FutureFuel Chemical Company
CA-GREET Model for Used Cooking Oil to BD

The applicant has conducted its analysis of direct effects on carbon intensity for this pathway using CA-GREET, v.1.8b (Dec. 2009) (See http://www.arb.ca.gov/fuels/lcfs/ca_greet1.8b_dec09.xls). 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.

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

Parameters	Cell Location	Original Value	Future Fuels value	Note
Electric Power	N83 for C83	2.31%	2.31%	Arkansas Electric Power
	N84 for C84	45.09%	73.02%	
	N85 for C85	22.73%	22.73%	
	N86 for C86	25.97%	0.00%	
	N87 for C87	1.93%	1.93%	
	N88 for C88	0.00%	0.00%	
UCO Transport	IG91	Truck	Rail	The GREET model was modified to allow shipment of UCO by truck and by rail. Each cell modification is shown.
	IG93	0	824	
	IH93	50	500	
	CL142	0	80%	
	DP141	0	56%	
	DP142	100%	44%	
	DP144	DP142*IH111	DP142*IH111+DP$141*IG111	
	DP145	DP142*IH112	DP142*IH112+DP$141*IG112	
	DP146	DP142*IH113	DP142*IH113+DP$141*IG113	
	DP147	DP142*IH114	DP142*IH114+DP$141*IG114	
	DP148	DP142*IH115	DP142*IH115+DP$141*IG115	
	DP150	DP142*IH117	DP142*IH117+DP$141*IG117	
	DP151	DP142*IH118	DP142*IH118+DP$141*IG118	
	DP152	DP142*IH119	DP142*IH119+DP$141*IG119	
	DP153	DP142*IH120	DP142*IH120+DP$141*IG120	
	DP154	DP142*IH121	DP142*IH121+DP$141*IG121	
	DP155	DP142*IH122	DP142*IH122+DP$141*IG122	
	DP156	DP142*IH123	DP142*IH123+DP$141*IG123	
	DP157	DP142*IH124	DP142*IH124+DP$141*IG124	
	DP158	DP142*IH125	DP142*IH125+DP$141*IG125	
	DP160	DP142*IH127	DP142*IH127+DP$141*IG127	
	DP161	DP142*IH128	DP142*IH128+DP$141*IG128	
	DP162	DP142*IH129	DP142*IH129+DP$141*IG129	
	DP163	DP142*IH130	DP142*IH130+DP$141*IG130	
	DP164	DP142*IH131	DP142*IH131+DP$141*IG131	
	DP165	DP142*IH132	DP142*IH132+DP$141*IG132	
UCO BD, total energy	B13	2,116	2,666	Biodiesel processing energy
Correct model to include coal	D160	0	100%	
NG	F174	42.0%	30.8%	
Coal	F175	0.0%	21.9%	

Power	F177	2.2%	3.1%	
Methanol	F179	40.9%	32.4%	
NaOH	F180	2.0%	1.6%	
Sodium Methylate	F181	9.9%	7.8%	
HCL	F182	3.0%	2.4%	
T&D Flowchart[1]	F1393	100%	100%	Biodiesel Transport
	F1394	1,400	2,000	

[1] For biodiesel transport.