farming	Residual oil	EtOH	BZ158	0	Btu/tonne
	Diesel fuel	EtOH	BZ159	16,840	Btu/tonne
	Gasoline	EtOH	BZ160	0	Btu/tonne
	Natural gas	EtOH	BZ161	0	Btu/tonne
	Coal	EtOH	BZ162	0	Btu/tonne
	LPG	EtOH	BZ163	0	Btu/tonne
	Biomass	EtOH	BZ164	0	Btu/tonne
	Grid electricity	EtOH	BZ165	41,593	Btu/tonne
	Nitrogen fertilizer	EtOH	CA144	2,114.4	g/tonne
	Phosphate fertilizer	EtOH	CB144	198.2	g/tonne
	Potash fertilizer	EtOH	CC144	330.4	g/tonne
	Lime fertilizer	EtOH	CD144	0	g/tonne
	Herbicide	EtOH	CE144	21.5	g/tonne
	Insecticide	EtOH	CF144	20.5	g/tonne
	Ammonia N share	Ag_Inputs	H65	0%	%
Urea N share	Ag_Inputs	I65	100%	%	
Beet Transport	HD truck distance	T&D_Flowcharts	F1377	50	mi
	HD truck capacity	T&D	AE7	25	tons

Digester Feedstock Transport	HD truck distance	T&D	FY93	1	mi
	HD truck capacity	T&D	AA7	25	tons
	HD Truck LCI data	T&D	FY117:FY125	NA	g/ton*mi
Ethanol Plant	Ethanol yield	EtOH	C80	XXX	gal/tonne
	Residual oil	EtOH	CJ158	0	Btu/gal
	Diesel fuel	EtOH	CJ159	0	Btu/gal
	Gasoline	EtOH	CJ160	0	Btu/gal
	Natural gas	EtOH	CJ161	XXX	Btu/gal
	Digester gas ^a	EtOH	CJ162	XXX	Btu/gal
	Coal	EtOH	CJ163	0	Btu/gal
	LPG	EtOH	CJ164	0	Btu/gal
	Biomass	EtOH	CJ165	0	Btu/gal
	Grid electricity	EtOH	CJ166	0	Btu/gal
	RTO natural gas	EtOH	CK161	XXX	Btu/gal
Animal Feed Co-Product	DBP yield (0% MC)	EtOH	CN145	XXX	lb/gal
	DBP Corn DF	EtOH	CN139	1	lb corn/lb DBP
Fertilizer Co-Product	Compost LCI data ^b	Total Emissions Balance	G61	0.1531	tonne CO ₂ e/ton feedstock
	Mineral fertilizer DF ^b	Total Emissions Balance	G63	0.50	lb fertilizer/lb compost
Fuel Transport	HD truck distance	T&D_Flowcharts	R1427	55	mi
	HD truck capacity	T&D	S7	25	tons
Fuel Distribution	HD truck distance	T&D_Flowcharts	F1377	50	mi

^aDigester gas was added as a new row to CA-GREET and the emissions are calculated based on methane and nitrous oxide emission factors for a natural gas industrial boiler.

^bThe LCI data for displaced mineral fertilizer and the displacement factor are derived from the HSAD pathway spreadsheet; all other entries in the table correspond to CA-GREET inputs.