In-Use Compliance Cost Range Estimates

Oct. 12, 03

Matrix #1

This Matrix calculates the in-use cost of compliance for TRUs and TRU gen sets ("TRUs".) It takes the annual TRU population numbers (same as used for emissions inventory purposes) and multiplies them by the capital and annual costs for the compliance technology shown.
The capital costs are amortized over an assumed ten-year useful life, and all annual costs are converted to constant year (2002) dollars using standard present worth analysis techniques.
Four different scenarios are shown, the first two are the low and high cost ends of the range of expected in-use compliance costs, and the last two are the alternative technologies examined for the economic impact statement in the Form 399.
In each scenario, on a year-by-year basis, population figures for each engine category are multiplied by a compliance cost component (annualized capital or annual maintenance); these products are then summed to determine the compliance cost for a given year.

Interest Rates Used for Present Worth Analysis

Capital Costs:	0.05	Real interest rate, which is a 7% nominal rate minus an assumed 2% inflation rate
Annual Costs:	0.05	Real interest rate, which is a 7% nominal rate minus an assumed 2% inflation rate

Assumptions: 10-year useful life for compliance technology; capital cost is amortized over a 10-year period.

Low-Cost Scenario: Assume 1200 Hours/Year TRU/Gen Set Operation

In-Use Compliance Technology Used

	Cap. Cost	Ann. Cost - TRUs	Ann. Cost - Gen Sets	Notes
LETRU: FBC + CWMF	$2,050	$107	$97	FBC = Fuel-Borne Catalyst, CWMF = Catalyzed Wire Mesh Filter
ULETRU: LPG Dual-Fuel Pilot Injection	$2,300	$0	$0	

Engine Population Category / **Capital Cost Subtotal**

Engine Model Year	Calendar Year	< 15hp	15-25 hp	25-50 hp CA-based	25-50 hp Out-of-State	25-50 hp Gen Sets CA-based	25-50 hp Gen Sets Out-of-State	25-50 hp Reefer Railcar	Total (25-50 hp (Info Only)	Total (this year)	Annualized Capital Cost [1] < 15hp													15-25 hp									
-2001	**2008**	2125	880	11162	3721	856	285	822	16846	19851	$265	$564,134												$233,618									
2002	**2009**	311	124	1419	473	156	52	105	2205	2640	$265	$564,134	$82,563											$233,618	$32,919								
2003	**2010**	326	128	1493	498	172	57	110	2330	2784	$298	$564,134	$82,563	$97,099										$233,618	$32,919	$38,125							
2004	**2011**	340	132	1571	524	189	63	116	2463	2935	$298	$564,134	$82,563	$97,099	$101,269									$233,618	$32,919	$38,125	$39,316						
2005	**2012**	356	136	1652	551	209	70	122	2604	3096	$298	$564,134	$82,563	$97,099	$101,269	$106,035								$233,618	$32,919	$38,125	$39,316	$40,508					
2006	**2013**	372	140	1738	579	230	77	128	2752	3264	$298	$564,134	$82,563	$97,099	$101,269	$106,035	$110,800							$233,618	$32,919	$38,125	$39,316	$40,508	$41,699				
2007	**2014**	389	144	1829	610	254	85	135	2913	3446	$298	$564,134	$82,563	$97,099	$101,269	$106,035	$110,800	$115,864						$233,618	$32,919	$38,125	$39,316	$40,508	$41,699	$42,890			
2008	**2015**	407	148	1924	641	279	93	142	3079	3634	$298	$564,134	$82,563	$97,099	$101,269	$106,035	$110,800	$115,864	$121,225					$233,618	$32,919	$38,125	$39,316	$40,508	$41,699	$42,890	$44,082		
2009	**2016**	426	153	2024	675	308	103	149	3259	3838	$298	$564,134	$82,563	$97,099	$101,269	$106,035	$110,800	$115,864	$121,225	$126,884				$233,618	$32,919	$38,125	$39,316	$40,508	$41,699	$42,890	$44,082	$45,571	
2010	**2017**	445	157	2129	710	339	113	157	3448	4050	$298	$564,134	$82,563	$97,099	$101,269	$106,035	$110,800	$115,864	$121,225	$126,884	$132,543			$233,618	$32,919	$38,125	$39,316	$40,508	$41,699	$42,890	$44,082	$45,571	$46,762
2011	**2018**	465	162	2240	747	374	125	165	3651	4278	$298		$82,563	$97,099	$101,269	$106,035	$110,800	$115,864	$121,225	$126,884	$132,543	$138,500			$32,919	$38,125	$39,316	$40,508	$41,699	$42,890	$44,082	$45,571	$46,762
2012	**2019**	486	167	2356	785	412	137	174	3864	4517	$298			$97,099	$101,269	$106,035	$110,800	$115,864	$121,225	$126,884	$132,543	$138,500	$144,755			$38,125	$39,316	$40,508	$41,699	$42,890	$44,082	$45,571	$46,762
2013	**2020**	509	172	a	a	a	a	a	a	681	$298				$101,269	$106,035	$110,800	$115,864	$121,225	$126,884	$132,543	$138,500	$144,755	$151,606			$39,316	$40,508	$41,699	$42,890	$44,082	$45,571	$46,762
	2021	a	a	a	a	a	a	a	a	a						$106,035	$110,800	$115,864	$121,225	$126,884	$132,543	$138,500	$144,755	$151,606				$40,508	$41,699	$42,890	$44,082	$45,571	$46,762
	2022	a	a	a	a	a	a	a	a	a							$110,800	$115,864	$121,225	$126,884	$132,543	$138,500	$144,755	$151,606					$41,699	$42,890	$44,082	$45,571	$46,762
	2023	a	a	a	a	a	a	a	a	a								$115,864	$121,225	$126,884	$132,543	$138,500	$144,755	$151,606						$42,890	$44,082	$45,571	$46,762
	2024	a	a	a	a	a	a	a	a	a									$121,225	$126,884	$132,543	$138,500	$144,755	$151,606							$44,082	$45,571	$46,762
	2025	a	a	a	a	a	a	a	a	a										$126,884	$132,543	$138,500	$144,755	$151,606								$45,571	$46,762
	2026	a	a	a	a	a	a	a	a	a											$132,543	$138,500	$144,755	$151,606									$46,762
	2027	a	a	a	a	a	a	a	a	a												$138,500	$144,755	$151,606									
	2028	a	a	a	a	a	a	a	a	a													$144,755	$151,606									
	2029	a	a	a	a	a	a	a	a	a														$151,606									
										59014	Total																						

[a] In-Use Affected Population = 0; Assumes Full Introduction of EPA Tier 4 Engines into TRU/Gen Set Fleet
[1] This is the annualized capital cost of the appropriate in-use compliance technology used to meet LETRU or ULETRU requirements as appropriate. The interest rate used is given at the top of this matrix.
[2] This is the annual cost of maintaining the in-use complaince technology over and above that for diesel technology. It may include items such as more-frequent engine servicing, cost of fuel-borne catalyst or other additive, and/or servicing of emission-control device(s).

High-Cost Scenario: Assume 3,000 Hours/Year TRU/Gen Set Operation

In-Use Compliance Technology Used

	Cap. Cost	Ann. Cost - TRUs	Ann. Cost - Gen Sets	Notes
LETRU: FBC + CWMF	$2,050	$291	$97	FBC = Fuel-Borne Catalyst, CWMF = Catalyzed Wire Mesh Filter
ULETRU: LPG Dual-Fuel Pilot Injection	$2,300	$0	$0	

Engine Population Category / **Capital Cost Subtotal**

Engine Model Year	Calendar Year	< 15hp	15-25 hp	25-50 hp CA-based	25-50 hp Out-of-State	25-50 hp Gen Sets CA-based	25-50 hp Gen Sets Out-of-State	25-50 hp Reefer Railcar	Total (25-50 hp (Info Only)	Total (this year)	Annualized Capital Cost [1] < 15hp													15-25 hp									
-2001	**2008**	2125	880	11162	3721	856	285	822	16846	19851	$265	$564,134												$233,618									
2002	**2009**	311	124	1419	473	156	52	105	2205	2640	$265	$564,134	$82,563											$233,618	$32,919								
2003	**2010**	326	128	1493	498	172	57	110	2330	2784	$298	$564,134	$82,563	$97,099										$233,618	$32,919	$38,125							
2004	**2011**	340	132	1571	524	189	63	116	2463	2935	$298	$564,134	$82,563	$97,099	$101,269									$233,618	$32,919	$38,125	$39,316						
2005	**2012**	356	136	1652	551	209	70	122	2604	3096	$298	$564,134	$82,563	$97,099	$101,269	$106,035								$233,618	$32,919	$38,125	$39,316	$40,508					
2006	**2013**	372	140	1738	579	230	77	128	2752	3264	$298	$564,134	$82,563	$97,099	$101,269	$106,035	$110,800							$233,618	$32,919	$38,125	$39,316	$40,508	$41,699				
2007	**2014**	389	144	1829	610	254	85	135	2913	3446	$298	$564,134	$82,563	$97,099	$101,269	$106,035	$110,800	$115,864						$233,618	$32,919	$38,125	$39,316	$40,508	$41,699	$42,890			
2008	**2015**	407	148	1924	641	279	93	142	3079	3634	$298	$564,134	$82,563	$97,099	$101,269	$106,035	$110,800	$115,864	$121,225					$233,618	$32,919	$38,125	$39,316	$40,508	$41,699	$42,890	$44,082		
2009	**2016**	426	153	2024	675	308	103	149	3259	3838	$298	$564,134	$82,563	$97,099	$101,269	$106,035	$110,800	$115,864	$121,225	$126,884				$233,618	$32,919	$38,125	$39,316	$40,508	$41,699	$42,890	$44,082	$45,571	
2010	**2017**	445	157	2129	710	339	113	157	3448	4050	$298	$564,134	$82,563	$97,099	$101,269	$106,035	$110,800	$115,864	$121,225	$126,884	$132,543			$233,618	$32,919	$38,125	$39,316	$40,508	$41,699	$42,890	$44,082	$45,571	$46,762
2011	**2018**	465	162	2240	747	374	125	165	3651	4278	$298		$82,563	$97,099	$101,269	$106,035	$110,800	$115,864	$121,225	$126,884	$132,543	$138,500			$32,919	$38,125	$39,316	$40,508	$41,699	$42,890	$44,082	$45,571	$46,762
2012	**2019**	486	167	2356	785	412	137	174	3864	4517	$298			$97,099	$101,269	$106,035	$110,800	$115,864	$121,225	$126,884	$132,543	$138,500	$144,755			$38,125	$39,316	$40,508	$41,699	$42,890	$44,082	$45,571	$46,762
2013	**2020**	509	172	a	a	a	a	a	a	681	$298				$101,269	$106,035	$110,800	$115,864	$121,225	$126,884	$132,543	$138,500	$144,755	$151,606			$39,316	$40,508	$41,699	$42,890	$44,082	$45,571	$46,762
	2021	a	a	a	a	a	a	a	a	a						$106,035	$110,800	$115,864	$121,225	$126,884	$132,543	$138,500	$144,755	$151,606				$40,508	$41,699	$42,890	$44,082	$45,571	$46,762
	2022	a	a	a	a	a	a	a	a	a							$110,800	$115,864	$121,225	$126,884	$132,543	$138,500	$144,755	$151,606					$41,699	$42,890	$44,082	$45,571	$46,762
	2023	a	a	a	a	a	a	a	a	a								$115,864	$121,225	$126,884	$132,543	$138,500	$144,755	$151,606						$42,890	$44,082	$45,571	$46,762
	2024	a	a	a	a	a	a	a	a	a									$121,225	$126,884	$132,543	$138,500	$144,755	$151,606							$44,082	$45,571	$46,762
	2025	a	a	a	a	a	a	a	a	a										$126,884	$132,543	$138,500	$144,755	$151,606								$45,571	$46,762
	2026	a	a	a	a	a	a	a	a	a											$132,543	$138,500	$144,755	$151,606									$46,762
	2027	a	a	a	a	a	a	a	a	a												$138,500	$144,755	$151,606									
	2028	a	a	a	a	a	a	a	a	a													$144,755	$151,606									
	2029	a	a	a	a	a	a	a	a	a														$151,606									
										59014	Total																						

[a] In-Use Affected Population = 0; Assumes Full Introduction of EPA Tier 4 Engines into TRU/Gen Set Fleet
[1] This is the annualized capital cost of the appropriate in-use compliance technology used to meet LETRU or ULETRU requirements as appropriate. The interest rate used is given at the top of this matrix.
[2] This is the annual cost of maintaining the in-use complaince technology over and above that for diesel technology. It may include items such as more-frequent engine servicing, cost of fuel-borne catalyst or other additive, and/or servicing of emission-control device(s).

Matrix #1

Alternative 1 Scenario: Use of Electric Standby Retrofit-- Assume 1,200 Hours/Year TRU/Gen Set Operation [3]

In-Use Compliance Technology Used

	Cap. Cost	Ann. Cost - TRUs	Ann. Cost - Gen Sets	Notes
LETRU: Electric Standby Retrofit	$15,600	$519		
ULETRU: Electric Standby Retrofit	$15,600	$519		

Engine Model Year	Calendar Year	Engine Population Category: < 15hp	15-25 hp	25-50 hp CA-based	25-50 hp Out-of-State	25-50 hp Gen Sets CA-based	25-50 hp Gen Sets Out-of-State	25-50 hp Reefer Railcar	Total 25-50 hp (info Only)	Total (this year)	Annualized Capital Cost [1] < 15hp	Capital Cost Subtotal: 15-25 hp												Capital Cost Subtotal: 15-25 hp									
-2001	**2008**	2125	880	11162	3721	856	285	822	16846	19851	$2,020	$4,292,925												$1,777,776									
2002	**2009**	311	124	1419	473	156	52	105	2205	2640	$2,020	$4,292,925	$628,282											$1,777,776	$250,505								
2003	**2010**	326	128	1493	498	172	57	110	2330	2784	$2,020	$4,292,925	$628,282	$658,585										$1,777,776	$250,505	$258,586							
2004	**2011**	340	132	1571	524	189	63	116	2463	2935	$2,020	$4,292,925	$628,282	$658,585	$686,868									$1,777,776	$250,505	$258,586	$266,666						
2005	**2012**	356	136	1652	551	209	70	122	2604	3096	$2,020	$4,292,925	$628,282	$658,585	$686,868	$719,191								$1,777,776	$250,505	$258,586	$266,666	$274,747					
2006	**2013**	372	140	1738	579	230	77	128	2752	3264	$2,020	$4,292,925	$628,282	$658,585	$686,868	$719,191	$751,514							$1,777,776	$250,505	$258,586	$266,666	$274,747	$282,828				
2007	**2014**	389	144	1829	610	254	85	135	2913	3446	$2,020	$4,292,925	$628,282	$658,585	$686,868	$719,191	$751,514	$785,858						$1,777,776	$250,505	$258,586	$266,666	$274,747	$282,828	$290,909			
2008	**2015**	407	148	1924	641	279	93	142	3079	3634	$2,020	$4,292,925	$628,282	$658,585	$686,868	$719,191	$751,514	$785,858	$822,221					$1,777,776	$250,505	$258,586	$266,666	$274,747	$282,828	$290,909	$298,990		
2009	**2016**	426	153	2024	675	308	103	149	3259	3838	$2,020	$4,292,925	$628,282	$658,585	$686,868	$719,191	$751,514	$785,858	$822,221	$860,605				$1,777,776	$250,505	$258,586	$266,666	$274,747	$282,828	$290,909	$298,990	$309,091	
2010	**2017**	445	157	2129	710	339	113	157	3448	4050	$2,020	$4,292,925	$628,282	$658,585	$686,868	$719,191	$751,514	$785,858	$822,221	$860,605	$898,989			$1,777,776	$250,505	$258,586	$266,666	$274,747	$282,828	$290,909	$298,990	$309,091	$317,171
2011	**2018**	465	162	2240	747	374	125	165	3651	4278	$2,020		$628,282	$658,585	$686,868	$719,191	$751,514	$785,858	$822,221	$860,605	$898,989	$939,393			$250,505	$258,586	$266,666	$274,747	$282,828	$290,909	$298,990	$309,091	$317,171
2012	**2019**	486	167	2356	785	412	137	174	3864	4517	$2,020			$658,585	$686,868	$719,191	$751,514	$785,858	$822,221	$860,605	$898,989	$939,393	$981,817			$258,586	$266,666	$274,747	$282,828	$290,909	$298,990	$309,091	$317,171
2013	**2020**	509	172	a	a	a	a	a	a	681	$2,020				$686,868	$719,191	$751,514	$785,858	$822,221	$860,605	$898,989	$939,393	$981,817	$1,028,282			$266,666	$274,747	$282,828	$290,909	$298,990	$309,091	$317,171
	2021	a	a	a	a	a	a	a	a	a						$719,191	$751,514	$785,858	$822,221	$860,605	$898,989	$939,393	$981,817	$1,028,282				$274,747	$282,828	$290,909	$298,990	$309,091	$317,171
	2022	a	a	a	a	a	a	a	a	a							$751,514	$785,858	$822,221	$860,605	$898,989	$939,393	$981,817	$1,028,282					$282,828	$290,909	$298,990	$309,091	$317,171
	2023	a	a	a	a	a	a	a	a	a								$785,858	$822,221	$860,605	$898,989	$939,393	$981,817	$1,028,282						$290,909	$298,990	$309,091	$317,171
	2024	a	a	a	a	a	a	a	a	a									$822,221	$860,605	$898,989	$939,393	$981,817	$1,028,282							$298,990	$309,091	$317,171
	2025	a	a	a	a	a	a	a	a	a										$860,605	$898,989	$939,393	$981,817	$1,028,282								$309,091	$317,171
	2026	a	a	a	a	a	a	a	a	a											$898,989	$939,393	$981,817	$1,028,282									$317,171
	2027	a	a	a	a	a	a	a	a	a												$939,393	$981,817	$1,028,282									
	2028	a	a	a	a	a	a	a	a	a													$981,817	$1,028,282									
	2029	a	a	a	a	a	a	a	a	a														$1,028,282									
										59014	Total																						

[a] In-Use Affected Population = 0; Assumes Full Introduction of EPA Tier 4 Engines into TRU/Gen Set Fleet

[1] This is the annualized capital cost of the appropriate in-use compliance technology used to meet LETRU or ULETRU requirements as appropriate. The interest rate used is given at the top of this matrix.

[2] This is the annual cost of maintaining the in-use complaince technology over and above that for diesel technology. It may include items such as more-frequent engine servicing, cost of fuel-borne catalyst or other additive, and/or servicing of emission-control device(s).

[3] Use of electric standby retrofit technology not appropriate for gen sets-- cost figures do not include gen sets.

Alternative 2 Scenario: Use of Cryogenic Technology-- Assume 1,200 Hours/Year TRU Operation [4]

In-Use Compliance Technology Used

	Cap. Cost	Ann. Cost - TRUs	Ann. Cost - Gen Sets	Notes
LETRU: Full Cryogenic Refrig	$22,007	$6,133		
ULETRU: Full Cryogenic Refrig	$22,007	$6,133		

Engine Model Year	Calendar Year	Engine Population Category: < 15hp	15-25 hp	25-50 hp CA-based	25-50 hp Out-of-State	25-50 hp Gen Sets CA-based	25-50 hp Gen Sets Out-of-State	25-50 hp Reefer Railcar	Total 25-50 hp (info Only)	Total (this year)	Annualized Capital Cost [1] < 15hp	Capital Cost Subtotal: 15-25 hp												Capital Cost Subtotal: 15-25 hp									
-2001	**2008**	2125	880	11162	3721	856	285	822	16846	19851	$2,850	$6,056,051												$2,507,918									
2002	**2009**	311	124	1419	473	156	52	105	2205	2640	$2,850	$6,056,051	$886,321											$2,507,918	$353,388								
2003	**2010**	326	128	1493	498	172	57	110	2330	2784	$2,850	$6,056,051	$886,321	$929,070										$2,507,918	$353,388	$364,788							
2004	**2011**	340	132	1571	524	189	63	116	2463	2935	$2,850	$6,056,051	$886,321	$929,070	$968,968									$2,507,918	$353,388	$364,788	$376,188						
2005	**2012**	356	136	1652	551	209	70	122	2604	3096	$2,850	$6,056,051	$886,321	$929,070	$968,968	$1,014,567								$2,507,918	$353,388	$364,788	$376,188	$387,587					
2006	**2013**	372	140	1738	579	230	77	128	2752	3264	$2,850	$6,056,051	$886,321	$929,070	$968,968	$1,014,567	$1,060,165							$2,507,918	$353,388	$364,788	$376,188	$387,587	$398,987				
2007	**2014**	389	144	1829	610	254	85	135	2913	3446	$2,850	$6,056,051	$886,321	$929,070	$968,968	$1,014,567	$1,060,165	$1,108,614						$2,507,918	$353,388	$364,788	$376,188	$387,587	$398,987	$410,387			
2008	**2015**	407	148	1924	641	279	93	142	3079	3634	$2,850	$6,056,051	$886,321	$929,070	$968,968	$1,014,567	$1,060,165	$1,108,614	$1,159,912					$2,507,918	$353,388	$364,788	$376,188	$387,587	$398,987	$410,387	$421,786		
2009	**2016**	426	153	2024	675	308	103	149	3259	3838	$2,850	$6,056,051	$886,321	$929,070	$968,968	$1,014,567	$1,060,165	$1,108,614	$1,159,912	$1,214,060				$2,507,918	$353,388	$364,788	$376,188	$387,587	$398,987	$410,387	$421,786	$436,036	
2010	**2017**	445	157	2129	710	339	113	157	3448	4050	$2,850	$6,056,051	$886,321	$929,070	$968,968	$1,014,567	$1,060,165	$1,108,614	$1,159,912	$1,214,060	$1,268,208			$2,507,918	$353,388	$364,788	$376,188	$387,587	$398,987	$410,387	$421,786	$436,036	$447,435
2011	**2018**	465	162	2240	747	374	125	165	3651	4278	$2,850		$886,321	$929,070	$968,968	$1,014,567	$1,060,165	$1,108,614	$1,159,912	$1,214,060	$1,268,208	$1,325,207			$353,388	$364,788	$376,188	$387,587	$398,987	$410,387	$421,786	$436,036	$447,435
2012	**2019**	486	167	2356	785	412	137	174	3864	4517	$2,850			$929,070	$968,968	$1,014,567	$1,060,165	$1,108,614	$1,159,912	$1,214,060	$1,268,208	$1,325,207	$1,385,055			$364,788	$376,188	$387,587	$398,987	$410,387	$421,786	$436,036	$447,435
2013	**2020**	509	172	a	a	a	a	a	a	681	$2,850				$968,968	$1,014,567	$1,060,165	$1,108,614	$1,159,912	$1,214,060	$1,268,208	$1,325,207	$1,385,055	$1,450,602			$376,188	$387,587	$398,987	$410,387	$421,786	$436,036	$447,435
	2021	a	a	a	a	a	a	a	a	a						$1,014,567	$1,060,165	$1,108,614	$1,159,912	$1,214,060	$1,268,208	$1,325,207	$1,385,055	$1,450,602				$387,587	$398,987	$410,387	$421,786	$436,036	$447,435
	2022	a	a	a	a	a	a	a	a	a							$1,060,165	$1,108,614	$1,159,912	$1,214,060	$1,268,208	$1,325,207	$1,385,055	$1,450,602					$398,987	$410,387	$421,786	$436,036	$447,435
	2023	a	a	a	a	a	a	a	a	a								$1,108,614	$1,159,912	$1,214,060	$1,268,208	$1,325,207	$1,385,055	$1,450,602						$410,387	$421,786	$436,036	$447,435
	2024	a	a	a	a	a	a	a	a	a									$1,159,912	$1,214,060	$1,268,208	$1,325,207	$1,385,055	$1,450,602							$421,786	$436,036	$447,435
	2025	a	a	a	a	a	a	a	a	a										$1,214,060	$1,268,208	$1,325,207	$1,385,055	$1,450,602								$436,036	$447,435
	2026	a	a	a	a	a	a	a	a	a											$1,268,208	$1,325,207	$1,385,055	$1,450,602									$447,435
	2027	a	a	a	a	a	a	a	a	a												$1,325,207	$1,385,055	$1,450,602									
	2028	a	a	a	a	a	a	a	a	a													$1,385,055	$1,450,602									
	2029	a	a	a	a	a	a	a	a	a														$1,450,602									
										59014	Total																						

[a] In-Use Affected Population = 0; Assumes Full Introduction of EPA Tier 4 Engines into TRU/Gen Set Fleet

[1] This is the annualized capital cost of the appropriate in-use compliance technology used to meet LETRU or ULETRU requirements as appropriate. The interest rate used is given at the top of this matrix.

[2] This is the annual cost of maintaining the in-use complaince technology over and above that for diesel technology. It may include items such as more-frequent engine servicing, cost of fuel-borne catalyst or other additive, and/or servicing of emission-control device(s).

[4] Use of cryogenic technology not appropriate for gen sets-- cost figures do not include gen sets.

Capital Cost Subtotal

25-50 hp CA-based															
$2,963,232															
$2,963,232	$376,709														
$2,963,232	$376,709	$444,690													
$2,963,232	$376,709	$444,690	$467,922												
$2,963,232	$376,709	$444,690	$467,922	$492,048											
$2,963,232	$376,709	$444,690	$467,922	$492,048	$517,663										
$2,963,232	$376,709	$444,690	$467,922	$492,048	$517,663	$544,768									
$2,963,232	$376,709	$444,690	$467,922	$492,048	$517,663	$544,768	$573,063								
$2,963,232	$376,709	$444,690	$467,922	$492,048	$517,663	$544,768	$573,063	$602,848							
$2,963,232	$376,709	$444,690	$467,922	$492,048	$517,663	$544,768	$573,063	$602,848	$634,123						
	$376,709	$444,690	$467,922	$492,048	$517,663	$544,768	$573,063	$602,848	$634,123	$667,184					
		$444,690	$467,922	$492,048	$517,663	$544,768	$573,063	$602,848	$634,123	$667,184	$701,735				
			$467,922	$492,048	$517,663	$544,768	$573,063	$602,848	$634,123	$667,184	$701,735	$0			
				$492,048	$517,663	$544,768	$573,063	$602,848	$634,123	$667,184	$701,735	$0			
					$517,663	$544,768	$573,063	$602,848	$634,123	$667,184	$701,735	$0			
						$544,768	$573,063	$602,848	$634,123	$667,184	$701,735	$0			
							$573,063	$602,848	$634,123	$667,184	$701,735	$0			
								$602,848	$634,123	$667,184	$701,735	$0			
									$634,123	$667,184	$701,735	$0			
										$667,184	$701,735	$0			
											$701,735	$0			
												$0			

25-50 hp Out-of-State															
$987,832															
$987,832	$125,570														
$987,832	$125,570	$148,329													
$987,832	$125,570	$148,329	$156,073												
$987,832	$125,570	$148,329	$156,073	$164,115											
$987,832	$125,570	$148,329	$156,073	$164,115	$172,455										
$987,832	$125,570	$148,329	$156,073	$164,115	$172,455	$181,689									
$987,832	$125,570	$148,329	$156,073	$164,115	$172,455	$181,689	$190,922								
$987,832	$125,570	$148,329	$156,073	$164,115	$172,455	$181,689	$190,922	$201,049							
$987,832	$125,570	$148,329	$156,073	$164,115	$172,455	$181,689	$190,922	$201,049	$211,474						
	$125,570	$148,329	$156,073	$164,115	$172,455	$181,689	$190,922	$201,049	$211,474	$222,494					
		$148,329	$156,073	$164,115	$172,455	$181,689	$190,922	$201,049	$211,474	$222,494	$233,812				
			$156,073	$164,115	$172,455	$181,689	$190,922	$201,049	$211,474	$222,494	$233,812	$0			
				$164,115	$172,455	$181,689	$190,922	$201,049	$211,474	$222,494	$233,812	$0			
					$172,455	$181,689	$190,922	$201,049	$211,474	$222,494	$233,812	$0			
						$181,689	$190,922	$201,049	$211,474	$222,494	$233,812	$0			
							$190,922	$201,049	$211,474	$222,494	$233,812	$0			
								$201,049	$211,474	$222,494	$233,812	$0			
									$211,474	$222,494	$233,812	$0			
										$222,494	$233,812	$0			
											$233,812	$0			
												$0			

Capital Cost Sub

25-50 hp Gen Sets CA-based		
$227,247		
$227,247	$41,414	
$227,247	$41,414	$51,230
$227,247	$41,414	$51,230
$227,247	$41,414	$51,230
$227,247	$41,414	$51,230
$227,247	$41,414	$51,230
$227,247	$41,414	$51,230
$227,247	$41,414	$51,230
$227,247	$41,414	$51,230
	$41,414	$51,230
		$51,230

Capital Cost Subtotal

25-50 hp CA-based															
$2,963,232															
$2,963,232	$376,709														
$2,963,232	$376,709	$444,690													
$2,963,232	$376,709	$444,690	$467,922												
$2,963,232	$376,709	$444,690	$467,922	$492,048											
$2,963,232	$376,709	$444,690	$467,922	$492,048	$517,663										
$2,963,232	$376,709	$444,690	$467,922	$492,048	$517,663	$544,768									
$2,963,232	$376,709	$444,690	$467,922	$492,048	$517,663	$544,768	$573,063								
$2,963,232	$376,709	$444,690	$467,922	$492,048	$517,663	$544,768	$573,063	$602,848							
$2,963,232	$376,709	$444,690	$467,922	$492,048	$517,663	$544,768	$573,063	$602,848	$634,123						
	$376,709	$444,690	$467,922	$492,048	$517,663	$544,768	$573,063	$602,848	$634,123	$667,184					
		$444,690	$467,922	$492,048	$517,663	$544,768	$573,063	$602,848	$634,123	$667,184	$701,735				
			$467,922	$492,048	$517,663	$544,768	$573,063	$602,848	$634,123	$667,184	$701,735	$0			
				$492,048	$517,663	$544,768	$573,063	$602,848	$634,123	$667,184	$701,735	$0			
					$517,663	$544,768	$573,063	$602,848	$634,123	$667,184	$701,735	$0			
						$544,768	$573,063	$602,848	$634,123	$667,184	$701,735	$0			
							$573,063	$602,848	$634,123	$667,184	$701,735	$0			
								$602,848	$634,123	$667,184	$701,735	$0			
									$634,123	$667,184	$701,735	$0			
										$667,184	$701,735	$0			
											$701,735	$0			
												$0			

25-50 hp Out-of-State															
$987,832															
$987,832	$125,570														
$987,832	$125,570	$148,329													
$987,832	$125,570	$148,329	$156,073												
$987,832	$125,570	$148,329	$156,073	$164,115											
$987,832	$125,570	$148,329	$156,073	$164,115	$172,455										
$987,832	$125,570	$148,329	$156,073	$164,115	$172,455	$181,689									
$987,832	$125,570	$148,329	$156,073	$164,115	$172,455	$181,689	$190,922								
$987,832	$125,570	$148,329	$156,073	$164,115	$172,455	$181,689	$190,922	$201,049							
$987,832	$125,570	$148,329	$156,073	$164,115	$172,455	$181,689	$190,922	$201,049	$211,474						
	$125,570	$148,329	$156,073	$164,115	$172,455	$181,689	$190,922	$201,049	$211,474	$222,494					
		$148,329	$156,073	$164,115	$172,455	$181,689	$190,922	$201,049	$211,474	$222,494	$233,812				
			$156,073	$164,115	$172,455	$181,689	$190,922	$201,049	$211,474	$222,494	$233,812	$0			
				$164,115	$172,455	$181,689	$190,922	$201,049	$211,474	$222,494	$233,812	$0			
					$172,455	$181,689	$190,922	$201,049	$211,474	$222,494	$233,812	$0			
						$181,689	$190,922	$201,049	$211,474	$222,494	$233,812	$0			
							$190,922	$201,049	$211,474	$222,494	$233,812	$0			
								$201,049	$211,474	$222,494	$233,812	$0			
									$211,474	$222,494	$233,812	$0			
										$222,494	$233,812	$0			
											$233,812	$0			
												$0			

Capital Cost Sub

25-50 hp Gen Sets CA-based		
$227,247		
$227,247	$41,414	
$227,247	$41,414	$51,230
$227,247	$41,414	$51,230
$227,247	$41,414	$51,230
$227,247	$41,414	$51,230
$227,247	$41,414	$51,230
$227,247	$41,414	$51,230
$227,247	$41,414	$51,230
$227,247	$41,414	$51,230
	$41,414	$51,230
		$51,230

Matrix #1

			25-50 hp CA-based	Capital Cost Subtotal												25-50 hp Out-of-State	Capital Cost Subtotal											25-50 hp Gen Sets CA-based	Capital Cost Sub	Use of el
			$22,549,472													$7,517,164														
			$22,549,472	$2,866,664												$7,517,164	$955,555													
			$22,549,472	$2,866,664	$3,016,159											$7,517,164	$955,555	$1,006,060												
			$22,549,472	$2,866,664	$3,016,159	$3,173,734										$7,517,164	$955,555	$1,006,060	$1,058,585											
			$22,549,472	$2,866,664	$3,016,159	$3,173,734	$3,337,370									$7,517,164	$955,555	$1,006,060	$1,058,585	$1,113,130										
			$22,549,472	$2,866,664	$3,016,159	$3,173,734	$3,337,370	$3,511,108								$7,517,164	$955,555	$1,006,060	$1,058,585	$1,113,130	$1,169,696									
			$22,549,472	$2,866,664	$3,016,159	$3,173,734	$3,337,370	$3,511,108	$3,694,946							$7,517,164	$955,555	$1,006,060	$1,058,585	$1,113,130	$1,169,696	$1,232,322								
			$22,549,472	$2,866,664	$3,016,159	$3,173,734	$3,337,370	$3,511,108	$3,694,946	$3,886,865						$7,517,164	$955,555	$1,006,060	$1,058,585	$1,113,130	$1,169,696	$1,232,322	$1,294,948							
			$22,549,472	$2,866,664	$3,016,159	$3,173,734	$3,337,370	$3,511,108	$3,694,946	$3,886,865	$4,088,885					$7,517,164	$955,555	$1,006,060	$1,058,585	$1,113,130	$1,169,696	$1,232,322	$1,294,948	$1,363,635						
			$22,549,472	$2,866,664	$3,016,159	$3,173,734	$3,337,370	$3,511,108	$3,694,946	$3,886,865	$4,088,885	$4,301,006				$7,517,164	$955,555	$1,006,060	$1,058,585	$1,113,130	$1,169,696	$1,232,322	$1,294,948	$1,363,635	$1,434,342					
$327,272				$2,866,664	$3,016,159	$3,173,734	$3,337,370	$3,511,108	$3,694,946	$3,886,865	$4,088,885	$4,301,006	$4,525,248				$955,555	$1,006,060	$1,058,585	$1,113,130	$1,169,696	$1,232,322	$1,294,948	$1,363,635	$1,434,342	$1,509,089					
$327,272	$337,373				$3,016,159	$3,173,734	$3,337,370	$3,511,108	$3,694,946	$3,886,865	$4,088,885	$4,301,006	$4,525,248	$4,759,591				$1,006,060	$1,058,585	$1,113,130	$1,169,696	$1,232,322	$1,294,948	$1,363,635	$1,434,342	$1,509,089	$1,585,857				
$327,272	$337,373	$347,474				$3,173,734	$3,337,370	$3,511,108	$3,694,946	$3,886,865	$4,088,885	$4,301,006	$4,525,248	$4,759,591	$0				$1,058,585	$1,113,130	$1,169,696	$1,232,322	$1,294,948	$1,363,635	$1,434,342	$1,509,089	$1,585,857	$0			
$327,272	$337,373	$347,474					$3,337,370	$3,511,108	$3,694,946	$3,886,865	$4,088,885	$4,301,006	$4,525,248	$4,759,591	$0					$1,113,130	$1,169,696	$1,232,322	$1,294,948	$1,363,635	$1,434,342	$1,509,089	$1,585,857	$0			
$327,272	$337,373	$347,474						$3,511,108	$3,694,946	$3,886,865	$4,088,885	$4,301,006	$4,525,248	$4,759,591	$0						$1,169,696	$1,232,322	$1,294,948	$1,363,635	$1,434,342	$1,509,089	$1,585,857	$0			
$327,272	$337,373	$347,474							$3,694,946	$3,886,865	$4,088,885	$4,301,006	$4,525,248	$4,759,591	$0							$1,232,322	$1,294,948	$1,363,635	$1,434,342	$1,509,089	$1,585,857	$0			
$327,272	$337,373	$347,474								$3,886,865	$4,088,885	$4,301,006	$4,525,248	$4,759,591	$0								$1,294,948	$1,363,635	$1,434,342	$1,509,089	$1,585,857	$0			
$327,272	$337,373	$347,474									$4,088,885	$4,301,006	$4,525,248	$4,759,591	$0									$1,363,635	$1,434,342	$1,509,089	$1,585,857	$0			
$327,272	$337,373	$347,474										$4,301,006	$4,525,248	$4,759,591	$0										$1,434,342	$1,509,089	$1,585,857	$0			
$327,272	$337,373	$347,474											$4,525,248	$4,759,591	$0											$1,509,089	$1,585,857	$0			
	$337,373	$347,474												$4,759,591	$0												$1,585,857	$0			
		$347,474													$0													$0			

			25-50 hp CA-based	Capital Cost Subtotal												25-50 hp Out-of-State	Capital Cost Subtotal											25-50 hp Gen Sets CA-based	Capital Cost Sub	Use of cr
			$31,810,656													$10,604,502														
			$31,810,656	$4,044,017												$10,604,502	$1,348,006													
			$31,810,656	$4,044,017	$4,254,910											$10,604,502	$1,348,006	$1,419,253												
			$31,810,656	$4,044,017	$4,254,910	$4,477,203										$10,604,502	$1,348,006	$1,419,253	$1,493,351											
			$31,810,656	$4,044,017	$4,254,910	$4,477,203	$4,708,046									$10,604,502	$1,348,006	$1,419,253	$1,493,351	$1,570,298										
			$31,810,656	$4,044,017	$4,254,910	$4,477,203	$4,708,046	$4,953,137								$10,604,502	$1,348,006	$1,419,253	$1,493,351	$1,570,298	$1,650,096									
			$31,810,656	$4,044,017	$4,254,910	$4,477,203	$4,708,046	$4,953,137	$5,212,479							$10,604,502	$1,348,006	$1,419,253	$1,493,351	$1,570,298	$1,650,096	$1,738,443								
			$31,810,656	$4,044,017	$4,254,910	$4,477,203	$4,708,046	$4,953,137	$5,212,479	$5,483,220						$10,604,502	$1,348,006	$1,419,253	$1,493,351	$1,570,298	$1,650,096	$1,738,443	$1,826,790							
			$31,810,656	$4,044,017	$4,254,910	$4,477,203	$4,708,046	$4,953,137	$5,212,479	$5,483,220	$5,768,211					$10,604,502	$1,348,006	$1,419,253	$1,493,351	$1,570,298	$1,650,096	$1,738,443	$1,826,790	$1,923,687						
			$31,810,656	$4,044,017	$4,254,910	$4,477,203	$4,708,046	$4,953,137	$5,212,479	$5,483,220	$5,768,211	$6,067,451				$10,604,502	$1,348,006	$1,419,253	$1,493,351	$1,570,298	$1,650,096	$1,738,443	$1,826,790	$1,923,687	$2,023,434					
$461,685				$4,044,017	$4,254,910	$4,477,203	$4,708,046	$4,953,137	$5,212,479	$5,483,220	$5,768,211	$6,067,451	$6,383,791				$1,348,006	$1,419,253	$1,493,351	$1,570,298	$1,650,096	$1,738,443	$1,826,790	$1,923,687	$2,023,434	$2,128,880					
$461,685	$475,934				$4,254,910	$4,477,203	$4,708,046	$4,953,137	$5,212,479	$5,483,220	$5,768,211	$6,067,451	$6,383,791	$6,714,380				$1,419,253	$1,493,351	$1,570,298	$1,650,096	$1,738,443	$1,826,790	$1,923,687	$2,023,434	$2,128,880	$2,237,177				
$461,685	$475,934	$490,184				$4,477,203	$4,708,046	$4,953,137	$5,212,479	$5,483,220	$5,768,211	$6,067,451	$6,383,791	$6,714,380	$0				$1,493,351	$1,570,298	$1,650,096	$1,738,443	$1,826,790	$1,923,687	$2,023,434	$2,128,880	$2,237,177	$0			
$461,685	$475,934	$490,184					$4,708,046	$4,953,137	$5,212,479	$5,483,220	$5,768,211	$6,067,451	$6,383,791	$6,714,380	$0					$1,570,298	$1,650,096	$1,738,443	$1,826,790	$1,923,687	$2,023,434	$2,128,880	$2,237,177	$0			
$461,685	$475,934	$490,184						$4,953,137	$5,212,479	$5,483,220	$5,768,211	$6,067,451	$6,383,791	$6,714,380	$0						$1,650,096	$1,738,443	$1,826,790	$1,923,687	$2,023,434	$2,128,880	$2,237,177	$0			
$461,685	$475,934	$490,184							$5,212,479	$5,483,220	$5,768,211	$6,067,451	$6,383,791	$6,714,380	$0							$1,738,443	$1,826,790	$1,923,687	$2,023,434	$2,128,880	$2,237,177	$0			
$461,685	$475,934	$490,184								$5,483,220	$5,768,211	$6,067,451	$6,383,791	$6,714,380	$0								$1,826,790	$1,923,687	$2,023,434	$2,128,880	$2,237,177	$0			
$461,685	$475,934	$490,184									$5,768,211	$6,067,451	$6,383,791	$6,714,380	$0									$1,923,687	$2,023,434	$2,128,880	$2,237,177	$0			
$461,685	$475,934	$490,184										$6,067,451	$6,383,791	$6,714,380	$0										$2,023,434	$2,128,880	$2,237,177	$0			
$461,685	$475,934	$490,184											$6,383,791	$6,714,380	$0											$2,128,880	$2,237,177	$0			
	$475,934	$490,184												$6,714,380	$0												$2,237,177	$0			
		$490,184													$0													$0			

total											**Capital Cost Subtotal**												**Capital Cost Subtotal**								
										25-50 hp Gen Sets Out-of-State											25-50 hp Reefer Railcars										
										$75,660											$218,220										
										$75,660	$13,805										$218,220	$27,875									
										$75,660	$13,805	$16,977									$218,220	$27,875	$32,764								
$56,294										$75,660	$13,805	$16,977	$18,765								$218,220	$27,875	$32,764	$34,551							
$56,294	$62,251									$75,660	$13,805	$16,977	$18,765	$20,850							$218,220	$27,875	$32,764	$34,551	$36,338						
$56,294	$62,251	$68,506								$75,660	$13,805	$16,977	$18,765	$20,850	$22,934						$218,220	$27,875	$32,764	$34,551	$36,338	$38,125					
$56,294	$62,251	$68,506	$75,654							$75,660	$13,805	$16,977	$18,765	$20,850	$22,934	$25,317					$218,220	$27,875	$32,764	$34,551	$36,338	$38,125	$40,210				
$56,294	$62,251	$68,506	$75,654	$83,100						$75,660	$13,805	$16,977	$18,765	$20,850	$22,934	$25,317	$27,700				$218,220	$27,875	$32,764	$34,551	$36,338	$38,125	$40,210	$42,295			
$56,294	$62,251	$68,506	$75,654	$83,100	$91,738					$75,660	$13,805	$16,977	$18,765	$20,850	$22,934	$25,317	$27,700	$30,679			$218,220	$27,875	$32,764	$34,551	$36,338	$38,125	$40,210	$42,295	$44,380		
$56,294	$62,251	$68,506	$75,654	$83,100	$91,738	$100,971				$75,660	$13,805	$16,977	$18,765	$20,850	$22,934	$25,317	$27,700	$30,679	$33,657		$218,220	$27,875	$32,764	$34,551	$36,338	$38,125	$40,210	$42,295	$44,380	$46,762	
$56,294	$62,251	$68,506	$75,654	$83,100	$91,738	$100,971	$111,396				$13,805	$16,977	$18,765	$20,850	$22,934	$25,317	$27,700	$30,679	$33,657	$37,231		$27,875	$32,764	$34,551	$36,338	$38,125	$40,210	$42,295	$44,380	$46,762	$49,145
$56,294	$62,251	$68,506	$75,654	$83,100	$91,738	$100,971	$111,396	$122,714				$16,977	$18,765	$20,850	$22,934	$25,317	$27,700	$30,679	$33,657	$37,231	$40,805		$32,764	$34,551	$36,338	$38,125	$40,210	$42,295	$44,380	$46,762	$49,145
$56,294	$62,251	$68,506	$75,654	$83,100	$91,738	$100,971	$111,396	$122,714	$0				$18,765	$20,850	$22,934	$25,317	$27,700	$30,679	$33,657	$37,231	$40,805	$0		$34,551	$36,338	$38,125	$40,210	$42,295	$44,380	$46,762	$49,145
	$62,251	$68,506	$75,654	$83,100	$91,738	$100,971	$111,396	$122,714	$0					$20,850	$22,934	$25,317	$27,700	$30,679	$33,657	$37,231	$40,805	$0			$36,338	$38,125	$40,210	$42,295	$44,380	$46,762	$49,145
		$68,506	$75,654	$83,100	$91,738	$100,971	$111,396	$122,714	$0						$22,934	$25,317	$27,700	$30,679	$33,657	$37,231	$40,805	$0				$38,125	$40,210	$42,295	$44,380	$46,762	$49,145
			$75,654	$83,100	$91,738	$100,971	$111,396	$122,714	$0							$25,317	$27,700	$30,679	$33,657	$37,231	$40,805	$0					$40,210	$42,295	$44,380	$46,762	$49,145
				$83,100	$91,738	$100,971	$111,396	$122,714	$0								$27,700	$30,679	$33,657	$37,231	$40,805	$0						$42,295	$44,380	$46,762	$49,145
					$91,738	$100,971	$111,396	$122,714	$0									$30,679	$33,657	$37,231	$40,805	$0							$44,380	$46,762	$49,145
						$100,971	$111,396	$122,714	$0										$33,657	$37,231	$40,805	$0								$46,762	$49,145
							$111,396	$122,714	$0											$37,231	$40,805	$0									$49,145
								$122,714	$0												$40,805	$0									
									$0													$0										**2008 - 2020**

total											**Capital Cost Subtotal**												**Capital Cost Subtotal**								
										25-50 hp Gen Sets Out-of-State											25-50 hp Reefer Railcars										
										$75,660											$218,220										
										$75,660	$13,805										$218,220	$27,875									
										$75,660	$13,805	$16,977									$218,220	$27,875	$32,764								
$56,294										$75,660	$13,805	$16,977	$18,765								$218,220	$27,875	$32,764	$34,551							
$56,294	$62,251									$75,660	$13,805	$16,977	$18,765	$20,850							$218,220	$27,875	$32,764	$34,551	$36,338						
$56,294	$62,251	$68,506								$75,660	$13,805	$16,977	$18,765	$20,850	$22,934						$218,220	$27,875	$32,764	$34,551	$36,338	$38,125					
$56,294	$62,251	$68,506	$75,654							$75,660	$13,805	$16,977	$18,765	$20,850	$22,934	$25,317					$218,220	$27,875	$32,764	$34,551	$36,338	$38,125	$40,210				
$56,294	$62,251	$68,506	$75,654	$83,100						$75,660	$13,805	$16,977	$18,765	$20,850	$22,934	$25,317	$27,700				$218,220	$27,875	$32,764	$34,551	$36,338	$38,125	$40,210	$42,295			
$56,294	$62,251	$68,506	$75,654	$83,100	$91,738					$75,660	$13,805	$16,977	$18,765	$20,850	$22,934	$25,317	$27,700	$30,679			$218,220	$27,875	$32,764	$34,551	$36,338	$38,125	$40,210	$42,295	$44,380		
$56,294	$62,251	$68,506	$75,654	$83,100	$91,738	$100,971				$75,660	$13,805	$16,977	$18,765	$20,850	$22,934	$25,317	$27,700	$30,679	$33,657		$218,220	$27,875	$32,764	$34,551	$36,338	$38,125	$40,210	$42,295	$44,380	$46,762	
$56,294	$62,251	$68,506	$75,654	$83,100	$91,738	$100,971	$111,396				$13,805	$16,977	$18,765	$20,850	$22,934	$25,317	$27,700	$30,679	$33,657	$37,231		$27,875	$32,764	$34,551	$36,338	$38,125	$40,210	$42,295	$44,380	$46,762	$49,145
$56,294	$62,251	$68,506	$75,654	$83,100	$91,738	$100,971	$111,396	$122,714				$16,977	$18,765	$20,850	$22,934	$25,317	$27,700	$30,679	$33,657	$37,231	$40,805		$32,764	$34,551	$36,338	$38,125	$40,210	$42,295	$44,380	$46,762	$49,145
$56,294	$62,251	$68,506	$75,654	$83,100	$91,738	$100,971	$111,396	$122,714	$0				$18,765	$20,850	$22,934	$25,317	$27,700	$30,679	$33,657	$37,231	$40,805	$0		$34,551	$36,338	$38,125	$40,210	$42,295	$44,380	$46,762	$49,145
	$62,251	$68,506	$75,654	$83,100	$91,738	$100,971	$111,396	$122,714	$0					$20,850	$22,934	$25,317	$27,700	$30,679	$33,657	$37,231	$40,805	$0			$36,338	$38,125	$40,210	$42,295	$44,380	$46,762	$49,145
		$68,506	$75,654	$83,100	$91,738	$100,971	$111,396	$122,714	$0						$22,934	$25,317	$27,700	$30,679	$33,657	$37,231	$40,805	$0				$38,125	$40,210	$42,295	$44,380	$46,762	$49,145
			$75,654	$83,100	$91,738	$100,971	$111,396	$122,714	$0							$25,317	$27,700	$30,679	$33,657	$37,231	$40,805	$0					$40,210	$42,295	$44,380	$46,762	$49,145
				$83,100	$91,738	$100,971	$111,396	$122,714	$0								$27,700	$30,679	$33,657	$37,231	$40,805	$0						$42,295	$44,380	$46,762	$49,145
					$91,738	$100,971	$111,396	$122,714	$0									$30,679	$33,657	$37,231	$40,805	$0							$44,380	$46,762	$49,145
						$100,971	$111,396	$122,714	$0										$33,657	$37,231	$40,805	$0								$46,762	$49,145
							$111,396	$122,714	$0											$37,231	$40,805	$0									$49,145
								$122,714	$0												$40,805	$0									
									$0													$0										**2008 - 2020**

Matrix #1

otal | **Capital Cost Subtotal** | **Capital Cost Subtotal**

ectric standby technology not appropriate for gen sets-- cost figures do not include gen sets.

Use of electric standby technology not appropriate for gen sets-- cost figures do not include gen sets.

25-50 hp Gen Sets Out-of-State	25-50 hp Reefer Railcars									
$1,660,604										
$1,660,604	$212,121									
$1,660,604	$212,121	$222,222								
$1,660,604	$212,121	$222,222	$234,343							
$1,660,604	$212,121	$222,222	$234,343	$246,464						
$1,660,604	$212,121	$222,222	$234,343	$246,464	$258,586					
$1,660,604	$212,121	$222,222	$234,343	$246,464	$258,586	$272,727				
$1,660,604	$212,121	$222,222	$234,343	$246,464	$258,586	$272,727	$286,868			
$1,660,604	$212,121	$222,222	$234,343	$246,464	$258,586	$272,727	$286,868	$301,010		
$1,660,604	$212,121	$222,222	$234,343	$246,464	$258,586	$272,727	$286,868	$301,010	$317,171	
	$212,121	$222,222	$234,343	$246,464	$258,586	$272,727	$286,868	$301,010	$317,171	$333,333
		$222,222	$234,343	$246,464	$258,586	$272,727	$286,868	$301,010	$317,171	$333,333
			$234,343	$246,464	$258,586	$272,727	$286,868	$301,010	$317,171	$333,333
				$246,464	$258,586	$272,727	$286,868	$301,010	$317,171	$333,333
					$258,586	$272,727	$286,868	$301,010	$317,171	$333,333
						$272,727	$286,868	$301,010	$317,171	$333,333
							$286,868	$301,010	$317,171	$333,333
								$301,010	$317,171	$333,333
									$317,171	$333,333
										$333,333
										2008 - 2020

otal | **Capital Cost Subtotal** | **Capital Cost Subtotal**

yogenic technology not appropriate for gen sets-- cost figures do not include gen sets.

Use of cryogenic technology not appropriate for gen sets-- cost figures do not include gen sets.

25-50 hp Gen Sets Out-of-State	25-50 hp Reefer Railcars									
$2,342,623										
$2,342,623	$299,240									
$2,342,623	$299,240	$313,490								
$2,342,623	$299,240	$313,490	$330,589							
$2,342,623	$299,240	$313,490	$330,589	$347,689						
$2,342,623	$299,240	$313,490	$330,589	$347,689	$364,788					
$2,342,623	$299,240	$313,490	$330,589	$347,689	$364,788	$384,737				
$2,342,623	$299,240	$313,490	$330,589	$347,689	$364,788	$384,737	$404,687			
$2,342,623	$299,240	$313,490	$330,589	$347,689	$364,788	$384,737	$404,687	$424,636		
$2,342,623	$299,240	$313,490	$330,589	$347,689	$364,788	$384,737	$404,687	$424,636	$447,435	
	$299,240	$313,490	$330,589	$347,689	$364,788	$384,737	$404,687	$424,636	$447,435	$470,235
		$313,490	$330,589	$347,689	$364,788	$384,737	$404,687	$424,636	$447,435	$470,235
			$330,589	$347,689	$364,788	$384,737	$404,687	$424,636	$447,435	$470,235
				$347,689	$364,788	$384,737	$404,687	$424,636	$447,435	$470,235
					$364,788	$384,737	$404,687	$424,636	$447,435	$470,235
						$384,737	$404,687	$424,636	$447,435	$470,235
							$404,687	$424,636	$447,435	$470,235
								$424,636	$447,435	$470,235
									$447,435	$470,235
										$470,235
										2008 - 2020

Matrix #1

		Capital Cost Subtotal			Maintenance Cost Subtotal																															Maintena
		Capital Cost Sub-Total	Capital Cost Sub-Total (2002 $)	Annual Mice Cost ² < 15hp															15-25 hp														25-50 hp CA-based	
		$5,269,944	**$3,932,514**	$107	$227,375														$94,160														$1,194,334	
		$5,970,798	**$4,243,335**	$107	$227,375	$33,277													$94,160	$13,268													$1,194,334	$151,833
		$6,800,013	**$4,602,516**	$0	$227,375	$33,277	$0												$94,160	$13,268	$0												$1,194,334	$151,833
		$7,674,202	**$4,946,859**	$0	$227,375	$33,277	$0	$0											$94,160	$13,268	$0	$0											$1,194,334	$151,833
		$8,596,346	**$5,277,411**	$0	$227,375	$33,277	$0	$0	$0										$94,160	$13,268	$0	$0	$0										$1,194,334	$151,833
		$9,568,528	**$5,594,520**	$0	$227,375	$33,277	$0	$0	$0	$0									$94,160	$13,268	$0	$0	$0	$0									$1,194,334	$151,833
		$10,594,919	**$5,899,648**	$0	$227,375	$33,277	$0	$0	$0	$0	$0								$94,160	$13,268	$0	$0	$0	$0	$0								$1,194,334	$151,833
		$11,677,306	**$6,192,725**	$0	$227,375	$33,277	$0	$0	$0	$0	$0	$0							$94,160	$13,268	$0	$0	$0	$0	$0	$0							$1,194,334	$151,833
		$12,820,455	**$6,475,201**	$0	$227,375	$33,277	$0	$0	$0	$0	$0	$0	$0						$94,160	$13,268	$0	$0	$0	$0	$0	$0	$0						$1,194,334	$151,833
		$14,026,747	**$6,747,105**	$0	$227,375	$33,277	$0	$0	$0	$0	$0	$0	$0	$0					$94,160	$13,268	$0	$0	$0	$0	$0	$0	$0	$0					$1,194,334	$151,833
		$10,031,005	**$4,595,319**	$0		$33,277	$0	$0	$0	$0	$0	$0	$0	$0	$0					$13,268	$0	$0	$0	$0	$0	$0	$0	$0	$0						$151,833
$51,826		$10,675,540	**$4,657,703**	$0			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0					$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0					
$51,826	$0	$10,049,161	**$4,175,634**	$0				$0	$0	$0	$0	$0	$0	$0	$0	$0	$0					$0	$0	$0	$0	$0	$0	$0	$0	$0	$0					
$51,826	$0	$9,174,971	**$3,630,848**						$0	$0	$0	$0	$0	$0	$0	$0	$0						$0	$0	$0	$0	$0	$0	$0	$0	$0					
$51,826	$0	$8,252,828	**$3,110,404**							$0	$0	$0	$0	$0	$0	$0	$0							$0	$0	$0	$0	$0	$0	$0	$0					
$51,826	$0	$7,280,645	**$2,613,332**								$0	$0	$0	$0	$0	$0	$0								$0	$0	$0	$0	$0	$0	$0					
$51,826	$0	$6,254,254	**$2,138,016**									$0	$0	$0	$0	$0	$0									$0	$0	$0	$0	$0	$0					
$51,826	$0	$5,171,867	**$1,683,812**										$0	$0	$0	$0	$0										$0	$0	$0	$0	$0					
$51,826	$0	$4,028,719	**$1,249,177**											$0	$0	$0	$0											$0	$0	$0	$0					
$51,826	$0	$2,822,427	**$833,470**												$0	$0	$0												$0	$0	$0					
$51,826	$0	$1,548,224	**$435,424**													$0	$0													$0	$0					
	$0	$202,836	**$54,329**														$0														$0					
Capital Cost Subtotal (in 2002 $):			**$67,340,489**																																	

		Capital Cost Subtotal			Maintenance Cost Subtotal																															Maintena
		Capital Cost Sub-Total	Capital Cost Sub-Total (2002 $)	Annual Mice Cost ² < 15hp															15-25 hp														25-50 hp CA-based	
		$5,269,944	**$3,932,514**	$291	$618,375														$94,160														$1,194,334	
		$5,970,798	**$4,243,335**	$291	$618,375	$90,501													$94,160	$13,268													$1,194,334	$151,833
		$6,800,013	**$4,602,516**	$0	$618,375	$90,501	$0												$94,160	$13,268	$0												$1,194,334	$151,833
		$7,674,202	**$4,946,859**	$0	$618,375	$90,501	$0	$0											$94,160	$13,268	$0	$0											$1,194,334	$151,833
		$8,596,346	**$5,277,411**	$0	$618,375	$90,501	$0	$0	$0										$94,160	$13,268	$0	$0	$0										$1,194,334	$151,833
		$9,568,528	**$5,594,520**	$0	$618,375	$90,501	$0	$0	$0	$0									$94,160	$13,268	$0	$0	$0	$0									$1,194,334	$151,833
		$10,594,919	**$5,899,648**	$0	$618,375	$90,501	$0	$0	$0	$0	$0								$94,160	$13,268	$0	$0	$0	$0	$0								$1,194,334	$151,833
		$11,677,306	**$6,192,725**	$0	$618,375	$90,501	$0	$0	$0	$0	$0	$0							$94,160	$13,268	$0	$0	$0	$0	$0	$0							$1,194,334	$151,833
		$12,820,455	**$6,475,201**	$0	$618,375	$90,501	$0	$0	$0	$0	$0	$0	$0						$94,160	$13,268	$0	$0	$0	$0	$0	$0	$0						$1,194,334	$151,833
		$14,026,747	**$6,747,105**	$0	$618,375	$90,501	$0	$0	$0	$0	$0	$0	$0	$0					$94,160	$13,268	$0	$0	$0	$0	$0	$0	$0	$0					$1,194,334	$151,833
		$10,031,005	**$4,595,319**	$0		$90,501	$0	$0	$0	$0	$0	$0	$0	$0	$0					$13,268	$0	$0	$0	$0	$0	$0	$0	$0	$0						$151,833
$51,826		$10,675,540	**$4,657,703**	$0			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0					$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0					
$51,826	$0	$10,049,161	**$4,175,634**	$0				$0	$0	$0	$0	$0	$0	$0	$0	$0	$0					$0	$0	$0	$0	$0	$0	$0	$0	$0	$0					
$51,826	$0	$9,174,971	**$3,630,848**						$0	$0	$0	$0	$0	$0	$0	$0	$0						$0	$0	$0	$0	$0	$0	$0	$0	$0					
$51,826	$0	$8,252,828	**$3,110,404**							$0	$0	$0	$0	$0	$0	$0	$0							$0	$0	$0	$0	$0	$0	$0	$0					
$51,826	$0	$7,280,645	**$2,613,332**								$0	$0	$0	$0	$0	$0	$0								$0	$0	$0	$0	$0	$0	$0					
$51,826	$0	$6,254,254	**$2,138,016**									$0	$0	$0	$0	$0	$0									$0	$0	$0	$0	$0	$0					
$51,826	$0	$5,171,867	**$1,683,812**										$0	$0	$0	$0	$0										$0	$0	$0	$0	$0					
$51,826	$0	$4,028,719	**$1,249,177**											$0	$0	$0	$0											$0	$0	$0	$0					
$51,826	$0	$2,822,427	**$833,470**												$0	$0	$0												$0	$0	$0					
$51,826	$0	$1,548,224	**$435,424**													$0	$0													$0	$0					
	$0	$202,836	**$54,329**														$0														$0					
Capital Cost Subtotal (in 2002 $):			**$67,340,489**																																	

Matrix #1

		Capital Cost Sub-Total	Capital Cost Sub-Total (2002 $)	Annual Mtce Cost < 15hp																												
		Capital Cost Subtotal			**Maintenance Cost Subtotal**														**Maintenance Cost Subtotal**													**Maintena**
																		15-25 hp												25-50 hp CA-based	
		$37,797,942	**$28,205,406**	$519	$1,102,875													$456,720												$5,793,078	
		$42,711,068	**$30,353,959**	$519	$1,102,875	$161,409												$456,720	$64,356											$5,793,078	$736,461
		$47,872,679	**$32,402,114**	$519	$1,102,875	$161,409	$169,194											$456,720	$64,356	$66,432										$5,793,078	$736,461
		$53,292,876	**$34,353,063**	$519	$1,102,875	$161,409	$169,194	$176,460										$456,720	$64,356	$66,432	$68,508									$5,793,078	$736,461
		$58,983,779	**$36,210,924**	$519	$1,102,875	$161,409	$169,194	$176,460	$184,764									$456,720	$64,356	$66,432	$68,508	$70,584								$5,793,078	$736,461
		$64,957,511	**$37,979,311**	$519	$1,102,875	$161,409	$169,194	$176,460	$184,764	$193,068								$456,720	$64,356	$66,432	$68,508	$70,584	$72,660							$5,793,078	$736,461
		$71,234,272	**$39,665,908**	$519	$1,102,875	$161,409	$169,194	$176,460	$184,764	$193,068	$201,891							$456,720	$64,356	$66,432	$68,508	$70,584	$72,660	$74,736						$5,793,078	$736,461
		$77,824,165	**$41,271,816**	$519	$1,102,875	$161,409	$169,194	$176,460	$184,764	$193,068	$201,891	$211,233						$456,720	$64,356	$66,432	$68,508	$70,584	$72,660	$74,736	$76,812					$5,793,078	$736,461
		$84,747,390	**$42,803,191**	$519	$1,102,875	$161,409	$169,194	$176,460	$184,764	$193,068	$201,891	$211,233	$221,094					$456,720	$64,356	$66,432	$68,508	$70,584	$72,660	$74,736	$76,812	$79,407				$5,793,078	$736,461
		$92,016,070	**$44,261,303**	$519	$1,102,875	$161,409	$169,194	$176,460	$184,764	$193,068	$201,891	$211,233	$221,094	$230,955				$456,720	$64,356	$66,432	$68,508	$70,584	$72,660	$74,736	$76,812	$79,407	$81,483			$5,793,078	$736,461
		$61,852,463	**$28,335,326**	$519		$161,409	$169,194	$176,460	$184,764	$193,068	$201,891	$211,233	$221,094	$230,955	$241,335				$64,356	$66,432	$68,508	$70,584	$72,660	$74,736	$76,812	$79,407	$81,483	$84,078			$736,461
$351,515		$64,955,491	**$28,339,865**	$519			$169,194	$176,460	$184,764	$193,068	$201,891	$211,233	$221,094	$230,955	$241,335	$252,234				$66,432	$68,508	$70,584	$72,660	$74,736	$76,812	$79,407	$81,483	$84,078	$86,673			
$351,515	$0	$61,169,636	**$25,417,247**	$519				$176,460	$184,764	$193,068	$201,891	$211,233	$221,094	$230,955	$241,335	$252,234	$264,171				$68,508	$70,584	$72,660	$74,736	$76,812	$79,407	$81,483	$84,078	$86,673	$89,268		
$351,515	$0	$55,749,439	**$22,061,946**						$184,764	$193,068	$201,891	$211,233	$221,094	$230,955	$241,335	$252,234	$264,171					$70,584	$72,660	$74,736	$76,812	$79,407	$81,483	$84,078	$86,673	$89,268		
$351,515	$0	$50,058,536	**$18,866,536**							$193,068	$201,891	$211,233	$221,094	$230,955	$241,335	$252,234	$264,171						$72,660	$74,736	$76,812	$79,407	$81,483	$84,078	$86,673	$89,268		
$351,515	$0	$44,084,804	**$15,823,904**								$201,891	$211,233	$221,094	$230,955	$241,335	$252,234	$264,171							$74,736	$76,812	$79,407	$81,483	$84,078	$86,673	$89,268		
$351,515	$0	$37,808,043	**$12,924,675**									$211,233	$221,094	$230,955	$241,335	$252,234	$264,171								$76,812	$79,407	$81,483	$84,078	$86,673	$89,268		
$351,515	$0	$31,218,151	**$10,163,734**										$221,094	$230,955	$241,335	$252,234	$264,171									$79,407	$81,483	$84,078	$86,673	$89,268		
$351,515	$0	$24,294,925	**$7,533,077**											$230,955	$241,335	$252,234	$264,171										$81,483	$84,078	$86,673	$89,268		
$351,515	$0	$17,026,246	**$5,027,898**												$241,335	$252,234	$264,171											$84,078	$86,673	$89,268		
$351,515	$0	$9,391,910	**$2,641,388**													$252,234	$264,171												$86,673	$89,268		
	$0	$1,375,756	**$368,494**														$264,171													$89,268		
Capital Cost Subtotal (in 2002 $):			**$449,599,434**																													

		Capital Cost Sub-Total	Capital Cost Sub-Total (2002 $)	Annual Mtce Cost < 15hp																												
		Capital Cost Subtotal			**Maintenance Cost Subtotal**														**Maintenance Cost Subtotal**													**Maintena**
																		15-25 hp												25-50 hp CA-based	
		$53,321,751	**$39,789,511**	$6,133	$13,032,625													$5,397,040												$68,456,546	
		$60,252,723	**$42,820,485**	$6,133	$13,032,625	$1,907,363												$5,397,040	$760,492											$68,456,546	$8,702,727
		$67,534,234	**$45,709,828**	$6,133	$13,032,625	$1,907,363	$1,999,358											$5,397,040	$760,492	$785,024										$68,456,546	$8,702,727
		$75,180,533	**$48,462,042**	$6,133	$13,032,625	$1,907,363	$1,999,358	$2,085,220										$5,397,040	$760,492	$785,024	$809,556									$68,456,546	$8,702,727
		$83,208,720	**$51,082,936**	$6,133	$13,032,625	$1,907,363	$1,999,358	$2,085,220	$2,183,348									$5,397,040	$760,492	$785,024	$809,556	$834,088								$68,456,546	$8,702,727
		$91,635,894	**$53,577,609**	$6,133	$13,032,625	$1,907,363	$1,999,358	$2,085,220	$2,183,348	$2,281,476								$5,397,040	$760,492	$785,024	$809,556	$834,088	$858,620							$68,456,546	$8,702,727
		$100,490,553	**$55,956,900**	$6,133	$13,032,625	$1,907,363	$1,999,358	$2,085,220	$2,183,348	$2,281,476	$2,385,737							$5,397,040	$760,492	$785,024	$809,556	$834,088	$858,620	$883,152						$68,456,546	$8,702,727
		$109,786,948	**$58,222,363**	$6,133	$13,032,625	$1,907,363	$1,999,358	$2,085,220	$2,183,348	$2,281,476	$2,385,737	$2,496,131						$5,397,040	$760,492	$785,024	$809,556	$834,088	$858,620	$883,152	$907,684					$68,456,546	$8,702,727
		$119,553,578	**$60,382,681**	$6,133	$13,032,625	$1,907,363	$1,999,358	$2,085,220	$2,183,348	$2,281,476	$2,385,737	$2,496,131	$2,612,658					$5,397,040	$760,492	$785,024	$809,556	$834,088	$858,620	$883,152	$907,684	$938,349				$68,456,546	$8,702,727
		$129,807,541	**$62,439,647**	$6,133	$13,032,625	$1,907,363	$1,999,358	$2,085,220	$2,183,348	$2,281,476	$2,385,737	$2,496,131	$2,612,658	$2,729,185				$5,397,040	$760,492	$785,024	$809,556	$834,088	$858,620	$883,152	$907,684	$938,349	$962,881			$68,456,546	$8,702,727
		$87,255,587	**$39,972,790**	$6,133		$1,907,363	$1,999,358	$2,085,220	$2,183,348	$2,281,476	$2,385,737	$2,496,131	$2,612,658	$2,729,185	$2,851,845				$760,492	$785,024	$809,556	$834,088	$858,620	$883,152	$907,684	$938,349	$962,881	$993,546			$8,702,727
$495,884		$91,633,044	**$39,979,193**	$6,133			$1,999,358	$2,085,220	$2,183,348	$2,281,476	$2,385,737	$2,496,131	$2,612,658	$2,729,185	$2,851,845	$2,980,638				$785,024	$809,556	$834,088	$858,620	$883,152	$907,684	$938,349	$962,881	$993,546	$1,024,211			
$495,884	$0	$86,292,319	**$35,856,241**	$6,133				$2,085,220	$2,183,348	$2,281,476	$2,385,737	$2,496,131	$2,612,658	$2,729,185	$2,851,845	$2,980,638	$3,121,697				$809,556	$834,088	$858,620	$883,152	$907,684	$938,349	$962,881	$993,546	$1,024,211	$1,054,876		
$495,884	$0	$78,646,020	**$31,122,901**						$2,183,348	$2,281,476	$2,385,737	$2,496,131	$2,612,658	$2,729,185	$2,851,845	$2,980,638	$3,121,697					$834,088	$858,620	$883,152	$907,684	$938,349	$962,881	$993,546	$1,024,211	$1,054,876		
$495,884	$0	$70,617,833	**$26,615,119**							$2,281,476	$2,385,737	$2,496,131	$2,612,658	$2,729,185	$2,851,845	$2,980,638	$3,121,697						$858,620	$883,152	$907,684	$938,349	$962,881	$993,546	$1,024,211	$1,054,876		
$495,884	$0	$62,190,660	**$22,322,862**								$2,385,737	$2,496,131	$2,612,658	$2,729,185	$2,851,845	$2,980,638	$3,121,697							$883,152	$907,684	$938,349	$962,881	$993,546	$1,024,211	$1,054,876		
$495,884	$0	$53,336,000	**$18,232,905**									$2,496,131	$2,612,658	$2,729,185	$2,851,845	$2,980,638	$3,121,697								$907,684	$938,349	$962,881	$993,546	$1,024,211	$1,054,876		
$495,884	$0	$44,039,605	**$14,338,032**										$2,612,658	$2,729,185	$2,851,845	$2,980,638	$3,121,697									$938,349	$962,881	$993,546	$1,024,211	$1,054,876		
$495,884	$0	$34,272,976	**$10,626,950**											$2,729,185	$2,851,845	$2,980,638	$3,121,697										$962,881	$993,546	$1,024,211	$1,054,876		
$495,884	$0	$24,019,012	**$7,092,881**												$2,851,845	$2,980,638	$3,121,697											$993,546	$1,024,211	$1,054,876		
$495,884	$0	$13,249,215	**$3,726,219**													$2,980,638	$3,121,697												$1,024,211	$1,054,876		
	$0	$1,940,786	**$519,836**														$3,121,697													$1,054,876		
Capital Cost Subtotal (in 2002 $):			**$634,252,227**																													

ance Cost Subtotal

25-50 hp Out-of-State
$398,147
$398,147
$398,147

Matrix #1

ance Cost Subtotal												**Maintenance Cost Subtotal**												**Maintenance Cost Subtotal**						
											25-50 hp Out-of-State												25-50 hp Gen Sets CA-based	Use of electric standby not appropriate for gen sets-- c					
											$1,931,199																			
											$1,931,199	$245,487																		
$774,867											$1,931,199	$245,487	$258,462																	
$774,867	$815,349										$1,931,199	$245,487	$258,462	$271,956																
$774,867	$815,349	$857,388									$1,931,199	$245,487	$258,462	$271,956	$285,969															
$774,867	$815,349	$857,388	$902,022								$1,931,199	$245,487	$258,462	$271,956	$285,969	$300,501														
$774,867	$815,349	$857,388	$902,022	$949,251							$1,931,199	$245,487	$258,462	$271,956	$285,969	$300,501	$316,590													
$774,867	$815,349	$857,388	$902,022	$949,251	$998,556						$1,931,199	$245,487	$258,462	$271,956	$285,969	$300,501	$316,590	$332,679												
$774,867	$815,349	$857,388	$902,022	$949,251	$998,556	$1,050,456					$1,931,199	$245,487	$258,462	$271,956	$285,969	$300,501	$316,590	$332,679	$350,325											
$774,867	$815,349	$857,388	$902,022	$949,251	$998,556	$1,050,456	$1,104,951				$1,931,199	$245,487	$258,462	$271,956	$285,969	$300,501	$316,590	$332,679	$350,325	$368,490										
$774,867	$815,349	$857,388	$902,022	$949,251	$998,556	$1,050,456	$1,104,951	$1,162,560				$245,487	$258,462	$271,956	$285,969	$300,501	$316,590	$332,679	$350,325	$368,490	$387,693									
$774,867	$815,349	$857,388	$902,022	$949,251	$998,556	$1,050,456	$1,104,951	$1,162,560	$1,222,764				$258,462	$271,956	$285,969	$300,501	$316,590	$332,679	$350,325	$368,490	$387,693	$407,415								
	$815,349	$857,388	$902,022	$949,251	$998,556	$1,050,456	$1,104,951	$1,162,560	$1,222,764	$0				$271,956	$285,969	$300,501	$316,590	$332,679	$350,325	$368,490	$387,693	$407,415	$0							
		$857,388	$902,022	$949,251	$998,556	$1,050,456	$1,104,951	$1,162,560	$1,222,764	$0					$285,969	$300,501	$316,590	$332,679	$350,325	$368,490	$387,693	$407,415	$0							
			$902,022	$949,251	$998,556	$1,050,456	$1,104,951	$1,162,560	$1,222,764	$0						$300,501	$316,590	$332,679	$350,325	$368,490	$387,693	$407,415	$0							
				$949,251	$998,556	$1,050,456	$1,104,951	$1,162,560	$1,222,764	$0							$316,590	$332,679	$350,325	$368,490	$387,693	$407,415	$0							
					$998,556	$1,050,456	$1,104,951	$1,162,560	$1,222,764	$0								$332,679	$350,325	$368,490	$387,693	$407,415	$0							
						$1,050,456	$1,104,951	$1,162,560	$1,222,764	$0									$350,325	$368,490	$387,693	$407,415	$0							
							$1,104,951	$1,162,560	$1,222,764	$0										$368,490	$387,693	$407,415	$0							
								$1,162,560	$1,222,764	$0											$387,693	$407,415	$0							
									$1,222,764	$0												$407,415	$0							
										$0													$0							

ance Cost Subtotal												**Maintenance Cost Subtotal**												**Maintenance Cost Subtotal**						
											25-50 hp Out-of-State												25-50 hp Gen Sets CA-based	Use of cryogenic technology not appropriate for gen se					
											$22,820,893																			
											$22,820,893	$2,900,909																		
$9,156,569											$22,820,893	$2,900,909	$3,054,234																	
$9,156,569	$9,634,943										$22,820,893	$2,900,909	$3,054,234	$3,213,692																
$9,156,569	$9,634,943	$10,131,716									$22,820,893	$2,900,909	$3,054,234	$3,213,692	$3,379,283															
$9,156,569	$9,634,943	$10,131,716	$10,659,154								$22,820,893	$2,900,909	$3,054,234	$3,213,692	$3,379,283	$3,551,007														
$9,156,569	$9,634,943	$10,131,716	$10,659,154	$11,217,257							$22,820,893	$2,900,909	$3,054,234	$3,213,692	$3,379,283	$3,551,007	$3,741,130													
$9,156,569	$9,634,943	$10,131,716	$10,659,154	$11,217,257	$11,799,892						$22,820,893	$2,900,909	$3,054,234	$3,213,692	$3,379,283	$3,551,007	$3,741,130	$3,931,253												
$9,156,569	$9,634,943	$10,131,716	$10,659,154	$11,217,257	$11,799,892	$12,413,192					$22,820,893	$2,900,909	$3,054,234	$3,213,692	$3,379,283	$3,551,007	$3,741,130	$3,931,253	$4,139,775											
$9,156,569	$9,634,943	$10,131,716	$10,659,154	$11,217,257	$11,799,892	$12,413,192	$13,057,157				$22,820,893	$2,900,909	$3,054,234	$3,213,692	$3,379,283	$3,551,007	$3,741,130	$3,931,253	$4,139,775	$4,354,430										
$9,156,569	$9,634,943	$10,131,716	$10,659,154	$11,217,257	$11,799,892	$12,413,192	$13,057,157	$13,737,920				$2,900,909	$3,054,234	$3,213,692	$3,379,283	$3,551,007	$3,741,130	$3,931,253	$4,139,775	$4,354,430	$4,581,351									
$9,156,569	$9,634,943	$10,131,716	$10,659,154	$11,217,257	$11,799,892	$12,413,192	$13,057,157	$13,737,920	$14,449,348				$3,054,234	$3,213,692	$3,379,283	$3,551,007	$3,741,130	$3,931,253	$4,139,775	$4,354,430	$4,581,351	$4,814,405								
	$9,634,943	$10,131,716	$10,659,154	$11,217,257	$11,799,892	$12,413,192	$13,057,157	$13,737,920	$14,449,348	$0				$3,213,692	$3,379,283	$3,551,007	$3,741,130	$3,931,253	$4,139,775	$4,354,430	$4,581,351	$4,814,405	$0								
		$10,131,716	$10,659,154	$11,217,257	$11,799,892	$12,413,192	$13,057,157	$13,737,920	$14,449,348	$0					$3,379,283	$3,551,007	$3,741,130	$3,931,253	$4,139,775	$4,354,430	$4,581,351	$4,814,405	$0								
			$10,659,154	$11,217,257	$11,799,892	$12,413,192	$13,057,157	$13,737,920	$14,449,348	$0						$3,551,007	$3,741,130	$3,931,253	$4,139,775	$4,354,430	$4,581,351	$4,814,405	$0								
				$11,217,257	$11,799,892	$12,413,192	$13,057,157	$13,737,920	$14,449,348	$0							$3,741,130	$3,931,253	$4,139,775	$4,354,430	$4,581,351	$4,814,405	$0								
					$11,799,892	$12,413,192	$13,057,157	$13,737,920	$14,449,348	$0								$3,931,253	$4,139,775	$4,354,430	$4,581,351	$4,814,405	$0								
						$12,413,192	$13,057,157	$13,737,920	$14,449,348	$0									$4,139,775	$4,354,430	$4,581,351	$4,814,405	$0								
							$13,057,157	$13,737,920	$14,449,348	$0										$4,354,430	$4,581,351	$4,814,405	$0								
								$13,737,920	$14,449,348	$0											$4,581,351	$4,814,405	$0								
									$14,449,348	$0												$4,814,405	$0								
										$0													$0								

						Maintenance Cost Subtotal													Maintenance Cost Subtotal												Maintenance Cost Subtotal		
					25-50 hp Gen Sets Out-of-State												25-50 hp Reefer Railcars												Maint Cost Sub-Total	Maintenance Cost Sub-Total (2002 $)	Total Annual In-Use Cost
					$27,645												$87,954												$2,112,647	$1,576,490	$7,382,591
					$27,645	$5,044											$87,954	$11,235											$2,393,047	$1,700,694	$8,363,845
					$27,645	$5,044	$0										$87,954	$11,235	$0										$2,393,047	$1,619,708	$9,193,060
					$27,645	$5,044	$0	$0									$87,954	$11,235	$0	$0									$2,393,047	$1,542,579	$10,067,249
					$27,645	$5,044	$0	$0	$0								$87,954	$11,235	$0	$0	$0								$2,393,047	$1,469,123	$10,989,393
					$27,645	$5,044	$0	$0	$0	$0							$87,954	$11,235	$0	$0	$0	$0							$2,393,047	$1,399,165	$11,961,575
					$27,645	$5,044	$0	$0	$0	$0	$0						$87,954	$11,235	$0	$0	$0	$0	$0						$2,393,047	$1,332,538	$12,987,966
					$27,645	$5,044	$0	$0	$0	$0	$0	$0					$87,954	$11,235	$0	$0	$0	$0	$0	$0					$2,393,047	$1,269,084	$14,070,353
$0					$27,645	$5,044	$0	$0	$0	$0	$0	$0	$0				$87,954	$11,235	$0	$0	$0	$0	$0	$0	$0				$2,393,047	$1,208,651	$15,213,502
$0	$0				$27,645	$5,044	$0	$0	$0	$0	$0	$0	$0	$0			$87,954	$11,235	$0	$0	$0	$0	$0	$0	$0	$0			$2,393,047	$1,151,097	$16,419,794
$0	$0	$0				$5,044	$0	$0	$0	$0	$0	$0	$0	$0	$0			$11,235	$0	$0	$0	$0	$0	$0	$0	$0	$0		$280,400	$128,454	$10,311,405
$0	$0	$0	$0				$0	$0	$0	$0	$0	$0	$0	$0	$0	$0			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$10,675,540
$0	$0	$0	$0	$0				$0	$0	$0	$0	$0	$0	$0	$0	$0				$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$10,049,161
$0	$0	$0	$0	$0					$0	$0	$0	$0	$0	$0	$0	$0					$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$9,174,971
$0	$0	$0	$0	$0						$0	$0	$0	$0	$0	$0	$0						$0	$0	$0	$0	$0	$0	$0	$0	$0	$8,252,828
$0	$0	$0	$0	$0							$0	$0	$0	$0	$0	$0							$0	$0	$0	$0	$0	$0	$0	$0	$7,280,645
$0	$0	$0	$0	$0								$0	$0	$0	$0	$0								$0	$0	$0	$0	$0	$0	$0	$6,254,254
$0	$0	$0	$0	$0									$0	$0	$0	$0									$0	$0	$0	$0	$0	$0	$5,171,867
	$0	$0	$0	$0										$0	$0	$0										$0	$0	$0	$0	$0	$4,028,719
		$0	$0	$0											$0	$0											$0	$0	$0	$0	$2,822,427
			$0	$0												$0												$0	$0	$0	$1,548,224
				$0												$0												$0	$0	$0	$202,836

2008-2020 Maintenance Cost Subtotal (in 2002 $): $14,397,584

2008 - 2020 Total In-Use Compliance Cost (in 2002 $):
Low-Cost Scenario

						Maintenance Cost Subtotal													Maintenance Cost Subtotal												Maintenance Cost Subtotal		
					25-50 hp Gen Sets Out-of-State												25-50 hp Reefer Railcars												Maint Cost Sub-Total	Maintenance Cost Sub-Total (2002 $)	Total Annual In-Use Cost
					$27,645												$87,954												$2,503,647	$1,868,260	$7,773,591
					$27,645	$5,044											$87,954	$11,235											$2,841,271	$2,019,238	$8,812,069
					$27,645	$5,044	$0										$87,954	$11,235	$0										$2,841,271	$1,923,084	$9,641,284
					$27,645	$5,044	$0	$0									$87,954	$11,235	$0	$0									$2,841,271	$1,831,509	$10,515,473
					$27,645	$5,044	$0	$0	$0								$87,954	$11,235	$0	$0	$0								$2,841,271	$1,744,294	$11,437,617
					$27,645	$5,044	$0	$0	$0	$0							$87,954	$11,235	$0	$0	$0	$0							$2,841,271	$1,661,232	$12,409,799
					$27,645	$5,044	$0	$0	$0	$0	$0						$87,954	$11,235	$0	$0	$0	$0	$0						$2,841,271	$1,582,126	$13,436,190
					$27,645	$5,044	$0	$0	$0	$0	$0	$0					$87,954	$11,235	$0	$0	$0	$0	$0	$0					$2,841,271	$1,506,787	$14,518,577
$0					$27,645	$5,044	$0	$0	$0	$0	$0	$0	$0				$87,954	$11,235	$0	$0	$0	$0	$0	$0	$0				$2,841,271	$1,435,035	$15,661,726
$0	$0				$27,645	$5,044	$0	$0	$0	$0	$0	$0	$0	$0			$87,954	$11,235	$0	$0	$0	$0	$0	$0	$0	$0			$2,841,271	$1,366,700	$16,868,018
$0	$0	$0				$5,044	$0	$0	$0	$0	$0	$0	$0	$0	$0			$11,235	$0	$0	$0	$0	$0	$0	$0	$0	$0		$337,624	$154,669	$10,368,629
$0	$0	$0	$0				$0	$0	$0	$0	$0	$0	$0	$0	$0	$0			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$10,675,540
$0	$0	$0	$0	$0				$0	$0	$0	$0	$0	$0	$0	$0	$0				$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$10,049,161
$0	$0	$0	$0	$0					$0	$0	$0	$0	$0	$0	$0	$0					$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$9,174,971
$0	$0	$0	$0	$0						$0	$0	$0	$0	$0	$0	$0						$0	$0	$0	$0	$0	$0	$0	$0	$0	$8,252,828
$0	$0	$0	$0	$0							$0	$0	$0	$0	$0	$0							$0	$0	$0	$0	$0	$0	$0	$0	$7,280,645
$0	$0	$0	$0	$0								$0	$0	$0	$0	$0								$0	$0	$0	$0	$0	$0	$0	$6,254,254
$0	$0	$0	$0	$0									$0	$0	$0	$0									$0	$0	$0	$0	$0	$0	$5,171,867
	$0	$0	$0	$0										$0	$0	$0										$0	$0	$0	$0	$0	$4,028,719
		$0	$0	$0											$0	$0											$0	$0	$0	$0	$2,822,427
			$0	$0												$0												$0	$0	$0	$1,548,224
				$0												$0												$0	$0	$0	$202,836

2008 - 2020 Maintenance Cost Subtotal (in 2002 $): $17,092,934

2008 - 2020 Total In-Use Compliance Cost (in 2002 $):
High-Cost Scenario

Matrix #1

| | Maintenance Cost Subtotal | | |

$35,451,523	
$38,152,051	
$40,726,387	
$43,178,546	
$45,513,701	
$47,736,396	
$49,856,289	
$51,874,763	
$53,799,556	
$55,632,264	
$35,614,820	
$35,620,526	
$31,947,072	
$27,729,776	
$23,713,448	
$19,889,148	
$16,245,091	
$12,774,851	
$9,468,364	
$6,319,591	
$3,319,974	
$463,162	
$565,103,892	