NYSERDA

Cleaner Greener Communities / Climate Smart Communities
Regional Level GHG Reporting Template

Instructions

Please use this template to report summary regional GHG inventories to NYSERDA as part of your final deliverables for the regional GHG inventory. Fill it out and rename the sheet "**REDC_NAME.CGC Final GHG Inventory.2010.xlxs**".

In this template there are two tabs, "Emissions by Source" and the "Roll Up Report". Emissions by Source shows all direct and indirect emissions sources considered by the GHG Working Group for inclusion in the inventory, and the Roll Up Report reflects the consensus decision for which sources are to be included when totaling the regions GHG inventory into a single number . The final submission should the two tabs for the REDC in total, and two additional tabs for each county separately. For county tab names, please rename "REDC" to the name of the county.

We understand each region will have its own custom way of managing data and calculations so please cut and paste summary results from from your own data sheets into this template. Although you may create dynamic links to this template from your analysis sheets when filling it out, please submit this template without these links.

Protocol Compliance Statements. In the REDC level tabs only, please fill in Columns P through R, and indicate if your methods adhered to methods in Column O that summarize NY GHG Working Group consensus decisions with "Rec" standing for the recommended methods and "Alt" standing for an acceptable alternative methods. Its not required that all methods adhere to the recommended or alternate methods, but please indicate any deviations, justifications, findings, or recommendations you have for additional methods to consider. It may help you to select Columns O-P and choose the "wrap text" format to help you read the methods.

Please Fill in the Summary Table on the Cover Sheet tab to the right at the conclusion of filling out there data sheets. You may dynamically link these numbers to the other sheets in this template.

Color Coding- in general a Green cell requires a value or entry, a while cell is optional.

Reporting Region	Mohawk Valley

REDC Emissions Summary CO2e Roll Up Numbers (MTCDE)		Population	MT CO2e per capita
Fulton County	#REF!	55,531	#REF!
Herkimer County	#REF!	64,519	#REF!
Montgomery County	#REF!	50,219	#REF!
Oneida County	#REF!	234,878	#REF!
Otsego County	#REF!	62,259	#REF!
Schoharie County	#REF!	32,749	#REF!
Sum Total of Counties	#REF!	500,155	#REF!
REDC in Total	#REF!		

REDC Emissions By Source and Sector
Year: 2010

REDC / County Name	Mohawk Valley

Color Code

	REQUIRED, though some data may be zero or considered to small to count
	OPTIONAL
	DO NOT Report Data in these cells

DRAFT Reporting Template CGC. Emissions in MTCDE							Rolled Up?	Related GHG Metrics / Activity Data		
		Scope 1	Scope 2	Scope 3	Biogenic			Metric	Unit	Value
Built Environment	**Residential Energy Consumption**									
MV Electricity Consumption	Electricity / Steam		330,885				Yes	Consumption	MMBTU	4,974,350
MV Direct Residential Fuel Consumption	Natural Gas	646,304					Yes	Consumption	MMBTU	12,177,874
MV Direct Residential Fuel Consumption	Propane / LPG	94,014					Yes	Consumption	MMBTU	1,486,885
MV Direct Residential Fuel Consumption	Distillate Fuel Oil (#1, #2, Kerosene)	368,268					Yes	Consumption	MMBTU	4,962,574
MV Direct Residential Fuel Consumption	Wood	10,589			503171.207		Yes	Consumption	MMBTU	5,364,299
	Commercial Energy Consumption									
MV Electricity Consumption	Electricity / Steam		177,504				Yes	Consumption	MMBTU	2,668,502
MV Commercial Direct Fuel Consumption	Natural Gas	429,023					Yes	Consumption	MMBTU	8,083,786
MV Commercial Direct Fuel Consumption	Propane / LPG	29,746					Yes	Consumption	MMBTU	470,455
MV Commercial Direct Fuel Consumption	Distillate Fuel Oil (#1, #2, Kerosene)	293,888					Yes	Consumption	MMBTU	3,960,278
MV Commercial Direct Fuel Consumption	Residual Fuel Oil (#4 and #6)	-					Yes	Consumption	MMBTU	-
MV Commercial Direct Fuel Consumption	Coal	421					Yes	Consumption	MMBTU	4,095
MV Commercial Direct Fuel Consumption	Wood	2,902			137876.076		Yes	Consumption	MMBTU	1,469,894
	Industrial Energy Consumption									
MV Electricity Consumption	Electricity / Steam		230,780				Yes	Consumption	MMBTU	3,469,426
MV Industrial Title V Consumption	Natural Gas	96,170					Yes	Consumption	MMBTU	1,812,060
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MV Industrial Title V Consumption	Distillate Fuel Oil (#1, #2, Kerosene)	882					Yes	Consumption	MMBTU	11,889
MV Industrial Title V Consumption	Residual Fuel Oil (#4 and #6)	1,465					Yes	Consumption	MMBTU	19,448
MV Industrial Title V Consumption	Coal	-					Yes	Consumption	MMBTU	-
MV Industrial Title V Consumption	Wood	262			12462.1761		Yes	Consumption	MMBTU	132,859
Energy Generation and Supply	**Energy Generation and Supply**									
MV Elec Generation GHG Analysis	Coal	-					No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	Natural Gas	5,741					No	Consumption	MMBTU	108,173
MV Elec Generation GHG Analysis	Distillate Fuel Oil (#1, #2 and #4)	15					No	Consumption	MMBTU	204
MV Elec Generation GHG Analysis	Residual Fuel Oil (#4 and #6)	-					No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	Wood / Biomass	-			0		No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	MSW	23			4,618		No	MSW Combusted	MMBTU	88,685
MV Elec Generation GHG Analysis	Other	-								4,507,423
MV Electricity Consumption	Electricity T/D Losses		43,020				Yes	Losses	MMBTU	289,507
MV Elec Generation GHG Analysis and MV Direct Fuel Consumption	Natural Gas T/D Losses	#REF!					Yes	Losses	MMBTU	
MV Electricity Consumption	Use of SF6 in the Utility Industry	9,895					Yes	Consumption	MMBTU	-
Industrial Processes	**Industrial Processes**									
Not Reported	Cement Production						Yes			
Not Reported	Iron and Steel Production						Yes			
Not Reported	Ferroalloy Production						Yes			
Not Reported	Aluminum Production						Yes			
Not Reported	Paper and Pulp						Yes			
Not Reported	Limestone Use						Yes			
Not Reported	Soda Ash Use						Yes			
Not Reported	Semi-Conductor Manufacturing						Yes			
MV Industrial Sources	Glass Production						Yes			
Not Reported	Chemical Manufacturing						Yes			
Product Use (Ozone Depleting Substances)	**Product Use (Ozone Depleting Substances)**									
MV Industrial Sources	All Refrigerants- except SF6	114,513					Yes			
Transportation Energy	**On-road**									
MV Emission Summary - Onroad	Motor Gasoline (E-10)	1,936,345			140,535		Yes	Consumption	MMBTU	29,529,656
MV Emission Summary - Onroad	Diesel	408,014					Yes	Consumption	MMBTU	5,635,324
Not Reported	Ethanol (E-85)						No	Consumption	MMBTU	
Not Reported	Biodiesel						No	Consumption	MMBTU	
Not Reported	Electricity Consumption						No	Consumption	MMBTU	
	Rail									
MV Emission Summary - Rail	Diesel	86,902					Yes	Consumption	MMBTU	1,171,042
MV Emission Summary - Rail	Coal Consumption		-				Yes	Consumption	MMBTU	-
	Marine									
MV Emission Summary -Com Marine	Gasoline						Yes	Consumption	MMBTU	
MV Emission Summary -Com Marine	Distillate Fuels	3					Yes	Consumption	MMBTU	21
MV Emission Summary -Com Marine	Residual Fuels	-					Yes	Consumption	MMBTU	-
	Air									
MV Emission Summary-Aircraft	All Fuels (Jet and Aviation Gasoline)	3,106					No	Consumption	MMBTU	43,515
	Off-road Mobile									
MV Emission Summary-Nonroad	All Fuels (Diesel and Gasoline)	320,037					Yes	Consumption	MMBTU	4,466,754
Waste Management	**Solid Waste Management**									
MV Waste	Landfill (Scope 1), allocated FOD (Scope 3) used in roll up	152,006		85,764	0		Yes - ONLY Scope 3	MSW+CD Generated	Tonnes	267,043
Not Reported	MSW incineration (non grid connected)						Yes	MSW+CD Processed	Tonnes	213,573
	Sewage Treatment							MSW Sent for Incineration	Tonnes	-
MV Waste water	Central WWTPs and Septic Systems	50,000					Yes	MSW incinerated in Boundary	Tonnes	-
Agriculture	**Livestock**									
GHF_MV_Agriculture	Enteric Fermentation	215,881					Yes			
GHF_MV_Agriculture	Manure management	56,250					Yes			
GHF_MV_Agriculture	**Crop Production and Soil Management**									
GHF_MV_Agriculture	Use of Fertilizer	21,599					Yes			
Not Reported	Crop Residue Incineration						No			
Land Use and Forestry										
GHG_MV_Forest	Urban Forest Annual Reserve	88,507					No			
GHG_MV_Forest	Forest Carbon Reserve (TOTAL)	411,498,822					No			

Grand Totals	Gross Totals	#REF!	782,189	85,764	798,662	#REF!
	Total with Aircraft (as reported in WNY Sustainability Plan)	#REF!	782,189	85,764	798,662	#REF!
	Net Totals					

Protocol Compliance Report			
Summary of Protocol Decisions for Required Tier II Source (Green Box Sources) "Rec" - recommended, "Alt" means acceptable alternative	**Adherence**		
	Yes	No	Brief Description of Method and Issues
(Rec) - Utility Supplied Data, (Alt 1) - extrapolation from partial set, (Alt 2) EIA allocation based HDD and Housing Unit Size	X		Actual electricity sales data is provided for National Grid, NYSEG and municipal utilities.
(Rec) - Utility Supplied Data, (Alt 1) - extrapolation from partial set, (Alt 2) EIA allocation based HDD and Housing Unit Size	X		Recommended method used
(Rec) Allocated EIA SEDS residential state consumption to counties based on Home Heating Fuel, HDD, and Housing Unit Size			Recommended method used
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(Rec) Allocated EIA SEDS residential state consumption to counties based on Home Heating Fuel, HDD, and Housing Unit Size			
(Rec) - Utility Supplied Data, (Alt 1) - extrapolation from partial set, (Alt 2) EIA allocation based on Fuel Oil Recommended method.	X		Actual electricity sales data is provided for National Grid, NYSEG and municipal utilities.
(Rec) - Utility Supplied Data, (Alt 1) - extrapolation from partial set, (Alt 2) EIA allocation based on Fuel Oil Recommended method.	X		Recommended method used
(Rec) Allocated EIA SEDS commercial state consumption to counties based on Home Heating Fuel, HDD, employment and Commercial Square Footage. (Alt) Allocation based on Home Heating, HDD, and Employment only.	X		Recommended method used
(Rec) Allocated EIA SEDS commercial state consumption to counties based on Home Heating Fuel, HDD, employment and Commercial Square Footage. (Alt) Allocation based on Home Heating, HDD, and Employment only.	X		Recommended method used: includes all Fuel OIl
(Rec) Allocated EIA SEDS commercial state consumption to counties based on Home Heating Fuel, HDD, employment and Commercial Square Footage. (Alt) Allocation based on Home Heating, HDD, and Employment only.	X		Recommended method used: included in Row 24 totals
(Rec) Allocated EIA SEDS commercial state consumption to counties based on Home Heating Fuel, HDD, employment and Commercial Square Footage. (Alt) Allocation based on Home Heating, HDD, and Employment only.	X		Recommended method used
(Rec) Allocated EIA SEDS commercial state consumption to counties based on Home Heating Fuel, HDD, employment and Commercial Square Footage. (Alt) Allocation based on Home Heating, HDD, and Employment only.	X		Recommended method used
(Rec) - Utility Supplied Data, (Alt 1) - extrapolation from partial set, (Alt 2) allocate SEDS EIA data based allocated by industrial employment	X		Actual electricity sales data is provided for National Grid, NYSEG and municipal utilities.
(Rec) - Pie Slice Method. (1) Allocate directly all Title 5 / MMR reporting industrial facilities to the counties / municipalities. (2) compute total statewide industrial fuel use for all Title 5 / EPA MMR reporting facilities and subtract that from the EIA SEDS reported fuel use for the industrial sector (3) allocate the balance from step 2 to counties by industrial employment for manufacturing. The balance is assumed to represent smaller industry that does not report under Title 5 regulations.		X	Direct energy use as reported for Title 5 industrial facilities only, additional allocation based on statewide emissions by industrial employees is not representative of the region, therefore not included
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(Rec) - Direct Allocation from Title 5, MMR, or EIA 923 Database. All Grid Connected Power Generators with Nameplate capacity of 1 MW or greater shall be reported. For overlap, prioritize EIA 923 Database.	X		EIA 923 database used
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(Rec) - Direct Allocation from Title 5, MMR, or EIA 923 Database. All Grid Connected Power Generators with Nameplate capacity of 1 MW or greater shall be reported. Wood CO2 emissions reported optionally as biogenic CO2, Ch4 and N2 Emissions required to be reported to Scope 1	X		EIA 923 database used
(Rec) - Direct Allocation from Title 5, MMR, or EIA 923 Database. All Grid Connected Power Generators with Nameplate capacity of 1 MW or greater shall be reported. MSW CO2 emissions split as 44% reported as Scope 1 as part of non-biogenic (plastics etc), and 56% can be reported as option biogenic based data for 2005 on http://www.eia.gov/cneaf/solar.renewables/page/mswaste/msw_report.html. All Ch4 and N2O shall be reported under required Scope 1.	X		EIA 923 database used
(Rec) - Acquire utility specific estimate of T/D (in %) and apply that to all consumption (res/commercial/industrial). Report emissions as Scope 2 using regional EGRID emission factors consistent with all Scope 2 calculations. (Alt) use a statewide average T/D loss of 5.28% as documented by EPA's EGRID reporting for New York.	X		Alternative method as stated
(Rec) - Acquire utility specific estimate of T/D (in %), compute as percentage of total residential/commercial/industrial/energy generation. Report as Scope 1 CH4 emissions. (Alt) use a statewide average of 1.8% as documented by National Grid in 2010 PSC Reporting.			Alternative method as stated
(Rec) - acquire utility specific estimate and report as SF6. (Alt) Apportion NYSERDA 2009 Emission Inventory Total for the state to counties based ration of EIA reported total electricity demand to computed regional or county demand for all sectors.		X	Based on conversations with P Groth and J Yeinger, used national 2010 emission inventory total (alternative method)
(Rec) Direct Allocation from from EPA MMR only. Small Sources to not to be included at this time.	X		Nothing to report
	X		Nothing to report
	X		Nothing to report
	X		Nothing to report
	X		Nothing to report
	X		Nothing to report
	X		Nothing to report
	X		Nothing to report
	X		Nothing to report
	X		Nothing to report
(Rec) Use EPA 2009 Draft Guidance method. Allocate national per/capita emissions to counties based on population. Methods include mobile refrigeration	X		Recommended method used
(Rec) Use MPO-provided VMT data local to your region, supplemented by DOT provided data (on Wiggio). Use regional-specific data on fleet profile and national fleet fuel economy data (on Wiggio) to estimate county-level GHG emissions. (Alt) Use EPA MOVES GHG module customized for your region-appropriate if you are running this model. Assume on-road fuel is 10% ethanol and report this fraction as Optional biogenic emissions.	X		Recommended method used
(Rec) Use MPO-provided VMT data local to your region, supplemented by DOT provided data (on Wiggio). Use regional-specific data on fleet profile and national fleet fuel economy data (on Wiggio) to estimate county-level GHG emissions. (Alt) Use EPA MOVES GHG module customized for your region-appropriate if you are running this model. Assume on-road fuel is 10% ethanol and report this fraction as Optional biogenic emissions on the ethanol line item.	X		Recommended method used
Optional- Include regional E-85 consumption if you have it, and debit against your gasoline estimate create using VMT. Allocate 15% as gasoline to be reported as Scope 1, and 85% as ethanol to be reported as optional biogenic.	X		Not available
Optional- Include regional biodiesel consumption if you have it, and debit against your diesel estimate create using VMT. Because biodiesel blends change, allocate option biogenic component on this line item only, and retain the diesel fraction on the diesel line item.	X		Not available
Today this will be zero, but as NYSERDA pushes to electrify on-road transportation we will want to report here, debiting against electricity consumption in the other sectors as appropriate.	X		Not available
Freight and Passenger. (Rec) Use direct provider fuel consumption data allocated spatially to location of routes (Alt) Use Nyserda 2002 estimates of Diesel consumption by county directly.	X		Recommended method used
Passenger and Commuter (Rec) Use direct provider electricity consumption data allocated spatially to location of routes (Alt) None identified.	X		None to report
Rec - USE NYSDEC 2007 data from the state emission inventory for the small and pleasure craft categories reported by county (data on Wiggio). For commercial distillate and bunkers, No consensus method identified- please document methods used.	X		As stated, except recreational boating included in non-road data
	X		As stated, except recreational boating included in non-road data
	X		As stated, except recreational boating included in non-road data
Optional Scope 1- Estimate Landing and Take off Cycle emissions using a dispersion model such as EDMS, or with related data from the NYSDEC for the 2007 state emission inventory. Optional Scope 3, use FAA statistics on departure miles from regional airport, allocate jet fuel use to it, then allocate to counties by fraction of population served	X		Scope 1 option, using EDMS. Totals are also included in GHG Inventory reporting as part of Sustainability Plan
Rec - USE NYSDEC 2007 NONROAD data from the state emission inventory (data on Wiggio) for all categories except small marine.	X		As stated, but includes recreational marine
This is fugitive CH4 emissions from landfills. There are two required Scopes. Scope 1 - Estimate of actual emissions in regional boundary. (rec) use MMR or Title 5 (annual landfill reporting) data directly for facilities (data on Wiggio). For recently closed landfills or for areas without reported data, use a First Order Decay model to estimate emissions. Scope 3- emissions footprint attributed to current waste generation regardless of where it is treated. (rec) Estimate county level MSW and C/D waste generation and apply a representative FOD model with prevailing CH4 captures rates forward-casted 50 years to estimate the footprint.		X	Scope 1 reported as actual 2010 waste facility emissions reported (EPA MRR). Scope 3 calculated and reported as stated
Rec - for any MSW incinerated that does not generate grid connected power, compute emissions. MSW CO2 emissions split. 44% shall be reported as Scope 1 as part of non-biogenic (plastics etc), and 56% can be reported as option biogenic based data for 2005 on http://www.eia.gov/cneaf/solar.renewables/page/mswaste/msw_report.html. All Ch4 and N2O shall be reported under required Scope 1	X		None Reported
Determine population covered by WWTPs. (Rec)- Use the ICLEI Local Government Operations Protocol and apply to all facilities in the region. (Alt) use methods as described in the EPA 2009 Draft GHG guidance to translate populations served into emissions using default data. Determine population covered by Septic Systems, and apply the default emissions / capita as described in the ICLEI Local Government Operations Protocol.		X	Based on conversations with P. Groth and J. Yeinger, used State Inventory Tool and regional population, allocated to county by population
(Rec) Methods as described in the EPA 2009 guidance and executed in the EPA's State Inventory Tool. Use locally resolved fertilizer, crop, and livestock population from either the 2007 Ag census or the US NASS system to get county-level data and make calculations for each county.	X		Recommended method used
	X		Recommended method used
	X		Recommended method used
	X		None reported
Optional Source and Sink. Use methods described in the EPA 2009 Guidance. Use local forest inventory data, or use the US Forest Services online inventory tool for forests. For carbon stock factors use the National Council for Air and Stream Improvement's Carbon On-Line Estimator. (NCASI 2008) Use the	X		Recommended method used
		X	Total reported for information, change is not relevant to WG discussions

Sum Totals in columns for all EXCEPT ANY FORESTRY SINKS. Totals in the Scope 1 column can be a considered a physical roll up of emissions that occur in boundary, and is analogous to reporting that is done for state and federal GHG inventories, and for air quality management.

Value above MINUS and reported optional forestry sinks.

REDC Emissions By Source and Sector
Year: 2010

REDC / County Name	Mohawk Valley

Color Code

	REQUIRED, though some data may be zero or considered to small to count
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MV Direct Residential Fuel Consumption	Propane / LPG	94,014		0	0	Yes	Consumption	MMBTU	1,486,885
MV Direct Residential Fuel Consumption	Distillate Fuel Oil (#1, #2, Kerosene)	368,268		0	0	Yes	Consumption	MMBTU	4,962,574
MV Direct Residential Fuel Consumption	Wood	10,589		0	503171.207	Yes	Consumption	MMBTU	5,364,299
	Commercial Energy Consumption				0				
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MV Commercial Direct Fuel Consumption	Propane / LPG	29,746		0	0	Yes	Consumption	MMBTU	470,455
MV Commercial Direct Fuel Consumption	Distillate Fuel Oil (#1, #2, Kerosene)	293,888		0	0	Yes	Consumption	MMBTU	3,960,278
MV Commercial Direct Fuel Consumption	Residual Fuel Oil (#4 and #6)	-		0	0	Yes	Consumption	MMBTU	-
MV Commercial Direct Fuel Consumption	Coal	421		0	0	Yes	Consumption	MMBTU	4,095
MV Commercial Direct Fuel Consumption	Wood	2,902		0	137876.076	Yes	Consumption	MMBTU	1,469,894
	Industrial Energy Consumption				0				
MV Electricity Consumption	Electricity / Steam		230,780	0	0	Yes	Consumption	MMBTU	3,469,426
MV Industrial Title V Consumption	Natural Gas	96,170		0	0	Yes	Consumption	MMBTU	1,812,060
MV Industrial Title V Consumption	Propane / LPG	77		0	0	Yes	Consumption	MMBTU	1,221
MV Industrial Title V Consumption	Distillate Fuel Oil (#1, #2, Kerosene)	882		0	0	Yes	Consumption	MMBTU	11,889
MV Industrial Title V Consumption	Residual Fuel Oil (#4 and #6)	1,465		0	0	Yes	Consumption	MMBTU	19,448
MV Industrial Title V Consumption	Coal	-		0	0	Yes	Consumption	MMBTU	-
MV Industrial Title V Consumption	Wood	262		0	12462.1761	Yes	Consumption	MMBTU	132,859
Energy Generation and Supply	**Energy Generation and Supply**			0	0				
MV Elec Generation GHG Analysis	Coal	-		0	0	No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	Natural Gas	5,741		0	0	No	Consumption	MMBTU	108,173
MV Elec Generation GHG Analysis	Distillate Fuel Oil (#1, #2 and #4)	15		0	0	No	Consumption	MMBTU	204
MV Elec Generation GHG Analysis	Residual Fuel Oil (#4 and #6)	-		0	0	No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	Wood / Biomass	-		0	0	No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	MSW	23		0	4,618	No	MSW Combusted	MMBTU	88,685
MV Elec Generation GHG Analysis	Other	-		0	0				4,507,423
MV Electricity Consumption	Electricity T/D Losses		43,020	0	0	Yes	Losses	MMBTU	289,507
MV Elec Generation GHG Analysis and MV Direct Fuel Consumption	Natural Gas T/D Losses	#REF!		0	0	Yes	Losses	MMBTU	-
MV Electricity Consumption	Use of SF6 in the Utility Industry	9,895		0	0	Yes	Consumption	MMBTU	-
Industrial Processes	**Industrial Processes**			0	0				
Not Reported	Cement Production	-		0	0	Yes			-
Not Reported	Iron and Steel Production	-		0	0	Yes			-
Not Reported	Ferroalloy Production	-		0	0	Yes			-
Not Reported	Aluminum Production	-		0	0	Yes			-
Not Reported	Paper and Pulp	-		0	0	Yes			-
Not Reported	Limestone Use	-		0	0	Yes			-
Not Reported	Soda Ash Use	-		0	0	Yes			-
Not Reported	Semi-Conductor Manufacturing	-		0	0	Yes			-
MV Industrial Sources	Glass Production	-		0	0	Yes			-
Not Reported	Chemical Manufacturing	-		0	0	Yes			-
Product Use (Ozone Depleting Substances)	**Product Use (Ozone Depleting Substances)**			0	0				
MV Industrial Sources	All Refrigerants- except SF6	114,513		0	0	Yes			-
Transportation Energy	**On-road**			0	0				
MV Emission Summary - Onroad	Motor Gasoline (E-10)	1,936,345		0	140,535	Yes	Consumption	MMBTU	29,529,656
MV Emission Summary - Onroad	Diesel	408,014		0	0	Yes	Consumption	MMBTU	5,635,324
Not Reported	Ethanol (E-85)	-		0	0	No	Consumption	MMBTU	-
Not Reported	Biodiesel			0	0	No	Consumption	MMBTU	-
Not Reported	Electricity Consumption		-	0	0	No	Consumption	MMBTU	-
	Rail			0	0				
MV Emission Summary - Rail	Diesel	86,902		0	0	Yes	Consumption	MMBTU	1,171,042
MV Emission Summary - Rail	Coal Consumption		-	0	0	Yes	Consumption	MMBTU	-
	Marine			0	0				
MV Emission Summary -Com Marine	Gasoline	-		0	0	Yes	Consumption	MMBTU	-
MV Emission Summary -Com Marine	Distillate Fuels	3		0	0	Yes	Consumption	MMBTU	21
MV Emission Summary -Com Marine	Residual Fuels	-		0	0	Yes	Consumption	MMBTU	-
	Air			0	0				
MV Emission Summary-Aircraft	All Fuels (Jet and Aviation Gasoline)	3,106		0	0	No	Consumption	MMBTU	43,515
	Off-road Mobile			0	0				
MV Emission Summary-Nonroad	All Fuels (Diesel and Gasoline)	320,037		0	0	Yes	Consumption	MMBTU	4,466,754
Waste Management	**Solid Waste Management**			0	0				
MV Waste	Landfill (Scope 1), allocated FOD (Scope 3) used in roll up	152,006		85,764	0	Yes - ONLY Scope 3	MSW+CD Generated	Tonnes	267,043
Not Reported	MSW incineration (non grid connected)	-		0	0	Yes	MSW+CD Processed	Tonnes	213,573
	Sewage Treatment			0	0		MSW Sent for Incineration	Tonnes	-
MV Waste water	Central WWTPs and Septic Systems	50,000		0	0	Yes	MSW incinerated in Boundary	Tonnes	-
Agriculture	**Livestock**			0	0				
GHF_MV_Agriculture	Enteric Fermentation	215,881		0	0	Yes			-
GHF_MV_Agriculture	Manure management	56,250		0	0	Yes			-
GHF_MV_Agriculture	**Crop Production and Soil Management**			0	0				
GHF_MV_Agriculture	Use of Fertilizer	21,599		0	0	Yes			-
Not Reported	Crop Residue Incineration	-		0	0	No			-
Land Use and Forestry				0	0				
GHG_MV_Forest	Urban Forest Annual Reserve	88,507		0	0	No			-
GHG_MV_Forest	Forest Carbon Reserve (TOTAL)	411,498,822		0	0	No			-

Grand Totals	Gross Totals	#REF!	782,189	85,764	798,662
	Total with Aircraft (as reported in WNY Sustainability Plan)	#REF!	782,189	85,764	798,662
	Net Totals				

	#REF!
	#REF!

REDC GHG Emissions Roll Up Report
Year: 2010
(all emissions in Column D, when summed will equal the total County or REDC protocol compliant GHG emissions estimate)

REDC / County Name	Mohawk Valley

Color Code

REQUIRED for the Roll Up Report, though some data may be zero, N/A, or considered to small to count

Report NO Data in cell

DRAFT Roll Up Report CGC. Emissions in MTCDE								
		CO2e	CO2	CH4	N2O	PFC	HFC	SF6
Built Environment	**Residential Energy Consumption**							
	Electricity / Steam	330,885	329,276	221	1,388			
	Natural Gas	646,304	645,671	256	378			
	Propane / LPG	94,014	93,644	94	277			
	Distillate Fuel Oil (#1, #2, Kerosene)	368,268	367,032	313	923			
	Wood	10,589	-	3,605	6,984			
	Commercial Energy Consumption							
	Electricity / Steam	177,504	176,641	119	745			
	Natural Gas	429,023	428,602	170	251			
	Propane / LPG	29,746	29,629	30	88			
	Distillate Fuel Oil (#1, #2, Kerosene)	293,888	292,902	249	737			
	Residual Fuel Oil (#4 and #6)	-						
	Coal	421	418	1	2			
	Wood	2,902	-	988	1,914			
	Industrial Energy Consumption							
	Electricity / Steam	230,780	229,658	154	968			
	Natural Gas	96,170	96,075	38	56			
	Propane / LPG	77	77	0	0			
	Distillate Fuel Oil (#1, #2, Kerosene)	882	879	1	2			
	Residual Fuel Oil (#4 and #6)	1,465	1,461	1	4			
	Coal	-	-	-	-			
	Wood	262		89	173			
	Energy Generation and Supply							
	Electricity T/D Losses	43,020	42,810	29	180			
	Natural Gas T/D Losses	#REF!		#REF!				
	Use of SF6 in the Utility Industry	9,895						9,895
	Industrial Processes							
	Cement Production							
	Iron and Steel Production							
	Ferroalloy Production							
	Aluminum Production							
	Paper and Pulp							
	Limestone Use							
	Soda Ash Use							
	Semi-Conductor Manufacturing							
	Chemical Manufacturing							
	Product Use (ODS Substitutes)							
	All Refrigerants- except utility SF6	114,513					114,513	
Transportation Energy	**On-road ALL (Total reflects subtraction of ethanol)**							
	Motor Gasoline (E-10)	1,936,345	1,929,503	5,111	1,731			
	Diesel	408,014	406,704	963	347			
	Ethanol							
	Biodiesel							
	Rail							
	Diesel	86,902	86,610	218	74			
	Coal	-	-	-	-			
	Marine							
	Gasoline							
	Distillate	3	3	0	0			
	Residual Fuel Oil	-	-	-	-			
	Off-road Mobile							
	All Fuels (Diesel and Gasoline)	320,037	318,931	826	280			
Waste Management	**Solid Waste Management**							
	FOD from Waste Generation	85,764	-	85,764	-			
	MSW incineration (non grid connected)							
	Sewage Treatment							
	Central WWTPs and Septic Systems Total reflects roun	50,000		30,000	10,000			
Agriculture	**Livestock**							
	Enteric Fementation	215,881		215,881				
	Manure management	56,250		46,590	9,659			
	Crop Production and Soil Management							
	Use of Fertilizer	21,599			21,599			
	Crop Residue Incineration							
Grand Totals		#REF!	5,476,527	#REF!	58,758	-	114,513	9,895

REDC GHG Emissions Roll Up Report
Year: 2010
(all emissions in Column D, when summed will equal the total County or REDC protocol compliant GHG emissions estimate)

REDC / County Name	QAQC

Color Code

REQUIRED for the Roll Up Report, though some data may be zero, N/A, or considered to small to count

Report NO Data in cell

DRAFT Roll Up Report CGC. Emissions in MTCDE								
		CO2e	CO2	CH4	N2O	PFC	HFC	SF6
Built Environment	**Residential Energy Consumption**							
	Electricity / Steam	330,885	329,276	221	1,388			
	Natural Gas	646,304	645,671	256	378			
	Propane / LPG	94,014	93,644	94	277			
	Distillate Fuel Oil (#1, #2, Kerosene)	368,268	367,032	313	923			
	Wood	10,589	-	3,605	6,984			
	Commercial Energy Consumption							
	Electricity / Steam	177,504	176,641	119	745			
	Natural Gas	429,023	428,602	170	251			
	Propane / LPG	29,746	29,629	30	88			
	Distillate Fuel Oil (#1, #2, Kerosene)	293,888	292,902	249	737			
	Residual Fuel Oil (#4 and #6)	-	-	-	-			
	Coal	421	418	1	2			
	Wood	2,902	-	988	1,914			
	Industrial Energy Consumption							
	Electricity / Steam	230,780	229,658	154	968			
	Natural Gas	96,170	96,075	38	56			
	Propane / LPG	77	77	0	0			
	Distillate Fuel Oil (#1, #2, Kerosene)	882	879	1	2			
	Residual Fuel Oil (#4 and #6)	1,465	1,461	1	4			
	Coal	-	-	-	-			
	Wood	262		89	173			
	Energy Generation and Supply							
	Electricity T/D Losses	43,020	42,810	29	180			
	Natural Gas T/D Losses	#REF!		#REF!				
	Use of SF6 in the Utility Industry	9,895						9,895
	Industrial Processes							
	Cement Production		-	-				
	Iron and Steel Production		-	-				
	Ferroalloy Production		-	-				
	Aluminum Production		-			-		
	Paper and Pulp		-	-				
	Limestone Use		-	-				
	Soda Ash Use		-	-				
	Semi-Conductor Manufacturing					-	-	-
	Chemical Manufacturing		-	-				
	Product Use (ODS Substitutes)							
	All Refrigerants- except utility SF6	114,513					114,513	
Transportation Energy	**On-road ALL (Total reflects subtraction of ethanol)**		-	-	-			
	Motor Gasoline (E-10)	1,936,345	1,929,503	5,111	1,731			
	Diesel	408,014	406,704	963	347			
	Ethanol			-	-			
	Biodiesel			-	-			
	Rail							
	Diesel	86,902	86,610	218	74			
	Coal	-	-	-	-			
	Marine							
	Gasoline		-	-	-			
	Distillate	3	3	0	0			
	Residual Fuel Oil	-	-	-	-			
	Off-road Mobile							
	All Fuels (Diesel and Gasoline)	320,037	318,931	826	280			
Waste Management	**Solid Waste Management**							
	FOD from Waste Generation	85,764	-	85,764	-			
	MSW incineration (non grid connected)		-	-	-			
	Sewage Treatment							
	Central WWTPs and Septic Systems Total reflects roun	50,000		30,000	10,000			
Agriculture	**Livestock**							
	Enteric Fementation	215,881		215,881				
	Manure management	56,250		46,590	9,659			
	Crop Production and Soil Management							
	Use of Fertilizer	21,599			21,599			
	Crop Residue Incineration		-	-	-			
Grand Totals		#REF!	5,476,527	#REF!	58,758	-	114,513	9,895

REDC Emissions By Source and Sector
Year: 2010

REDC / County Name	Fulton County

Color Code

	REQUIRED, though some data may be zero or considered to small to count
	OPTIONAL
	DO NOT Report Data in these cells

DRAFT Reporting Template CGC. Emissions in MTCDE							Related GHG Metrics / Activity Data		
		Scope 1	Scope 2	Scope 3	Biogenic	Rolled Up?	Metric	Unit	Value
Built Environment	**Residential Energy Consumption**								
MV Electricity Consumption	Electricity / Steam		36,889			Yes	Consumption	MMBTU	554,567
MV Direct Residential Fuel Consumption	Natural Gas	66,441				Yes	Consumption	MMBTU	1,251,899
MV Direct Residential Fuel Consumption	Propane / LPG	10,427				Yes	Consumption	MMBTU	164,914
MV Direct Residential Fuel Consumption	Distillate Fuel Oil (#1, #2, Kerosene)	44,973				Yes	Consumption	MMBTU	606,034
MV Direct Residential Fuel Consumption	Wood	1,395			66285.1378	Yes	Consumption	MMBTU	706,665
	Commercial Energy Consumption								
MV Electricity Consumption	Electricity / Steam		13,864			Yes	Consumption	MMBTU	208,420
MV Commercial Direct Fuel Consumption	Natural Gas	34,816				Yes	Consumption	MMBTU	656,007
MV Commercial Direct Fuel Consumption	Propane / LPG	2,648				Yes	Consumption	MMBTU	41,886
MV Commercial Direct Fuel Consumption	Distillate Fuel Oil (#1, #2, Kerosene)	28,058				Yes	Consumption	MMBTU	378,093
MV Commercial Direct Fuel Consumption	Residual Fuel Oil (#4 and #6)	-				Yes	Consumption	MMBTU	-
MV Commercial Direct Fuel Consumption	Coal	18				Yes	Consumption	MMBTU	174
MV Commercial Direct Fuel Consumption	Wood	308			14627.1074	Yes	Consumption	MMBTU	155,939
	Industrial Energy Consumption								
MV Electricity Consumption	Electricity / Steam		22,233			Yes	Consumption	MMBTU	334,236
MV Industrial Title V Consumption	Natural Gas	854				Yes	Consumption	MMBTU	16,093
MV Industrial Title V Consumption	Propane / LPG	-				Yes	Consumption	MMBTU	-
MV Industrial Title V Consumption	Distillate Fuel Oil (#1, #2, Kerosene)	-				Yes	Consumption	MMBTU	-
MV Industrial Title V Consumption	Residual Fuel Oil (#4 and #6)	-				Yes	Consumption	MMBTU	-
MV Industrial Title V Consumption	Coal	-				Yes	Consumption	MMBTU	-
MV Industrial Title V Consumption	Wood	-			0	Yes	Consumption	MMBTU	-
Energy Generation and Supply	**Energy Generation and Supply**								
MV Elec Generation GHG Analysis	Coal	-				No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	Natural Gas	-				No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	Distillate Fuel Oil (#1, #2 and #4)	-				No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	Residual Fuel Oil (#4 and #6)	-				No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	Wood / Biomass	-			0	No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	MSW	23			4,618	No	MSW Combusted	MMBTU	88,685
MV Elec Generation GHG Analysis	Other	-							115,598
MV Electricity Consumption	Electricity T/D Losses		4,248			Yes	Losses	MMBTU	32,276
MV Elec Generation GHG Analysis and MV Direct Fuel Consumption	Natural Gas T/D Losses	#REF!				Yes	Losses	MMBTU	
MV Electricity Consumption	Use of SF6 in the Utility Industry	977				Yes	Consumption	MMBTU	-
Industrial Processes	**Industrial Processes**								
Not Reported	Cement Production					Yes			
Not Reported	Iron and Steel Production					Yes			
Not Reported	Ferroalloy Production					Yes			
Not Reported	Aluminum Production					Yes			
Not Reported	Paper and Pulp					Yes			
Not Reported	Limestone Use					Yes			
Not Reported	Soda Ash Use					Yes			
Not Reported	Semi-Conductor Manufacturing					Yes			
MV Industrial Sources	Glass Production					Yes			
Not Reported	Chemical Manufacturing					Yes			
Product Use (Ozone Depleting Substances)	**Product Use (Ozone Depleting Substances)**								
MV Industrial Sources	All Refrigerants- except SF6	12,714				Yes			
Transportation Energy	**On-road**								
MV Emission Summary - Onroad	Motor Gasoline (E-10)	151,209			10,974	Yes	Consumption	MMBTU	2,305,976
MV Emission Summary - Onroad	Diesel	28,490				Yes	Consumption	MMBTU	383,921
Not Reported	Ethanol (E-85)					No	Consumption	MMBTU	
Not Reported	Biodiesel					No	Consumption	MMBTU	
Not Reported	Electricity Consumption					No	Consumption	MMBTU	
	Rail								
MV Emission Summary - Rail	Diesel	-				Yes	Consumption	MMBTU	-
MV Emission Summary - Rail	Coal Consumption		-			Yes	Consumption	MMBTU	-
	Marine								
MV Emission Summary -Com Marine	Gasoline					Yes	Consumption	MMBTU	
MV Emission Summary -Com Marine	Distillate Fuels	-				Yes	Consumption	MMBTU	-
MV Emission Summary -Com Marine	Residual Fuels	-				Yes	Consumption	MMBTU	-
	Air								
MV Emission Summary-Aircraft	All Fuels (Jet and Aviation Gasoline)	168				No	Consumption	MMBTU	2,351
	Off-road Mobile								
MV Emission Summary-Nonroad	All Fuels (Diesel and Gasoline)	33,069				Yes	Consumption	MMBTU	466,767
Waste Management	**Solid Waste Management**								
MV Waste	Landfill (Scope 1), allocated FOD (Scope 3) used in roll up	70,948		6,855	0	Yes - ONLY Scope 3	MSW+CD Generated	Tonnes	21,344
Not Reported	MSW incineration (non grid connected)					Yes	MSW+CD Processed	Tonnes	41,742
	Sewage Treatment						MSW Sent for Incineration	Tonnes	-
MV Waste water	Central WWTPs and Septic Systems	5,551				Yes	MSW incinerated in Boundar	Tonnes	-
Agriculture	**Livestock**								
GHF_MV_Agriculture	Enteric Fermentation	9,601				Yes			
GHF_MV_Agriculture	Manure management	1,756				Yes			
GHF_MV_Agriculture	**Crop Production and Soil Management**								
GHF_MV_Agriculture	Use of Fertilizer	960				Yes			
Not Reported	Crop Residue Incineration					No			
Land Use and Forestry									
GHG_MV_Forest	Urban Forest Annual Reserve	13,062				No			
GHG_MV_Forest	Forest Carbon Reserve (TOTAL)	55,708,984				No			

Grand Totals	Gross Totals	#REF!	77,233	6,855	96,504	#REF!
	Total with Aircraft (as reported in WNY Sustainability Plan)	#REF!	77,233	6,855	96,504	#REF!
	Net Totals					

REDC GHG Emissions Roll Up Report
Year: 2010
(all emissions in Column D, when summed will equal the total County or REDC protocol compliant GHG emissions estimate)

REDC / County Name	Fulton County

Color Code

REQUIRED for the Roll Up Report, though some data may be zero, N/A, or considered to small to count

Report NO Data in cell

DRAFT Roll Up Report CGC. Emissions in MTCDE								
		CO2e	CO2	CH4	N2O	PFC	HFC	SF6
Built Environment	**Residential Energy Consumption**							
	Electricity / Steam	36,889	36,709	25	155			
	Natural Gas	66,441	66,376	26	39			
	Propane / LPG	10,427	10,386	10	31			
	Distillate Fuel Oil (#1, #2, Kerosene)	44,973	44,822	38	113			
	Wood	1,395	-	475	920			
	Commercial Energy Consumption							
	Electricity / Steam	13,864	13,796	9	58			
	Natural Gas	34,816	34,781	14	20			
	Propane / LPG	2,648	2,638	3	8			
	Distillate Fuel Oil (#1, #2, Kerosene)	28,058	27,964	24	70			
	Residual Fuel Oil (#4 and #6)	-						
	Coal	18	18	0	0			
	Wood	308	-	105	203			
	Industrial Energy Consumption							
	Electricity / Steam	22,233	22,125	15	93			
	Natural Gas	854	853	0	0			
	Propane / LPG	-	-	-	-			
	Distillate Fuel Oil (#1, #2, Kerosene)	-	-	-	-			
	Residual Fuel Oil (#4 and #6)	-	-	-	-			
	Coal	-	-	-	-			
	Wood	-		-	-			
	Energy Generation and Supply							
	Electricity T/D Losses	4,248	4,227	3	18			
	Natural Gas T/D Losses	#REF!		#REF!				
	Use of SF6 in the Utility Industry	977						977
	Industrial Processes							
	Cement Production							
	Iron and Steel Production							
	Ferroalloy Production							
	Aluminum Production							
	Paper and Pulp							
	Limestone Use							
	Soda Ash Use							
	Semi-Conductor Manufacturing							
	Chemical Manufacturing							
	Product Use (ODS Substitutes)							
	All Refrigerants- except utility SF6	12,714					12,714	
Transportation Energy	**On-road ALL (Total reflects subtraction of ethanol)**							
	Motor Gasoline (E-10)	151,209	150,675	399	135			
	Diesel	28,490	28,395	71	24			
	Ethanol							
	Biodiesel							
	Rail							
	Diesel	-	-	-	-			
	Coal	-	-	-	-			
	Marine							
	Gasoline							
	Distillate	-	-	-	-			
	Residual Fuel Oil	-	-	-	-			
	Off-road Mobile							
	All Fuels (Diesel and Gasoline)	33,069	32,953	86	29			
Waste Management	**Solid Waste Management**							
	FOD from Waste Generation	6,855	-	6,855	-			
	MSW incineration (non grid connected)							
	Sewage Treatment							
	Central WWTPs and Septic Systems Total reflects roun	5,551		3,330	1,110			
Agriculture	**Livestock**							
	Enteric Fementation	9,601		9,601				
	Manure management	1,756		1,459	296			
	Crop Production and Soil Management							
	Use of Fertilizer	960			960			
	Crop Residue Incineration							
Grand Totals		#REF!	476,720	#REF!	4,284	-	12,714	977

REDC Emissions By Source and Sector
Year: 2010

REDC / County Name	Herkimer County

Color Code

	REQUIRED, though some data may be zero or considered to small to count
	OPTIONAL
	DO NOT Report Data in these cells

DRAFT Reporting Template CGC. Emissions in MTCDE							Related GHG Metrics / Activity Data		
		Scope 1	Scope 2	Scope 3	Biogenic	Rolled Up?	Metric	Unit	Value
Built Environment	**Residential Energy Consumption**								
MV Electricity Consumption	Electricity / Steam		43,131			Yes	Consumption	MMBTU	648,401
MV Direct Residential Fuel Consumption	Natural Gas	87,458				Yes	Consumption	MMBTU	1,647,911
MV Direct Residential Fuel Consumption	Propane / LPG	11,610				Yes	Consumption	MMBTU	183,618
MV Direct Residential Fuel Consumption	Distillate Fuel Oil (#1, #2, Kerosene)	48,784				Yes	Consumption	MMBTU	657,387
MV Direct Residential Fuel Consumption	Wood	1,857			88227.4659	Yes	Consumption	MMBTU	940,591
	Commercial Energy Consumption								
MV Electricity Consumption	Electricity / Steam		17,603			Yes	Consumption	MMBTU	264,641
MV Commercial Direct Fuel Consumption	Natural Gas	38,390				Yes	Consumption	MMBTU	723,354
MV Commercial Direct Fuel Consumption	Propane / LPG	2,470				Yes	Consumption	MMBTU	39,066
MV Commercial Direct Fuel Consumption	Distillate Fuel Oil (#1, #2, Kerosene)	25,495				Yes	Consumption	MMBTU	343,559
MV Commercial Direct Fuel Consumption	Residual Fuel Oil (#4 and #6)	-				Yes	Consumption	MMBTU	-
MV Commercial Direct Fuel Consumption	Coal	55				Yes	Consumption	MMBTU	538
MV Commercial Direct Fuel Consumption	Wood	343			16308.872	Yes	Consumption	MMBTU	173,869
	Industrial Energy Consumption								
MV Electricity Consumption	Electricity / Steam		20,755			Yes	Consumption	MMBTU	312,024
MV Industrial Title V Consumption	Natural Gas	37,080				Yes	Consumption	MMBTU	698,676
MV Industrial Title V Consumption	Propane / LPG	-				Yes	Consumption	MMBTU	-
MV Industrial Title V Consumption	Distillate Fuel Oil (#1, #2, Kerosene)	-				Yes	Consumption	MMBTU	-
MV Industrial Title V Consumption	Residual Fuel Oil (#4 and #6)	-				Yes	Consumption	MMBTU	-
MV Industrial Title V Consumption	Coal	-				Yes	Consumption	MMBTU	-
MV Industrial Title V Consumption	Wood	-			0	Yes	Consumption	MMBTU	-
Energy Generation and Supply	**Energy Generation and Supply**								
MV Elec Generation GHG Analysis	Coal	-				No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	Natural Gas	-				No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	Distillate Fuel Oil (#1, #2 and #4)	-				No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	Residual Fuel Oil (#4 and #6)	-				No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	Wood / Biomass	-			0	No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	MSW	-			0	No	MSW Combusted	MMBTU	-
MV Elec Generation GHG Analysis	Other	-							1,881,994
MV Electricity Consumption	Electricity T/D Losses		4,743			Yes	Losses	MMBTU	37,737
MV Elec Generation GHG Analysis and MV Direct Fuel Consumption	Natural Gas T/D Losses	#REF!				Yes	Losses	MMBTU	
MV Electricity Consumption	Use of SF6 in the Utility Industry	1,091				Yes	Consumption	MMBTU	-
Industrial Processes	**Industrial Processes**								
Not Reported	Cement Production					Yes			
Not Reported	Iron and Steel Production					Yes			
Not Reported	Ferroalloy Production					Yes			
Not Reported	Aluminum Production					Yes			
Not Reported	Paper and Pulp					Yes			
Not Reported	Limestone Use					Yes			
Not Reported	Soda Ash Use					Yes			
Not Reported	Semi-Conductor Manufacturing					Yes			
MV Industrial Sources	Glass Production					Yes			
Not Reported	Chemical Manufacturing					Yes			
Product Use (Ozone Depleting Substances)	**Product Use (Ozone Depleting Substances)**								
MV Industrial Sources	All Refrigerants- except SF6	14,772				Yes			
Transportation Energy	**On-road**								
MV Emission Summary - Onroad	Motor Gasoline (E-10)	264,726			19,213	Yes	Consumption	MMBTU	4,037,129
MV Emission Summary - Onroad	Diesel	55,898				Yes	Consumption	MMBTU	753,247
Not Reported	Ethanol (E-85)					No	Consumption	MMBTU	
Not Reported	Biodiesel					No	Consumption	MMBTU	
Not Reported	Electricity Consumption					No	Consumption	MMBTU	
	Rail								
MV Emission Summary - Rail	Diesel	19,118				Yes	Consumption	MMBTU	257,624
MV Emission Summary - Rail	Coal Consumption		-			Yes	Consumption	MMBTU	-
	Marine								
MV Emission Summary -Com Marine	Gasoline					Yes	Consumption	MMBTU	
MV Emission Summary -Com Marine	Distillate Fuels	1				Yes	Consumption	MMBTU	5
MV Emission Summary -Com Marine	Residual Fuels	-				Yes	Consumption	MMBTU	-
	Air								
MV Emission Summary-Aircraft	All Fuels (Jet and Aviation Gasoline)	189				No	Consumption	MMBTU	2,662
	Off-road Mobile								
MV Emission Summary-Nonroad	All Fuels (Diesel and Gasoline)	55,517				Yes	Consumption	MMBTU	776,114
Waste Management	**Solid Waste Management**								
MV Waste	Landfill (Scope 1), allocated FOD (Scope 3) used in roll up	-		11,892	0	Yes - ONLY Scope 3	MSW+CD Generated	Tonnes	37,029
Not Reported	MSW incineration (non grid connected)					Yes	MSW+CD Processed	Tonnes	-
	Sewage Treatment						MSW Sent for Incineration	Tonnes	-
MV Waste water	Central WWTPs and Septic Systems	6,706				Yes	MSW incinerated in Boundar	Tonnes	-
Agriculture	**Livestock**								
GHF_MV_Agriculture	Enteric Fermentation	60,782				Yes			
GHF_MV_Agriculture	Manure management	12,219				Yes			
GHF_MV_Agriculture	**Crop Production and Soil Management**								
GHF_MV_Agriculture	Use of Fertilizer	3,919				Yes			
Not Reported	Crop Residue Incineration					No			
Land Use and Forestry									
GHG_MV_Forest	Urban Forest Annual Reserve	11,283				No			
GHG_MV_Forest	Forest Carbon Reserve (TOTAL)	142,558,823				No			

Grand Totals	Gross Totals	#REF!	86,232	11,892	123,749
	Total with Aircraft (as reported in WNY Sustainability Plan)	#REF!	86,232	11,892	123,749
	Net Totals				

#REF!
#REF!

REDC GHG Emissions Roll Up Report
Year: 2010
(all emissions in Column D, when summed will equal the total County or REDC protocol compliant GHG emissions estimate)

REDC / County Name	Herkimer County

Color Code

REQUIRED for the Roll Up Report, though some data may be zero, N/A, or considered to small to count

Report NO Data in cell

DRAFT Roll Up Report CGC. Emissions in MTCDE								
		CO2e	CO2	CH4	N2O	PFC	HFC	SF6
Built Environment	**Residential Energy Consumption**							
	Electricity / Steam	43,131	42,921	29	181			
	Natural Gas	87,458	87,372	35	51			
	Propane / LPG	11,610	11,564	12	34			
	Distillate Fuel Oil (#1, #2, Kerosene)	48,784	48,620	41	122			
	Wood	1,857	-	632	1,225			
	Commercial Energy Consumption							
	Electricity / Steam	17,603	17,518	12	74			
	Natural Gas	38,390	38,352	15	22			
	Propane / LPG	2,470	2,460	2	7			
	Distillate Fuel Oil (#1, #2, Kerosene)	25,495	25,410	22	64			
	Residual Fuel Oil (#4 and #6)	-						
	Coal	55	55	0	0			
	Wood	343	-	117	226			
	Industrial Energy Consumption							
	Electricity / Steam	20,755	20,654	14	87			
	Natural Gas	37,080	37,044	15	22			
	Propane / LPG	-	-	-	-			
	Distillate Fuel Oil (#1, #2, Kerosene)	-	-	-	-			
	Residual Fuel Oil (#4 and #6)	-	-	-	-			
	Coal	-	-	-	-			
	Wood	-		-	-			
	Energy Generation and Supply							
	Electricity T/D Losses	4,743	4,720	3	20			
	Natural Gas T/D Losses	#REF!		#REF!				
	Use of SF6 in the Utility Industry	1,091						1,091
	Industrial Processes							
	Cement Production							
	Iron and Steel Production							
	Ferroalloy Production							
	Aluminum Production							
	Paper and Pulp							
	Limestone Use							
	Soda Ash Use							
	Semi-Conductor Manufacturing							
	Chemical Manufacturing							
	Product Use (ODS Substitutes)							
	All Refrigerants- except utility SF6	14,772					14,772	
Transportation Energy	**On-road ALL (Total reflects subtraction of ethanol)**							
	Motor Gasoline (E-10)	264,726	263,791	699	237			
	Diesel	55,898	55,710	140	47			
	Ethanol							
	Biodiesel							
	Rail							
	Diesel	19,118	19,054	48	16			
	Coal	-	-	-	-			
	Marine							
	Gasoline							
	Distillate	1	1	0	0			
	Residual Fuel Oil	-	-	-	-			
	Off-road Mobile							
	All Fuels (Diesel and Gasoline)	55,517	55,325	144	49			
Waste Management	**Solid Waste Management**							
	FOD from Waste Generation	11,892	-	11,892	-			
	MSW incineration (non grid connected)							
	Sewage Treatment							
	Central WWTPs and Septic Systems Total reflects roun	6,706		4,024	1,341			
Agriculture	**Livestock**							
	Enteric Fementation	60,782		60,782				
	Manure management	12,219		10,112	2,108			
	Crop Production and Soil Management							
	Use of Fertilizer	3,919			3,919			
	Crop Residue Incineration							
Grand Totals		#REF!	730,571	#REF!	9,853	-	14,772	1,091

REDC Emissions By Source and Sector
Year: 2010

REDC / County Name	Montgomery County

Color Code

	REQUIRED, though some data may be zero or considered to small to count
	OPTIONAL
	DO NOT Report Data in these cells

DRAFT Reporting Template CGC. Emissions in MTCDE							Related GHG Metrics / Activity Data		
		Scope 1	Scope 2	Scope 3	Biogenic	Rolled Up?	Metric	Unit	Value
Built Environment	**Residential Energy Consumption**								
MV Electricity Consumption	Electricity / Steam		31,017			Yes	Consumption	MMBTU	466,296
MV Direct Residential Fuel Consumption	Natural Gas	62,404				Yes	Consumption	MMBTU	1,175,829
MV Direct Residential Fuel Consumption	Propane / LPG	5,944				Yes	Consumption	MMBTU	94,000
MV Direct Residential Fuel Consumption	Distillate Fuel Oil (#1, #2, Kerosene)	35,228				Yes	Consumption	MMBTU	474,709
MV Direct Residential Fuel Consumption	Wood	879			41778.0253	Yes	Consumption	MMBTU	445,395
	Commercial Energy Consumption								
MV Electricity Consumption	Electricity / Steam		14,002			Yes	Consumption	MMBTU	210,496
MV Commercial Direct Fuel Consumption	Natural Gas	38,499				Yes	Consumption	MMBTU	725,404
MV Commercial Direct Fuel Consumption	Propane / LPG	1,777				Yes	Consumption	MMBTU	28,108
MV Commercial Direct Fuel Consumption	Distillate Fuel Oil (#1, #2, Kerosene)	25,875				Yes	Consumption	MMBTU	348,680
MV Commercial Direct Fuel Consumption	Residual Fuel Oil (#4 and #6)	-				Yes	Consumption	MMBTU	-
MV Commercial Direct Fuel Consumption	Coal	67				Yes	Consumption	MMBTU	652
MV Commercial Direct Fuel Consumption	Wood	228			10853.9373	Yes	Consumption	MMBTU	115,714
	Industrial Energy Consumption								
MV Electricity Consumption	Electricity / Steam		35,822			Yes	Consumption	MMBTU	538,530
MV Industrial Title V Consumption	Natural Gas	28,042				Yes	Consumption	MMBTU	528,384
MV Industrial Title V Consumption	Propane / LPG	-				Yes	Consumption	MMBTU	-
MV Industrial Title V Consumption	Distillate Fuel Oil (#1, #2, Kerosene)	-				Yes	Consumption	MMBTU	-
MV Industrial Title V Consumption	Residual Fuel Oil (#4 and #6)	-				Yes	Consumption	MMBTU	-
MV Industrial Title V Consumption	Coal	-				Yes	Consumption	MMBTU	-
MV Industrial Title V Consumption	Wood	-			0	Yes	Consumption	MMBTU	-
Energy Generation and Supply	**Energy Generation and Supply**								
MV Elec Generation GHG Analysis	Coal	-				No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	Natural Gas	-				No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	Distillate Fuel Oil (#1, #2 and #4)	-				No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	Residual Fuel Oil (#4 and #6)	-				No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	Wood / Biomass	-			0	No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	MSW	-			0	No	MSW Combusted	MMBTU	-
MV Elec Generation GHG Analysis	Other	-							-
MV Electricity Consumption	Electricity T/D Losses		4,705			Yes	Losses	MMBTU	27,138
MV Elec Generation GHG Analysis and MV Direct Fuel Consumption	Natural Gas T/D Losses	#REF!				Yes	Losses	MMBTU	
MV Electricity Consumption	Use of SF6 in the Utility Industry	1,082				Yes	Consumption	MMBTU	-
Industrial Processes	**Industrial Processes**								
Not Reported	Cement Production					Yes			
Not Reported	Iron and Steel Production					Yes			
Not Reported	Ferroalloy Production					Yes			
Not Reported	Aluminum Production					Yes			
Not Reported	Paper and Pulp					Yes			
Not Reported	Limestone Use					Yes			
Not Reported	Soda Ash Use					Yes			
Not Reported	Semi-Conductor Manufacturing					Yes			
MV Industrial Sources	Glass Production					Yes			
Not Reported	Chemical Manufacturing					Yes			
Product Use (Ozone Depleting Substances)	**Product Use (Ozone Depleting Substances)**								
MV Industrial Sources	All Refrigerants- except SF6	11,498				Yes			
Transportation Energy	**On-road**								
MV Emission Summary - Onroad	Motor Gasoline (E-10)	278,203			20,191	Yes	Consumption	MMBTU	4,242,655
MV Emission Summary - Onroad	Diesel	69,804				Yes	Consumption	MMBTU	940,638
Not Reported	Ethanol (E-85)					No	Consumption	MMBTU	
Not Reported	Biodiesel					No	Consumption	MMBTU	
Not Reported	Electricity Consumption					No	Consumption	MMBTU	
	Rail								
MV Emission Summary - Rail	Diesel	32,190				Yes	Consumption	MMBTU	433,773
MV Emission Summary - Rail	Coal Consumption		-			Yes	Consumption	MMBTU	-
	Marine								
MV Emission Summary -Com Marine	Gasoline					Yes	Consumption	MMBTU	
MV Emission Summary -Com Marine	Distillate Fuels	1				Yes	Consumption	MMBTU	9
MV Emission Summary -Com Marine	Residual Fuels	-				Yes	Consumption	MMBTU	-
	Air								
MV Emission Summary-Aircraft	All Fuels (Jet and Aviation Gasoline)	67				No	Consumption	MMBTU	932
	Off-road Mobile								
MV Emission Summary-Nonroad	All Fuels (Diesel and Gasoline)	51,249				Yes	Consumption	MMBTU	710,639
Waste Management	**Solid Waste Management**								
MV Waste	Landfill (Scope 1), allocated FOD (Scope 3) used in roll up	-		10,278	0	Yes - ONLY Scope 3	MSW+CD Generated	Tonnes	32,004
Not Reported	MSW incineration (non grid connected)					Yes	MSW+CD Processed	Tonnes	-
	Sewage Treatment						MSW Sent for Incineration	Tonnes	-
MV Waste water	Central WWTPs and Septic Systems	6,772				Yes	MSW incinerated in Bounda	Tonnes	-
Agriculture	**Livestock**								
GHF_MV_Agriculture	Enteric Fermentation	62,857				Yes			
GHF_MV_Agriculture	Manure management	11,904				Yes			
GHF_MV_Agriculture	**Crop Production and Soil Management**								
GHF_MV_Agriculture	Use of Fertilizer	4,335				Yes			
Not Reported	Crop Residue Incineration					No			
Land Use and Forestry									
GHG_MV_Forest	Urban Forest Annual Reserve	10,856				No			
GHG_MV_Forest	Forest Carbon Reserve (TOTAL)	12,382,900				No			

Grand Totals	Gross Totals	#REF!	85,546	10,278	72,823
	Total with Aircraft (as reported in WNY Sustainability Plan)	#REF!	85,546	10,278	72,823
	Net Totals				

#REF!
#REF!

REDC GHG Emissions Roll Up Report
Year: 2010
(all emissions in Column D, when summed will equal the total County or REDC protocol compliant GHG emissions estimate)

REDC / County Name	Montgomery County

Color Code

REQUIRED for the Roll Up Report, though some data may be zero, N/A, or considered to small to count

Report NO Data in cell

DRAFT Roll Up Report CGC. Emissions in MTCDE								
		CO2e	CO2	CH4	N2O	PFC	HFC	SF6
Built Environment	**Residential Energy Consumption**							
	Electricity / Steam	31,017	30,866	21	130			
	Natural Gas	62,404	62,342	25	36			
	Propane / LPG	5,944	5,920	6	17			
	Distillate Fuel Oil (#1, #2, Kerosene)	35,228	35,110	30	88			
	Wood	879	-	299	580			
	Commercial Energy Consumption							
	Electricity / Steam	14,002	13,934	9	59			
	Natural Gas	38,499	38,461	15	22			
	Propane / LPG	1,777	1,770	2	5			
	Distillate Fuel Oil (#1, #2, Kerosene)	25,875	25,788	22	65			
	Residual Fuel Oil (#4 and #6)	-						
	Coal	67	66	0	0			
	Wood	228	-	78	151			
	Industrial Energy Consumption							
	Electricity / Steam	35,822	35,648	24	150			
	Natural Gas	28,042	28,015	11	16			
	Propane / LPG	-	-	-	-			
	Distillate Fuel Oil (#1, #2, Kerosene)	-	-	-	-			
	Residual Fuel Oil (#4 and #6)	-	-	-	-			
	Coal	-	-	-	-			
	Wood	-		-	-			
	Energy Generation and Supply							
	Electricity T/D Losses	4,705	4,682	3	20			
	Natural Gas T/D Losses	#REF!		#REF!				
	Use of SF6 in the Utility Industry	1,082						1,082
	Industrial Processes							
	Cement Production							
	Iron and Steel Production							
	Ferroalloy Production							
	Aluminum Production							
	Paper and Pulp							
	Limestone Use							
	Soda Ash Use							
	Semi-Conductor Manufacturing							
	Chemical Manufacturing							
	Product Use (ODS Substitutes)							
	All Refrigerants- except utility SF6	11,498					11,498	
Transportation Energy	**On-road ALL (Total reflects subtraction of ethanol)**							
	Motor Gasoline (E-10)	278,203	277,220	734	249			
	Diesel	69,804	69,570	175	59			
	Ethanol							
	Biodiesel							
	Rail							
	Diesel	32,190	32,082	81	27			
	Coal	-	-	-	-			
	Marine							
	Gasoline							
	Distillate	1	1	0	0			
	Residual Fuel Oil	-	-	-	-			
	Off-road Mobile							
	All Fuels (Diesel and Gasoline)	51,249	51,072	132	45			
Waste Management	**Solid Waste Management**							
	FOD from Waste Generation	10,278	-	10,278	-			
	MSW incineration (non grid connected)							
	Sewage Treatment							
	Central WWTPs and Septic Systems Total reflects roun	6,772		4,063	1,354			
Agriculture	**Livestock**							
	Enteric Fementation	62,857		62,857				
	Manure management	11,904		9,869	2,035			
	Crop Production and Soil Management							
	Use of Fertilizer	4,335			4,335			
	Crop Residue Incineration							
Grand Totals		#REF!	712,548	#REF!	9,446	-	11,498	1,082

REDC Emissions By Source and Sector
Year: 2010

REDC / County Name	Oneida County

Color Code

	REQUIRED, though some data may be zero or considered to small to count
	OPTIONAL
	DO NOT Report Data in these cells

DRAFT Reporting Template CGC. Emissions in MTCDE							Related GHG Metrics / Activity Data		
		Scope 1	Scope 2	Scope 3	Biogenic	Rolled Up?	Metric	Unit	Value
Built Environment	**Residential Energy Consumption**								
MV Electricity Consumption	Electricity / Steam		48,760			Yes	Consumption	MMBTU	733,033
MV Direct Residential Fuel Consumption	Natural Gas	391,795				Yes	Consumption	MMBTU	7,382,321
MV Direct Residential Fuel Consumption	Propane / LPG	27,409				Yes	Consumption	MMBTU	433,485
MV Direct Residential Fuel Consumption	Distillate Fuel Oil (#1, #2, Kerosene)	111,432				Yes	Consumption	MMBTU	1,501,602
MV Direct Residential Fuel Consumption	Wood	2,086			99135.3344	Yes	Consumption	MMBTU	1,056,880
	Commercial Energy Consumption								
MV Electricity Consumption	Electricity / Steam		55,220			Yes	Consumption	MMBTU	830,142
MV Commercial Direct Fuel Consumption	Natural Gas	295,260				Yes	Consumption	MMBTU	5,563,382
MV Commercial Direct Fuel Consumption	Propane / LPG	10,012				Yes	Consumption	MMBTU	158,338
MV Commercial Direct Fuel Consumption	Distillate Fuel Oil (#1, #2, Kerosene)	99,982				Yes	Consumption	MMBTU	1,347,297
MV Commercial Direct Fuel Consumption	Residual Fuel Oil (#4 and #6)	-				Yes	Consumption	MMBTU	-
MV Commercial Direct Fuel Consumption	Coal	103				Yes	Consumption	MMBTU	1,002
MV Commercial Direct Fuel Consumption	Wood	662			31461.369	Yes	Consumption	MMBTU	335,409
	Industrial Energy Consumption								
MV Electricity Consumption	Electricity / Steam		5,037			Yes	Consumption	MMBTU	75,718
MV Industrial Title V Consumption	Natural Gas	345				Yes	Consumption	MMBTU	6,508
MV Industrial Title V Consumption	Propane / LPG	77				Yes	Consumption	MMBTU	1,221
MV Industrial Title V Consumption	Distillate Fuel Oil (#1, #2, Kerosene)	882				Yes	Consumption	MMBTU	11,889
MV Industrial Title V Consumption	Residual Fuel Oil (#4 and #6)	1,465				Yes	Consumption	MMBTU	19,448
MV Industrial Title V Consumption	Coal	-				Yes	Consumption	MMBTU	-
MV Industrial Title V Consumption	Wood	262			0	Yes	Consumption	MMBTU	132,859
Energy Generation and Supply	**Energy Generation and Supply**								
MV Elec Generation GHG Analysis	Coal	-				No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	Natural Gas	5,741				No	Consumption	MMBTU	108,173
MV Elec Generation GHG Analysis	Distillate Fuel Oil (#1, #2 and #4)	-				No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	Residual Fuel Oil (#4 and #6)	-				No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	Wood / Biomass	-			0	No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	MSW	-			0	No	MSW Combusted	MMBTU	-
MV Elec Generation GHG Analysis	Other	-							2,454,648
MV Electricity Consumption	Electricity T/D Losses		6,345			Yes	Losses	MMBTU	42,663
MV Elec Generation GHG Analysis and MV Direct Fuel Consumption	Natural Gas T/D Losses	#REF!				Yes	Losses	MMBTU	
MV Electricity Consumption	Use of SF6 in the Utility Industry	1,459				Yes	Consumption	MMBTU	-
Industrial Processes	**Industrial Processes**								
Not Reported	Cement Production					Yes			
Not Reported	Iron and Steel Production					Yes			
Not Reported	Ferroalloy Production					Yes			
Not Reported	Aluminum Production					Yes			
Not Reported	Paper and Pulp					Yes			
Not Reported	Limestone Use					Yes			
Not Reported	Soda Ash Use					Yes			
Not Reported	Semi-Conductor Manufacturing					Yes			
MV Industrial Sources	Glass Production					Yes			
Not Reported	Chemical Manufacturing					Yes			
Product Use (Ozone Depleting Substances)	**Product Use (Ozone Depleting Substances)**								
MV Industrial Sources	All Refrigerants- except SF6	53,776				Yes			
Transportation Energy	**On-road**								
MV Emission Summary - Onroad	Motor Gasoline (E-10)	766,133			55,604	Yes	Consumption	MMBTU	11,683,691
MV Emission Summary - Onroad	Diesel	148,454				Yes	Consumption	MMBTU	2,001,279
Not Reported	Ethanol (E-85)					No	Consumption	MMBTU	
Not Reported	Biodiesel					No	Consumption	MMBTU	
Not Reported	Electricity Consumption					No	Consumption	MMBTU	
	Rail								
MV Emission Summary - Rail	Diesel	23,241				Yes	Consumption	MMBTU	313,181
MV Emission Summary - Rail	Coal Consumption		-			Yes	Consumption	MMBTU	-
	Marine								
MV Emission Summary -Com Marine	Gasoline					Yes	Consumption	MMBTU	
MV Emission Summary -Com Marine	Distillate Fuels	1				Yes	Consumption	MMBTU	7
MV Emission Summary -Com Marine	Residual Fuels	-				Yes	Consumption	MMBTU	-
	Air								
MV Emission Summary-Aircraft	All Fuels (Jet and Aviation Gasoline)	1,950				No	Consumption	MMBTU	27,327
	Off-road Mobile								
MV Emission Summary-Nonroad	All Fuels (Diesel and Gasoline)	115,635				Yes	Consumption	MMBTU	1,616,964
Waste Management	**Solid Waste Management**								
MV Waste	Landfill (Scope 1), allocated FOD (Scope 3) used in roll up	52,153		43,293	0	Yes - ONLY Scope 3	MSW+CD Generated	Tonnes	134,802
Not Reported	MSW incineration (non grid connected)					Yes	MSW+CD Processed	Tonnes	171,831
	Sewage Treatment						MSW Sent for Incineration	Tonnes	-
MV Waste water	Central WWTPs and Septic Systems	27,737				Yes	MSW incinerated in Bounda	Tonnes	-
Agriculture	**Livestock**								
GHF_MV_Agriculture	Enteric Fermentation	531				Yes			
GHF_MV_Agriculture	Manure management	14,852				Yes			
GHF_MV_Agriculture	**Crop Production and Soil Management**								
GHF_MV_Agriculture	Use of Fertilizer	5,324				Yes			
Not Reported	Crop Residue Incineration					No			
Land Use and Forestry									
GHG_MV_Forest	Urban Forest Annual Reserve	45,676				No			
GHG_MV_Forest	Forest Carbon Reserve (TOTAL)	81,365,961				No			

Grand Totals	Gross Totals	#REF!	115,361	43,293	186,201	#REF!
	Total with Aircraft (as reported in WNY Sustainability Plan)	#REF!	115,361	43,293	186,201	#REF!
	Net Totals					

REDC GHG Emissions Roll Up Report
Year: 2010
(all emissions in Column D, when summed will equal the total County or REDC protocol compliant GHG emissions estimate)

REDC / County Name	Oneida County

Color Code

REQUIRED for the Roll Up Report, though some data may be zero, N/A, or considered to small to count

Report NO Data in cell

DRAFT Roll Up Report CGC. Emissions in MTCDE								
		CO2e	CO2	CH4	N2O	PFC	HFC	SF6
Built Environment	**Residential Energy Consumption**							
	Electricity / Steam	48,760	48,523	33	205			
	Natural Gas	391,795	391,411	155	229			
	Propane / LPG	27,409	27,301	27	81			
	Distillate Fuel Oil (#1, #2, Kerosene)	111,432	111,058	95	279			
	Wood	2,086	-	710	1,376			
	Commercial Energy Consumption							
	Electricity / Steam	55,220	54,951	37	232			
	Natural Gas	295,260	294,971	117	172			
	Propane / LPG	10,012	9,972	10	29			
	Distillate Fuel Oil (#1, #2, Kerosene)	99,982	99,646	85	251			
	Residual Fuel Oil (#4 and #6)	-						
	Coal	103	102	0	0			
	Wood	662	-	225	437			
	Industrial Energy Consumption							
	Electricity / Steam	5,037	5,012	3	21			
	Natural Gas	345	345	0	0			
	Propane / LPG	77	77	0	0			
	Distillate Fuel Oil (#1, #2, Kerosene)	882	879	1	2			
	Residual Fuel Oil (#4 and #6)	1,465	1,461	1	4			
	Coal	-	-	-	-			
	Wood	262		89	173			
	Energy Generation and Supply							
	Electricity T/D Losses	6,345	6,314	4	27			
	Natural Gas T/D Losses	#REF!		#REF!				
	Use of SF6 in the Utility Industry	1,459						1,459
	Industrial Processes							
	Cement Production							
	Iron and Steel Production							
	Ferroalloy Production							
	Aluminum Production							
	Paper and Pulp							
	Limestone Use							
	Soda Ash Use							
	Semi-Conductor Manufacturing							
	Chemical Manufacturing							
	Product Use (ODS Substitutes)							
	All Refrigerants- except utility SF6	53,776					53,776	
Transportation Energy	**On-road ALL (Total reflects subtraction of ethanol)**							
	Motor Gasoline (E-10)	766,133	763,426	2,022	685			
	Diesel	148,454	148,015	314	126			
	Ethanol							
	Biodiesel							
	Rail							
	Diesel	23,241	23,163	58	20			
	Coal	-	-	-	-			
	Marine							
	Gasoline							
	Distillate	1	1	0	0			
	Residual Fuel Oil	-	-	-	-			
	Off-road Mobile							
	All Fuels (Diesel and Gasoline)	115,635	115,235	298	101			
Waste Management	**Solid Waste Management**							
	FOD from Waste Generation	43,293	-	43,293	-			
	MSW incineration (non grid connected)							
	Sewage Treatment							
	Central WWTPs and Septic Systems Total reflects roun	27,737		16,642	5,547			
Agriculture	**Livestock**							
	Enteric Fementation	531		531				
	Manure management	14,852		12,272	2,579			
	Crop Production and Soil Management							
	Use of Fertilizer	5,324			5,324			
	Crop Residue Incineration							
Grand Totals		#REF!	2,101,863	#REF!	17,900	-	53,776	1,459

REDC Emissions By Source and Sector
Year: 2010

REDC / County Name	Otsego County

Color Code

	REQUIRED, though some data may be zero or considered to small to count
	OPTIONAL
	DO NOT Report Data in these cells

DRAFT Reporting Template CGC. Emissions in MTCDE							Related GHG Metrics / Activity Data		
		Scope 1	Scope 2	Scope 3	Biogenic	Rolled Up?	Metric	Unit	Value
Built Environment	**Residential Energy Consumption**								
MV Electricity Consumption	Electricity / Steam		146,168			Yes	Consumption	MMBTU	2,197,404
MV Direct Residential Fuel Consumption	Natural Gas	35,054				Yes	Consumption	MMBTU	660,505
MV Direct Residential Fuel Consumption	Propane / LPG	28,903				Yes	Consumption	MMBTU	457,122
MV Direct Residential Fuel Consumption	Distillate Fuel Oil (#1, #2, Kerosene)	82,461				Yes	Consumption	MMBTU	1,111,199
MV Direct Residential Fuel Consumption	Wood	2,911			138325.689	Yes	Consumption	MMBTU	1,474,688
	Commercial Energy Consumption								
MV Electricity Consumption	Electricity / Steam		69,020			Yes	Consumption	MMBTU	1,037,605
MV Commercial Direct Fuel Consumption	Natural Gas	18,384				Yes	Consumption	MMBTU	346,391
MV Commercial Direct Fuel Consumption	Propane / LPG	7,347				Yes	Consumption	MMBTU	116,195
MV Commercial Direct Fuel Consumption	Distillate Fuel Oil (#1, #2, Kerosene)	51,487				Yes	Consumption	MMBTU	693,817
MV Commercial Direct Fuel Consumption	Residual Fuel Oil (#4 and #6)	-				Yes	Consumption	MMBTU	-
MV Commercial Direct Fuel Consumption	Coal	65				Yes	Consumption	MMBTU	631
MV Commercial Direct Fuel Consumption	Wood	643			30548.9356	Yes	Consumption	MMBTU	325,682
	Industrial Energy Consumption								
MV Electricity Consumption	Electricity / Steam		138,909			Yes	Consumption	MMBTU	2,088,290
MV Industrial Title V Consumption	Natural Gas	-				Yes	Consumption	MMBTU	-
MV Industrial Title V Consumption	Propane / LPG	-				Yes	Consumption	MMBTU	-
MV Industrial Title V Consumption	Distillate Fuel Oil (#1, #2, Kerosene)	-				Yes	Consumption	MMBTU	-
MV Industrial Title V Consumption	Residual Fuel Oil (#4 and #6)	-				Yes	Consumption	MMBTU	-
MV Industrial Title V Consumption	Coal	-				Yes	Consumption	MMBTU	-
MV Industrial Title V Consumption	Wood	-			12462.1761	Yes	Consumption	MMBTU	-
Energy Generation and Supply	**Energy Generation and Supply**								
MV Elec Generation GHG Analysis	Coal	-				No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	Natural Gas	-				No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	Distillate Fuel Oil (#1, #2 and #4)	15				No	Consumption	MMBTU	204
MV Elec Generation GHG Analysis	Residual Fuel Oil (#4 and #6)	-				No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	Wood / Biomass	-			0	No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	MSW	-			0	No	MSW Combusted	MMBTU	-
MV Elec Generation GHG Analysis	Other	-							55,183
MV Electricity Consumption	Electricity T/D Losses		20,608			Yes	Losses	MMBTU	127,889
MV Elec Generation GHG Analysis and MV Direct Fuel Consumption	Natural Gas T/D Losses	#REF!				Yes	Losses	MMBTU	
MV Electricity Consumption	Use of SF6 in the Utility Industry	4,740				Yes	Consumption	MMBTU	-
Industrial Processes	**Industrial Processes**								
Not Reported	Cement Production					Yes			
Not Reported	Iron and Steel Production					Yes			
Not Reported	Ferroalloy Production					Yes			
Not Reported	Aluminum Production					Yes			
Not Reported	Paper and Pulp					Yes			
Not Reported	Limestone Use					Yes			
Not Reported	Soda Ash Use					Yes			
Not Reported	Semi-Conductor Manufacturing					Yes			
MV Industrial Sources	Glass Production					Yes			
Not Reported	Chemical Manufacturing					Yes			
Product Use (Ozone Depleting Substances)	**Product Use (Ozone Depleting Substances)**								
MV Industrial Sources	All Refrigerants- except SF6	14,254				Yes			
Transportation Energy	**On-road**								
MV Emission Summary - Onroad	Motor Gasoline (E-10)	248,427			18,030	Yes	Consumption	MMBTU	3,788,559
MV Emission Summary - Onroad	Diesel	49,513				Yes	Consumption	MMBTU	803,565
Not Reported	Ethanol (E-85)					No	Consumption	MMBTU	
Not Reported	Biodiesel					No	Consumption	MMBTU	
Not Reported	Electricity Consumption					No	Consumption	MMBTU	
	Rail								
MV Emission Summary - Rail	Diesel	8,865				Yes	Consumption	MMBTU	119,466
MV Emission Summary - Rail	Coal Consumption		-			Yes	Consumption	MMBTU	-
	Marine								
MV Emission Summary -Com Marine	Gasoline					Yes	Consumption	MMBTU	
MV Emission Summary -Com Marine	Distillate Fuels	-				Yes	Consumption	MMBTU	-
MV Emission Summary -Com Marine	Residual Fuels	-				Yes	Consumption	MMBTU	-
	Air								
MV Emission Summary-Aircraft	All Fuels (Jet and Aviation Gasoline)	707				No	Consumption	MMBTU	9,893
	Off-road Mobile								
MV Emission Summary-Nonroad	All Fuels (Diesel and Gasoline)	36,330				Yes	Consumption	MMBTU	503,854
Waste Management	**Solid Waste Management**								
MV Waste	Landfill (Scope 1), allocated FOD (Scope 3) used in roll up	28,905		9,635	0	Yes - ONLY Scope 3	MSW+CD Generated	Tonnes	30,000
Not Reported	MSW incineration (non grid connected)					Yes	MSW+CD Processed	Tonnes	-
	Sewage Treatment						MSW Sent for Incineration	Tonnes	-
MV Waste water	Central WWTPs and Septic Systems	2,113				Yes	MSW incinerated in Bounda	Tonnes	-
Agriculture	**Livestock**								
GHF_MV_Agriculture	Enteric Fermentation	52,359				Yes			
GHF_MV_Agriculture	Manure management	10,090				Yes			
GHF_MV_Agriculture	**Crop Production and Soil Management**								
GHF_MV_Agriculture	Use of Fertilizer	4,315				Yes			
Not Reported	Crop Residue Incineration					No			
Land Use and Forestry									
GHG_MV_Forest	Urban Forest Annual Reserve	5,959				No			
GHG_MV_Forest	Forest Carbon Reserve (TOTAL)	73,300,164				No			

Grand Totals	Gross Totals	#REF!	374,705	9,635	199,367	#REF!
	Total with Aircraft (as reported in WNY Sustainability Plan)	#REF!	374,705	9,635	199,367	#REF!
	Net Totals					

REDC GHG Emissions Roll Up Report
Year: 2010
(all emissions in Column D, when summed will equal the total County or REDC protocol compliant GHG emissions estimate)

REDC / County Name	Otsego County

Color Code

REQUIRED for the Roll Up Report, though some data may be zero, N/A, or considered to small to count

Report NO Data in cell

DRAFT Roll Up Report CGC. Emissions in MTCDE								
		CO2e	CO2	CH4	N2O	PFC	HFC	SF6
Built Environment	**Residential Energy Consumption**							
	Electricity / Steam	146,168	145,457	98	613			
	Natural Gas	35,054	35,020	14	20			
	Propane / LPG	28,903	28,790	29	85			
	Distillate Fuel Oil (#1, #2, Kerosene)	82,461	82,184	70	207			
	Wood	2,911	-	991	1,920			
	Commercial Energy Consumption							
	Electricity / Steam	69,020	68,684	46	289			
	Natural Gas	18,384	18,366	7	11			
	Propane / LPG	7,347	7,318	7	22			
	Distillate Fuel Oil (#1, #2, Kerosene)	51,487	51,315	44	129			
	Residual Fuel Oil (#4 and #6)	-						
	Coal	65	64	0	0			
	Wood	643	-	219	424			
	Industrial Energy Consumption							
	Electricity / Steam	138,909	138,234	93	583			
	Natural Gas	-	-	-	-			
	Propane / LPG	-	-	-	-			
	Distillate Fuel Oil (#1, #2, Kerosene)	-	-	-	-			
	Residual Fuel Oil (#4 and #6)	-	-	-	-			
	Coal	-	-	-	-			
	Wood	-		-	-			
	Energy Generation and Supply							
	Electricity T/D Losses	20,608	20,508	14	86			
	Natural Gas T/D Losses	#REF!		#REF!				
	Use of SF6 in the Utility Industry	4,740						4,740
	Industrial Processes							
	Cement Production							
	Iron and Steel Production							
	Ferroalloy Production							
	Aluminum Production							
	Paper and Pulp							
	Limestone Use							
	Soda Ash Use							
	Semi-Conductor Manufacturing							
	Chemical Manufacturing							
	Product Use (ODS Substitutes)							
	All Refrigerants- except utility SF6	14,254					14,254	
Transportation Energy	**On-road ALL (Total reflects subtraction of ethanol)**							
	Motor Gasoline (E-10)	248,427	247,549	656	222			
	Diesel	49,513	49,347	124	42			
	Ethanol							
	Biodiesel							
	Rail							
	Diesel	8,865	8,836	22	8			
	Coal	-	-	-	-			
	Marine							
	Gasoline							
	Distillate	-	-	-	-			
	Residual Fuel Oil	-	-	-	-			
	Off-road Mobile							
	All Fuels (Diesel and Gasoline)	36,330	36,205	93	32			
Waste Management	**Solid Waste Management**							
	FOD from Waste Generation	9,635	-	9,635	-			
	MSW incineration (non grid connected)							
	Sewage Treatment							
	Central WWTPs and Septic Systems Total reflects roun	2,113		1,268	423			
Agriculture	**Livestock**							
	Enteric Fementation	52,359		52,359				
	Manure management	10,090		8,367	1,724			
	Crop Production and Soil Management							
	Use of Fertilizer	4,315			4,315			
	Crop Residue Incineration							
Grand Totals		#REF!	937,876	#REF!	11,154	-	14,254	4,740

REDC Emissions By Source and Sector
Year: 2010

REDC / County Name	Schoharie County

Color Code

	REQUIRED, though some data may be zero or considered to small to count
	OPTIONAL
	DO NOT Report Data in these cells

DRAFT Reporting Template CGC. Emissions in MTCDE							Related GHG Metrics / Activity Data		
		Scope 1	Scope 2	Scope 3	Biogenic	Rolled Up?	Metric	Unit	Value
Built Environment	**Residential Energy Consumption**								
MV Electricity Consumption	Electricity / Steam		24,921			Yes	Consumption	MMBTU	374,648
MV Direct Residential Fuel Consumption	Natural Gas	3,153				Yes	Consumption	MMBTU	59,409
MV Direct Residential Fuel Consumption	Propane / LPG	9,721				Yes	Consumption	MMBTU	153,744
MV Direct Residential Fuel Consumption	Distillate Fuel Oil (#1, #2, Kerosene)	45,389				Yes	Consumption	MMBTU	611,642
MV Direct Residential Fuel Consumption	Wood	1,461			69419.5541	Yes	Consumption	MMBTU	740,081
	Commercial Energy Consumption								
MV Electricity Consumption	Electricity / Steam		7,796			Yes	Consumption	MMBTU	117,197
MV Commercial Direct Fuel Consumption	Natural Gas	3,675				Yes	Consumption	MMBTU	69,249
MV Commercial Direct Fuel Consumption	Propane / LPG	5,492				Yes	Consumption	MMBTU	86,861
MV Commercial Direct Fuel Consumption	Distillate Fuel Oil (#1, #2, Kerosene)	62,991				Yes	Consumption	MMBTU	848,833
MV Commercial Direct Fuel Consumption	Residual Fuel Oil (#4 and #6)	-				Yes	Consumption	MMBTU	-
MV Commercial Direct Fuel Consumption	Coal	113				Yes	Consumption	MMBTU	1,099
MV Commercial Direct Fuel Consumption	Wood	717			34075.8545	Yes	Consumption	MMBTU	363,282
	Industrial Energy Consumption								
MV Electricity Consumption	Electricity / Steam		8,024			Yes	Consumption	MMBTU	120,628
MV Industrial Title V Consumption	Natural Gas	29,848				Yes	Consumption	MMBTU	562,400
MV Industrial Title V Consumption	Propane / LPG	-				Yes	Consumption	MMBTU	-
MV Industrial Title V Consumption	Distillate Fuel Oil (#1, #2, Kerosene)	-				Yes	Consumption	MMBTU	-
MV Industrial Title V Consumption	Residual Fuel Oil (#4 and #6)	-				Yes	Consumption	MMBTU	-
MV Industrial Title V Consumption	Coal	-				Yes	Consumption	MMBTU	-
MV Industrial Title V Consumption	Wood	-			0	Yes	Consumption	MMBTU	-
Energy Generation and Supply	**Energy Generation and Supply**								
MV Elec Generation GHG Analysis	Coal	-				No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	Natural Gas	-				No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	Distillate Fuel Oil (#1, #2 and #4)	-				No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	Residual Fuel Oil (#4 and #6)	-				No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	Wood / Biomass	-			0	No	Consumption	MMBTU	-
MV Elec Generation GHG Analysis	MSW	-			0	No	MSW Combusted	MMBTU	-
MV Elec Generation GHG Analysis	Other	-							-
MV Electricity Consumption	Electricity T/D Losses		2,371			Yes	Losses	MMBTU	21,805
MV Elec Generation GHG Analysis and MV Direct Fuel Consumption	Natural Gas T/D Losses	#REF!				Yes	Losses	MMBTU	
MV Electricity Consumption	Use of SF6 in the Utility Industry	545				Yes	Consumption	MMBTU	-
Industrial Processes	**Industrial Processes**								
Not Reported	Cement Production					Yes			
Not Reported	Iron and Steel Production					Yes			
Not Reported	Ferroalloy Production					Yes			
Not Reported	Aluminum Production					Yes			
Not Reported	Paper and Pulp					Yes			
Not Reported	Limestone Use					Yes			
Not Reported	Soda Ash Use					Yes			
Not Reported	Semi-Conductor Manufacturing					Yes			
MV Industrial Sources	Glass Production					Yes			
Not Reported	Chemical Manufacturing					Yes			
Product Use (Ozone Depleting Substances)	**Product Use (Ozone Depleting Substances)**								
MV Industrial Sources	All Refrigerants- except SF6	7,498				Yes			
Transportation Energy	**On-road**								
MV Emission Summary - Onroad	Motor Gasoline (E-10)	227,646			16,522	Yes	Consumption	MMBTU	3,471,646
MV Emission Summary - Onroad	Diesel	55,855				Yes	Consumption	MMBTU	752,674
Not Reported	Ethanol (E-85)					No	Consumption	MMBTU	
Not Reported	Biodiesel					No	Consumption	MMBTU	
Not Reported	Electricity Consumption					No	Consumption	MMBTU	
	Rail								
MV Emission Summary - Rail	Diesel	3,488				Yes	Consumption	MMBTU	46,999
MV Emission Summary - Rail	Coal Consumption		-			Yes	Consumption	MMBTU	-
	Marine								
MV Emission Summary -Com Marine	Gasoline					Yes	Consumption	MMBTU	
MV Emission Summary -Com Marine	Distillate Fuels	-				Yes	Consumption	MMBTU	-
MV Emission Summary -Com Marine	Residual Fuels	-				Yes	Consumption	MMBTU	-
	Air								
MV Emission Summary-Aircraft	All Fuels (Jet and Aviation Gasoline)	25				No	Consumption	MMBTU	350
	Off-road Mobile								
MV Emission Summary-Nonroad	All Fuels (Diesel and Gasoline)	28,237				Yes	Consumption	MMBTU	392,415
Waste Management	**Solid Waste Management**								
MV Waste	Landfill (Scope 1), allocated FOD (Scope 3) used in roll up	-		3,810	0	Yes - ONLY Scope 3	MSW+CD Generated	Tonnes	11,864
Not Reported	MSW incineration (non grid connected)					Yes	MSW+CD Processed	Tonnes	-
	Sewage Treatment						MSW Sent for Incineration	Tonnes	-
MV Waste water	Central WWTPs and Septic Systems	1,121				Yes	MSW incinerated in Boundar	Tonnes	-
Agriculture	**Livestock**								
GHF_MV_Agriculture	Enteric Fermentation	29,750				Yes			
GHF_MV_Agriculture	Manure management	5,429				Yes			
GHF_MV_Agriculture	**Crop Production and Soil Management**								
GHF_MV_Agriculture	Use of Fertilizer	2,746				Yes			
Not Reported	Crop Residue Incineration					No			
Land Use and Forestry									
GHG_MV_Forest	Urban Forest Annual Reserve	1,672				No			
GHG_MV_Forest	Forest Carbon Reserve (TOTAL)	46,181,989				No			

Grand Totals	Gross Totals	#REF!	43,112	3,810	120,017
	Total with Aircraft (as reported in WNY Sustainability Plan)	#REF!	43,112	3,810	120,017
	Net Totals				

#REF!
#REF!

REDC GHG Emissions Roll Up Report
Year: 2010
(all emissions in Column D, when summed will equal the total County or REDC protocol compliant GHG emissions estimate)

REDC / County Name	Schoharie County

Color Code

REQUIRED for the Roll Up Report, though some data may be zero, N/A, or considered to small to count

Report NO Data in cell

DRAFT Roll Up Report CGC. Emissions in MTCDE								
		CO2e	CO2	CH4	N2O	PFC	HFC	SF6
Built Environment	**Residential Energy Consumption**							
	Electricity / Steam	24,921	24,800	17	105			
	Natural Gas	3,153	3,150	1	2			
	Propane / LPG	9,721	9,683	10	29			
	Distillate Fuel Oil (#1, #2, Kerosene)	45,389	45,237	39	114			
	Wood	1,461	-	497	964			
	Commercial Energy Consumption							
	Electricity / Steam	7,796	7,758	5	33			
	Natural Gas	3,675	3,672	1	2			
	Propane / LPG	5,492	5,471	5	16			
	Distillate Fuel Oil (#1, #2, Kerosene)	62,991	62,780	53	158			
	Residual Fuel Oil (#4 and #6)	-						
	Coal	113	112	0	1			
	Wood	717	-	244	473			
	Industrial Energy Consumption							
	Electricity / Steam	8,024	7,985	5	34			
	Natural Gas	29,848	29,818	12	17			
	Propane / LPG	-	-	-	-			
	Distillate Fuel Oil (#1, #2, Kerosene)	-	-	-	-			
	Residual Fuel Oil (#4 and #6)	-	-	-	-			
	Coal	-	-	-	-			
	Wood	-		-	-			
	Energy Generation and Supply							
	Electricity T/D Losses	2,371	2,360	2	10			
	Natural Gas T/D Losses	#REF!		#REF!				
	Use of SF6 in the Utility Industry	545						545
	Industrial Processes							
	Cement Production							
	Iron and Steel Production							
	Ferroalloy Production							
	Aluminum Production							
	Paper and Pulp							
	Limestone Use							
	Soda Ash Use							
	Semi-Conductor Manufacturing							
	Chemical Manufacturing							
	Product Use (ODS Substitutes)							
	All Refrigerants- except utility SF6	7,498					7,498	
Transportation Energy	**On-road ALL (Total reflects subtraction of ethanol)**							
	Motor Gasoline (E-10)	227,646	226,841	601	204			
	Diesel	55,855	55,668	140	47			
	Ethanol							
	Biodiesel							
	Rail							
	Diesel	3,488	3,476	9	3			
	Coal	-	-	-	-			
	Marine							
	Gasoline							
	Distillate	-	-	-	-			
	Residual Fuel Oil	-	-	-	-			
	Off-road Mobile							
	All Fuels (Diesel and Gasoline)	28,237	28,140	73	25			
Waste Management	**Solid Waste Management**							
	FOD from Waste Generation	3,810	-	3,810	-			
	MSW incineration (non grid connected)							
	Sewage Treatment							
	Central WWTPs and Septic Systems Total reflects roun	1,121		673	224			
Agriculture	**Livestock**							
	Enteric Fementation	29,750		29,750				
	Manure management	5,429		4,512	917			
	Crop Production and Soil Management							
	Use of Fertilizer	2,746			2,746			
	Crop Residue Incineration							
Grand Totals		#REF!	516,949	#REF!	6,121	-	7,498	545

Electricity Consumption GHG Emissions

County	# Households[2]	Population[2]	MWh	MMBTU[3]	CO2e (Metric Tons)[1] CO2	CH4	N2O	Total
New York State[4]	**7,317,755**	**19,378,102**	**144,624,000**					
Mohawk Valley	**199,964**	**500,155**	**3,256,822**	**11,112,277**	**735,574**	**495**	**3,100**	**739,169**
Fulton	22,554	55,531	321,578	1,097,224	72,630	49	306	72,985
Herkimer	26,324	64,519	359,046	1,225,066	81,093	55	342	81,489
Montgomery	20,272	50,219	356,191	1,215,322	80,448	54	339	80,841
Oneida	24,620	62,259	480,332	1,638,893	108,486	73	457	109,016
Otsego	93,028	234,878	1,560,170	5,323,300	352,375	237	1,485	354,097
Schoharie	13,166	32,749	179,506	612,473	40,543	27	171	40,741

Sector	% of total	Population	MWh	MMBTU[3]	CO2e (Metric Tons)[1] CO2	CH4	N2O	Total
Mohawk Valley		**500,155**	**3,256,822**	**11,112,277**	**1,241,491**	**835**	**5,233**	**1,247,559**
Residential			**1,457,899**	**4,974,350**	**329,276**	**221**	**1,388**	**330,885**
Fulton		55,531	162,534	554,567	36,709	25	155	36,889
Herkimer		64,519	190,035	648,401	42,921	29	181	43,131
Montgomery		50,219	136,664	466,296	30,866	21	130	31,017
Oneida		62,259	214,840	733,033	48,523	33	205	48,760
Otsego		234,878	644,022	2,197,404	145,457	98	613	146,168
Schoharie		32,749	109,803	374,648	24,800	17	105	24,921
Commercial[5]			**782,093**	**2,668,502**	**176,641**	**119**	**745**	**177,504**
Fulton		55,531	61,084	208,420	13,796	9	58	13,864
Herkimer		64,519	77,562	264,641	17,518	12	74	17,603
Montgomery		50,219	61,693	210,496	13,934	9	59	14,002
Oneida		62,259	243,301	830,142	54,951	37	232	55,220
Otsego		234,878	304,105	1,037,605	68,684	46	289	69,020
Schoharie		32,749	34,349	117,197	7,758	5	33	7,796
Industrial			**1,016,830**	**3,469,426**	**229,658**	**154**	**968**	**230,780**
Fulton		55,531	97,959	334,236	22,125	15	93	22,233
Herkimer		64,519	91,449	312,024	20,654	14	87	20,755
Montgomery		50,219	157,834	538,530	35,648	24	150	35,822
Oneida		62,259	22,192	75,718	5,012	3	21	5,037
Otsego		234,878	612,043	2,088,290	138,234	93	583	138,909
Schoharie		32,749	35,354	120,628	7,985	5	34	8,024

Notes

1. CO2e calculated based on regional electricity consumption provided by WNY Electricity providers and eGRID 2012 NYUP emission factors.Some energy use data is estimated based on regional averages.
2. 2010 US Census
3. 1 MWh = 3.412 MMBtu
4. New York State Totals from EIA New York http://www.eia.gov/electricity/state/newyork/
5. Commercial totals include commerical and government sectors

Grid Losses (Energy and Emissions) from Electricity Consumption

County	MWh	MMBTU[3]	CO2e (Metric Tons)			
			CO2	CH4	N2O	Total
Finger Lakes	**84,850**	**289,507**	**42,810**	**29**	**180**	**43,020**
Fulton	9,459	32,276	4,227	3	18	4,248
Herkimer	11,060	37,737	4,720	3	20	4,743
Montgomery	7,954	27,138	4,682	3	20	4,705
Oneida	12,504	42,663	6,314	4	27	6,345
Otsego	37,482	127,889	20,508	14	86	20,608
Schoharie	6,391	21,805	2,360	2	10	2,371

2. New York State Totals from EIA New York http://www.eia.gov/electricity/state/newyork/

Electrical Transmission and Distribution--SF6 Emissions

County	MWh[2]	CO2e (Metric Tons)[1]
		SF6[3]
United States[1,2]	**3,884,000,000**	**11,800,000**
Mohawk Valley	**3,256,822**	**9,895**
Fulton	321,578	977
Herkimer	359,046	1,091
Montgomery	356,191	1,082
Oneida	480,332	1,459
Otsego	1,560,170	4,740
Schoharie	179,506	545

1. CO2e calculated based on ratio of regional and national electricity consumption and reported national SF6 emissions.
2. U.S.Electricity end use consumption from EIA Annual Review, 2010 http://www.eia.gov/totalenergy/data/annual/showtext.cfm?t=ptb0801
3. U.S. SF6 emissions from U.S. Greenhouse Gas Inventory Report for 2010:http://www.epa.gov/climatechange/ghgemissions/usinventoryreport.htm

Supporting data and calculations are provided in the following E&E Excel Workbook:
File Name:
MV Electricity Consumption1_15.xlsx
Date:
1/15/2013

Electricity Generation GHG Emissions

	Total Fuel Consumption[1]	Units	Total Fuel Consumption (MMBTU)	MWh Generated	CO2e (Metric Tons)[1] Non-biogenic CO2	CH4	N2O	Non biogenic Total	Biogenic Total[3]	
New York State[2]				**136,961,654**	**41,583,758**					
Coal				13,582,766						
Natural Gas				48,915,545						
Fuel Oil, Kerosene, etc.				2,004,975						
Petroleum Coke										
Landfill										
Nuclear				41,869,535						
Hydro				25,471,697						
Other renewables				4,814,548						
Mohawk Valley: Total				**502,023**	**11,501**	**16**	**41**	**16,177**	**9,236**	**0.367%** Generation in NYS
Mohawk Valley: Renewable Energy				**469,983**	**-**	**6**	**17**	**23**	**4,618**	
Distillate Fuel Oil (#1, 2, or 4)	***35***	***barrels***	***204***	***3***	***15***	***0***	***0***	***15***	**-**	
Otsego County	35	barrels	204	3	15	0	0	15		
Oneida County	0	barrels	0	-	-	-	-	-		
Landfill Gas[3]	***194,914***	***mcf***	***88,685***	***7,968***	**-**	***6***	***17***	***23***	***4,618***	
Fulton County	194,914	mcf	88,685	7,968	-	6	17	23	4,618	
Natural Gas	***99,448***	***mcf***	***108,173***	***12,033***	***5,735***	***2***	***3***	***5,741***	**-**	
Oneida County	*99,448*	*mcf*	*108,173*	*12,033*	*5,735*	*2*	*3*	*5,741*		
Hydro[4]	***0***	***0***	***4,507,423***	***462,015***	***0***	***0***	***0***	***0***	***0***	
Fulton County	*0*	*0*	*115,598*	*11,849*	-	-	-	-		
Herkimer County	*0*	*0*	*1,881,994*	*192,906*	-	-	-	-		
Oneida County	*0*	*0*	*2,454,648*	*251,604*	-	-	-	-		
Otsego County	*0*	*0*	*55,183*	*5,656*	-	-	-	-		

Notes

1. CO2e calculated based on regional electricity generation data from 2010 EIA Form 923 reported energy use by facility, using fuel type emission factors from EPA's Manditory Reporting Rule(MRR)*

*Federal Register / Vol. 74, No. 209 / Friday, October 30, 2009 / Rules and Regulations, Table C-1 and Table C-2, http://epa.gov/climatechange/emissions/downloads09/GHG-MRR-FinalRule.pdf

2. New York State Totals from EIA New York http://www.eia.gov/electricity/state/newyork/

3. CO2 from landfill gas are considered a source of biogenic emissions, not to be included in GHG emission totals

**Table B2, "Methodology for Allocating Municipal Solid Waste to Biogenic/Non-Biogenic Energy" http://www.eia.gov/cneaf/solar.renewables/page/mswaste/msw_report.html

4. Renewable sources highlighted in green

GHG Emissions from Natural Gas Electricity Generation Transmission and Distribution Losses[1]

	% T&D Loss	Total Natural Gas (mcf)	CH4 Losses in mcf	CH4 Losses in lbs	Total CO2e
Mohawk Valley	**1.8%**	**99,448**	**1,790**	**80,195**	**764**
Fulton County	1.8%	-	-	-	-
Herkimer County	1.8%	-	-	-	-
Montgomery County	1.8%	-	-	-	-
Oneida County	1.8%	99,448	**1,790**	**80,195**	**764**
Otsego County	1.8%	-	-	-	-
Schoharie County	1.8%	-	-	-	-

Notes

1. CO2e from T&D losses calculated based on ratio of estimated % fuel loss and total CO2e estimated from natural gas use for electricity generation within the region.

Supporting data and calculations are provided in the following E&E Excel Workbook:
File Name:
MV Elec Generation GHG Analysis1_14.xlsx
Date:
1/14/2013

Residential Building Emissions from Stationary Combustion

			CO2e (Metric Tons)[1]				
	# Households[2]	mmBTU[2]	CO_2	CH_4	N_2O	Total	Biogenic Total[3]
New York State	**7,317,755**	**595,650,000**	**31,788,580**	**50,832**	**103,983**	**31,943,395**	**4,633,720**
Natural Gas	3,972,785	399,700,000	21,192,094	8,394	12,391	21,212,878	
Bottled, Tank, or LP gas	225,680	22,200,000	1,398,156	1,399	4,129	1,403,684	
Fuel Oil, Kerosene, etc.	2,207,233	124,300,000	9,193,228	7,831	23,120	9,224,179	
Wood	138,599	49,400,000	-	33,197	64,319	97,516	4,633,720
Coal	19,542	50,000	5,102	12	25	5,138	
Mohawk Valley	**199,964**	**23,993,619**	**1,106,550**	**4,267**	**8,562**	**1,119,379**	**503,171**
Natural Gas	90,564	12,177,874	645,671	256	378	646,304	
Bottled, Tank, or LP gas	13,769	1,486,885	93,644	94	277	94,014	
Fuel Oil, Kerosene, etc.	65,570	4,962,574	367,032	313	923	368,268	
Wood	15,980	5,364,299	-	3,605	6,984	10,589	503,171
Coal	794	1,989	203	0	1	204	
Fulton County	**22,554**	**2,729,621**	**121,595**	**550**	**1,102**	**123,247**	**66,285**
Natural Gas	9,153	1,251,899	66,376	26	39	66,441	
Bottled, Tank, or LP gas	1,472	164,914	10,386	10	31	10,427	
Fuel Oil, Kerosene, etc.	7,473	606,034	44,822	38	113	44,973	
Wood	1,975	706,665	-	475	920	1,395	66,285
Coal	39	109	11	0	0	11	
Herkimer County	**26,324**	**3,429,908**	**147,598**	**720**	**1,432**	**149,750**	**88,227**
Natural Gas	11,141	1,647,911	87,372	35	51	87,458	
Bottled, Tank, or LP gas	1,515	183,618	11,564	12	34	11,610	
Fuel Oil, Kerosene, etc.	7,495	657,387	48,620	41	122	48,784	
Wood	2,431	940,591	-	632	1,225	1,857	88,227
Coal	134	400	41	0	0	41	
Montgomery County	**20,272**	**2,190,278**	**103,407**	**360**	**722**	**104,489**	**41,778**
Natural Gas	9,310	1,175,829	62,342	25	36	62,404	
Bottled, Tank, or LP gas	908	94,000	5,920	6	17	5,944	
Fuel Oil, Kerosene, etc.	6,339	474,709	35,110	30	88	35,228	
Wood	1,348	445,395	-	299	580	879	41,778
Coal	136	345	35	0	0	35	
Oneida County	**93,028**	**10,374,722**	**529,814**	**987**	**1,965**	**532,767**	**99,135**
Natural Gas	56,209	7,382,321	391,411	155	229	391,795	
Bottled, Tank, or LP gas	4,028	433,485	27,301	27	81	27,409	
Fuel Oil, Kerosene, etc.	19,282	1,501,602	111,058	95	279	111,432	
Wood	3,076	1,056,880	-	710	1,376	2,086	99,135
Coal	164	434	44	0	0	45	
Otsego County	**24,620**	**3,703,907**	**146,034**	**1,104**	**2,232**	**149,370**	**138,326**
Natural Gas	3,960	660,505	35,020	14	20	35,054	
Bottled, Tank, or LP gas	3,345	457,122	28,790	29	85	28,903	
Fuel Oil, Kerosene, etc.	11,236	1,111,199	82,184	70	207	82,461	
Wood	3,380	1,474,688	-	991	1,920	2,911	138,326
Coal	117	393	40	0	0	40	
Schoharie County	**13,166**	**1,565,184**	**58,101**	**547**	**1,108**	**59,756**	**69,420**
Natural Gas	792	59,409	3,150	1	2	3,153	
Bottled, Tank, or LP gas	2,501	153,744	9,683	10	29	9,721	
Fuel Oil, Kerosene, etc.	13,746	611,642	45,237	39	114	45,389	
Wood	3,770	740,081	-	497	964	1,461	69,420
Coal	204	308	31	0	0	32	

Notes:

1. CO2e calculated based on allocation of EIA 2010 Residential Energy use in New York*, using fuel type emission factors from EPA's Manditory Reporting Rule(MRR)**

*http://www.eia.gov/state/seds/sep_sum/html/pdf/sum_btu_com.pdf

**Federal Register / Vol. 74, No. 209 / Friday, October 30, 2009 / Rules and Regulations, Table C-1 and Table C-2, http://epa.gov/climatechange/emissions/downloads09/GHG-MRR-FinalRule.pdf

2. New York State, regional and county residential energy totals allocated based on 2007 - 2010 ACS data for type of residence and heating fuel type, 2010 US Census data used for total occupied units, and HDD determined based on NOAA New York State climate divisions. fuel use by structure size determined though EPA study provided to GHG Inventory Protocol group.

3. CO2 from Wood products are considered a source of biogenic emissions, not to be included in GHG emission totals

4. Renewable sources highlighted in green

GHG Emissions from Natural Gas Use Transmission and Distribution Losses[1]

	% T&D Loss	Total Natural Gas (mcf)	CH4 Losses in mcf	CH4 Losses in lbs	Total CO2e
Mohawk Valley	**1.8%**	**11,846,180.52**	**213,231**	**9,552,759.97**	**90,994**
Fulton	1.8%	1,217,800.38	21,920	982,034.23	9,354
Herkimer	1.8%	1,603,026.41	28,854	1,292,680.50	12,313
Montgomery	1.8%	1,143,802.21	20,588	922,362.10	8,786
Oneida	1.8%	7,181,246.39	129,262	5,790,957.09	55,161
Otsego	1.8%	642,514.71	11,565	518,123.86	4,935
Schoharie	1.8%	57,790.41	1,040	46,602.19	444

Notes

1. CO2e from T&D losses calculated based on ratio of estimated % fuel loss and total residential natural gas use within the region.

Supporting data and calculations are provided in the following E&E Excel Workbook:

File Name:

MV Residential Direct Energy Sources 1_14_13.xlsx

Date:

1/14/2012

Commercial Energy Use Emissions

				CO2e (Metric Tons)[1]				
	Workers[2]	Sq Footage[2]	mmBTU[1]	CO_2	CH_4	N_2O	Total	Biogenic Total[3]
New York State	**6,618,037**	**6,018,827,593**	**431,800,000**	**24,923,838**	**21,323**	**46,590**	**24,991,751**	
Natural Gas	4,005,538	3,519,948,423	294,100,000	15,593,182	6,176	9,117	15,608,475	
Bottled, Tank, or LP gas	227,624	183,398,128	6,600,000	415,668	416	1,228	417,311	
Fuel Oil, Kerosene, etc.	2,225,226	2,200,987,287	120,400,000	8,904,784	7,585	22,394	8,934,764	
Wood[3]	139,846	97,326,344	10,600,000	-	7,123	13,801	20,924	994,280
Coal	19,802	17,167,411	100,000	10,204	23	50	10,277	
Mohawk Valley	**142,029**	**155,691,914**	**13,988,509**	**751,552**	**1,438**	**2,991**	**755,980**	
Natural Gas	79,462	77,110,718	8,083,786	428,602	170	251	429,023	
Bottled, Tank, or LP gas	9,479	11,378,175	470,455	29,629	30	88	29,746	
Fuel Oil, Kerosene, etc.	42,979	53,813,475	3,960,278	292,902	249	737	293,888	
Wood[3]	9,646	12,756,743	1,469,894	-	988	1,914	2,902	137,876
Coal	462	632,803	4,095	418	1	2	421	
Fulton County	**13,374**	**13,918,098**	**1,232,099**	**65,401**	**145**	**302**	**65,848**	
Natural Gas	6,087	6,334,278	656,007	34,781	14	20	34,816	
Bottled, Tank, or LP gas	979	1,018,447	41,886	2,638	3	8	2,648	
Fuel Oil, Kerosene, etc.	4,969	5,171,313	378,093	27,964	24	70	28,058	
Wood[3]	1,313	1,366,792	155,939	-	105	203	308	14,627
Coal	26	27,268	174	18	0	0	18	
Herkimer County	**11,487**	**12,189,173**	**1,280,385**	**66,277**	**156**	**320**	**66,754**	
Natural Gas	5,634	5,978,024	723,354	38,352	15	22	38,390	
Bottled, Tank, or LP gas	766	813,003	39,066	2,460	2	7	2,470	
Fuel Oil, Kerosene, etc.	3,790	4,021,803	343,559	25,410	22	64	25,495	
Wood[3]	1,229	1,304,325	173,869	-	117	226	343	16,309
Coal	68	72,018	538	55	0	0	55	
Montgomery County	**12,893**	**13,572,997**	**1,218,557**	**66,086**	**117**	**244**	**66,446**	
Natural Gas	6,654	7,004,370	725,404	38,461	15	22	38,499	
Bottled, Tank, or LP gas	649	683,445	28,108	1,770	2	5	1,777	
Fuel Oil, Kerosene, etc.	4,530	4,769,013	348,680	25,788	22	65	25,875	
Wood[3]	963	1,014,218	115,714	-	78	151	228	10,854
Coal	97	101,950	652	66	0	0	67	
Oneida County	**84,787**	**79,092,976**	**7,405,428**	**404,691**	**437**	**890**	**406,018**	
Natural Gas	57,586	53,718,976	5,563,382	294,971	117	172	295,260	
Bottled, Tank, or LP gas	4,127	3,850,003	158,338	9,972	10	29	10,012	
Fuel Oil, Kerosene, etc.	19,754	18,427,447	1,347,297	99,646	85	251	99,982	
Wood[3]	3,151	2,939,825	335,409	-	225	437	662	31,461
Coal	168	156,726	1,002	102	0	0	103	
Otsego County	**19,487**	**18,899,111**	**1,482,715**	**77,063**	**277**	**586**	**77,926**	
Natural Gas	3,502	3,396,133	346,391	18,366	7	11	18,384	
Bottled, Tank, or LP gas	2,958	2,868,751	116,195	7,318	7	22	7,347	
Fuel Oil, Kerosene, etc.	9,935	9,635,540	693,817	51,315	44	129	51,487	
Wood[3]	2,989	2,898,475	325,682	-	219	424	643	30,549
Coal	103	100,211	631	64	0	0	65	
Schoharie County	**5,953**	**18,019,560**	**1,369,324**	**72,034**	**305**	**650**	**72,988**	
Natural Gas	224	678,936	69,249	3,672	1	2	3,675	
Bottled, Tank, or LP gas	708	2,144,525	86,861	5,471	5	16	5,492	
Fuel Oil, Kerosene, etc.	3,894	11,788,360	848,833	62,780	53	158	62,991	
Wood[3]	1,068	3,233,108	363,282	-	244	473	717	34,076
Coal	58	174,630	1,099	112	0	1	113	

Notes:

1. CO2e calculated based on allocation of EIA 2010 Commercial Energy use in New York*, using fuel type emission factors from EPA's Manditory Reporting Rule(MRR)**

*http://www.eia.gov/state/seds/sep_sum/html/pdf/sum_btu_com.pdf

*Federal Register / Vol. 74, No. 209 / Friday, October 30, 2009 / Rules and Regulations, Table C-1 and Table C-2,
http://epa.gov/climatechange/emissions/downloads09/GHG-MRR-FinalRule.pdf

2. New York State, regional and county commercial energy totals allocated based on NYS 2010 Department of Labor statistics for each county, the CBECS average floor space per worker, and 2010 HDD based on NOAA climate divisionsconsumption and generation

3. CO2 from Wood products are considered a source of biogenic emissions, not to be included in GHG emission totals

4. Renewable sources highlighted in green

GHG Emissions from Natural Gas Use Transmission and Distribution Losses[1]

	% T&D Loss	Total Natural Gas (mcf)	CH4 Losses in mcf	CH4 Losses in lbs	Total CO2e
Mohawk Valley	**1.8%**	**7,863,605.16**	**141,545**	**6,341,211.20**	**60,403**
Fulton	1.8%	638,138.85	11,486	514,595.17	4,902
Herkimer	1.8%	703,651.46	12,666	567,424.53	5,405
Montgomery	1.8%	705,646.39	12,702	569,033.25	5,420
Oneida	1.8%	5,411,850.13	97,413	4,364,115.95	41,570
Otsego	1.8%	336,955.93	6,065	271,721.27	2,588
Schoharie	1.8%	67,362.40	1,213	54,321.04	517

Notes

1. CO2e from T&D losses calculated based on ratio of estimated % fuel loss and total commercial natural gas use within the region.

Supporting data and calculations are provided in the following E&E Excel Workbook:
File Name:
MV Commercial Energy Emissions 1_14_13.xlsx
Date:
1/14/2013

Industrial Energy Use Emissions

		CO2e (Metric Tons)[1]				
	mmBTU[2]	CO_2	CH_4	N_2O	Total	Biogenic Total[3]
New York State[2]	**172,806,620**	**7,834,093**	**6,160**	**12,718**	**7,852,971**	**219,731**
Natural Gas	100,184,192	5,311,766	2,104	3,106	5,316,975	
LPG	381,677	24,038	24	71	24,133	
Distillate Fuel Oil (#1, #2, Kerosene)	2,866,662	211,235	181	533	211,949	
Heating Oil #1	*1,103,236*	*80,812*	*70*	*205*	*81,087*	
Heating Oil #2	*1,763,426*	*130,423*	*111*	*328*	*130,862*	
Residual Fuel Oil (#4 and #6)	14,565,792	1,093,813	918	2,709	1,097,440	
Heating Oil #4	*1,300,971*	*97,625*	*82*	*242*	*97,949*	
Heating Oil #6	*13,264,821*	*996,188*	*836*	*2,467*	*999,491*	
Coal	12,699,950	1,193,241	2,934	6,299	1,202,474	
Bituminous Coal	*11,911,597*	*1,112,543*	*2,752*	*5,908*	*1,121,203*	
Anthracite Coal	*169,701*	*17,571*	*39*	*84*	*17,694*	
Coke	*618,652*	*63,127*	*143*	*307*	*63,577*	
Wood[3]	2,342,544	-	1,574	3,050	4,624	219,731
MSW[5]	9,633,400	873,749	6,474	12,543	892,766	
Solid Other						
Liquid Other						
Mohawk Valley	**1,977,477**	**98,492**	**129**	**235**	**98,857**	**12,462**
Natural Gas	1,812,060	96,075	38	56	96,170	
LPG	1,221	77	0	0	77	
Distillate Fuel Oil (#1, #2, Kerosene)	11,889	879	1	2	882	
Heating Oil #1	-	-	-	-	-	
Heating Oil #2	*11,889*	*879*	*1*	*2*	*882*	
Residual Fuel Oil (#4 and #6)	19,448	1,461	1	4	1,465	
Heating Oil #4	-	-	-	-	-	
Heating Oil #6	*19,448*	*1,461*	*1*	*4*	*1,465*	
Coal	-	-	-	-	-	
Bituminous Coal	-	-	-	-	-	
Anthracite Coal	-	-	-	-	-	
Coke	-	-	-	-	-	
Wood[3]	132,859	-	89	173	262	12,462
MSW	-	-	-	-	-	
Solid Other						
Liquid Other						
Fulton County	**16,093**	**853**	**0**	**0**	**854**	
Natural Gas	16,093	853	0	0	854	
LPG	-	-	-	-	-	
Distillate Fuel Oil (#1, #2, Kerosene)	-	-	-	-	-	
Heating Oil #1	-	-	-	-	-	
Heating Oil #2	-	-	-	-	-	
Residual Fuel Oil (#4 and #6)	-	-	-	-	-	
Heating Oil #4	-	-	-	-	-	
Heating Oil #6	-	-	-	-	-	
Coal	-	-	-	-	-	
Bituminous Coal	-	-	-	-	-	
Anthracite Coal	-	-	-	-	-	
Coke	-	-	-	-	-	
Wood[3]	-	-	-	-	-	
MSW	-	-	-	-	-	
Solid Other						
Liquid Other						
Herkimer County	**698,676**	**37,044**	**15**	**22**	**37,080**	
Natural Gas	698,676	37,044	15	22	37,080	
LPG	-	-	-	-	-	
Distillate Fuel Oil (#1, #2, Kerosene)	-	-	-	-	-	
Heating Oil #1	-	-	-	-	-	
Heating Oil #2	-	-	-	-	-	
Residual Fuel Oil (#4 and #6)	-	-	-	-	-	
Heating Oil #4	-	-	-	-	-	
Heating Oil #6	-	-	-	-	-	
Coal	-	-	-	-	-	
Bituminous Coal	-	-	-	-	-	
Anthracite Coal	-	-	-	-	-	
Coke	-	-	-	-	-	
Wood[3]	-	-	-	-	-	
MSW	-	-	-	-	-	
Solid Other						
Liquid Other						

Industrial Energy Use Emissions

		CO2e (Metric Tons)[1]				
	mmBTU[2]	CO_2	CH_4	N_2O	Total	Biogenic Total[3]
Montgomery County	**528,384**	**28,015**	**11**	**16**	**28,042**	
Natural Gas	528,384	28,015	11	16	28,042	
LPG	-	-	-	-	-	
Distillate Fuel Oil (#1, #2, Kerosene)	-	-	-	-	-	
Heating Oil #1	-	-	-	-	-	
Heating Oil #2	-	-	-	-	-	
Residual Fuel Oil (#4 and #6)	-	-	-	-	-	
Heating Oil #4	-	-	-	-	-	
Heating Oil #6	-	-	-	-	-	
Coal	-	-	-	-	-	
Bituminous Coal	-	-	-	-	-	
Anthracite Coal	-	-	-	-	-	
Coke	-	-	-	-	-	
Wood[3]	-	-	-	-	-	
MSW	-	-	-	-	-	
Solid Other						
Liquid Other						
Oneida County	**171,925**	**2,762**	**91**	**179**	**3,033**	
Natural Gas	6,508	345	0	0	345	
LPG	1,221	77	0	0	77	
Distillate Fuel Oil (#1, #2, Kerosene)	11,889	879	1	2	882	
Heating Oil #1	-	-	-	-	-	
Heating Oil #2	*11,889*	*879*	*1*	*2*	*882*	
Residual Fuel Oil (#4 and #6)	19,448	1,461	1	4	1,465	
Heating Oil #4	-	-	-	-	-	
Heating Oil #6	*19,448*	*1,461*	*1*	*4*	*1,465*	
Coal	-	-	-	-	-	
Bituminous Coal	-	-	-	-	-	
Anthracite Coal	-	-	-	-	-	
Coke	-	-	-	-	-	
Wood[3]	132,859	-	89	173	262	12,462
MSW	-	-	-	-	-	
Solid Other						
Liquid Other						
Otsego County	**-**	**-**	**-**	**-**	**-**	
Natural Gas	-	-	-	-	-	
LPG	-	-	-	-	-	
Distillate Fuel Oil (#1, #2, Kerosene)	-	-	-	-	-	
Heating Oil #1	-	-	-	-	-	
Heating Oil #2	-	-	-	-	-	
Residual Fuel Oil (#4 and #6)	-	-	-	-	-	
Heating Oil #4	-	-	-	-	-	
Heating Oil #6	-	-	-	-	-	
Coal	-	-	-	-	-	
Bituminous Coal	-	-	-	-	-	
Anthracite Coal	-	-	-	-	-	
Coke	-	-	-	-	-	
Wood[3]	-	-	-	-	-	-
MSW	-	-	-	-	-	
Solid Other						
Liquid Other						
Schoharie County	**562,400**	**29,818**	**12**	**17**	**29,848**	
Natural Gas	562,400	29,818	12	17	29,848	
LPG	-	-	-	-	-	
Distillate Fuel Oil (#1, #2, Kerosene)	-	-	-	-	-	
Heating Oil #1	-	-	-	-	-	
Heating Oil #2	-	-	-	-	-	
Residual Fuel Oil (#4 and #6)	-	-	-	-	-	
Heating Oil #4	-	-	-	-	-	
Heating Oil #6	-	-	-	-	-	
Coal	-	-	-	-	-	
Bituminous Coal	-	-	-	-	-	
Anthracite Coal	-	-	-	-	-	
Coke	-	-	-	-	-	
Wood[3]	-	-	-	-	-	-
MSW	-	-	-	-	-	
Solid Other						
Liquid Other						

Notes

1. CO2e calculated based on regional Title V Air Quality Permitting energy data provided to the CGC GHG Protocol Working Group from the NYSDEC (August 2012), using fuel type emission factors from EPA's Manditory Reporting Rule(MRR)*

*Federal Register / Vol. 74, No. 209 / Friday, October 30, 2009 / Rules and Regulations, Table C-1 and Table C-2, http://epa.gov/climatechange/emissions/downloads09/GHG-MRR-FinalRule.pdf

2. New York State, regional and county actual energy totals reported for all Title V sources within the area. Electricity generation and landfill emissions were excluded as they are calculated and counted separately in waste and electric consumption and generation

3. CO2 from Wood products are considered a source of biogenic emissions, not to be included in GHG emission totals

4. Renewable sources highlighted in green

5. MSW(Municipal Solid Waste) emissions are included in waste calculations

GHG Emissions from Natural Gas Use Transmission and Distribution Losses[1]

	% T&D Loss	Total Natural Gas (mcf)	CH4 Losses in mcf	CH4 Losses in lbs	Total CO2e
Mohawk Valley	**1.8%**	**1,762,704.23**	**31,729**	**1,421,444.69**	**13,540**
Fulton	1.8%	15,654.47	282	12,623.77	120
Herkimer	1.8%	679,645.43	12,234	548,066.07	5,221
Montgomery	1.8%	513,992.12	9,252	414,483.24	3,948
Oneida	1.8%	6,330.50	114	5,104.91	49
Otsego	1.8%	-	-	-	-
Schoharie	1.8%	547,081.71	9,847	441,166.69	4,202

Notes

1. CO2e from T&D losses calculated based on ratio of estimated % fuel loss and total industrial natural gas use within the region.

Supporting data and calculations are provided in the following E&E Excel Workbook:

File Name:

WNY Industrial Emissions 1-14-13.xlsx

Date:

1/14/2013

Industrial GHG Emissions

2010 Emissions reported as part of EPA MRR Program

Region	Source	Process	CO2e (Metric Tons) Emissions by Type[1] CO2	CH_4	N_2O	CF4	C2F6	CHF3	Total CO2e
New York State									
Mohawk Valley									-
Fulton County	None								
Herkimer County	None								
Montgomery County	None								
Oneida County	None								
Otsego County	None								
Schoharie County	None								

Notes:

1. There are no major GHG emission sources (except landfill and energy generation, which are included elsewhere) reporting to EPA for MRR in the Mohawk Valley.

Ozone Depleting Substance Substitution Emissions

Region	Population	HFC Emissions Total CO2e (Metric Tons)
New York State	**19,378,102**	**4,436,697**
Mohawk Valley	**500,155**	**114,512.57**
Fulton County	55,531	12,714.05
Herkimer County	64,519	14,771.89
Montgomery County	50,219	11,497.85
Oneida County	234,878	53,776.29
Otsego County	62,259	14,254.46
Schoharie County	32,749	7,498.02

Notes:

1. Emissions from HFC use estimated based on 2010 population ratio and 2007 Reported Statewide HFC emissions (New York State Greenhouse Gas Emissions Inventory and Forecasts for the 2009 State Energy Plan, NYSERDA, August 6, 2009)

Supporting data and calculations are provided in the following E&E Excel Workbook:

File Name:

MV Industrial Sources 11-27-12.xlsx

Date:

11/27/2012

Table 1
Greenhouse Gas Emission Inventory Summary
Transportation: On-Road Vehicles
Mohawk Valley New York Region

County	Annual Vehicle Miles Travelled[1] (VMT)	Annual GHG Emissions[2] (metric tons CO_2e/yr)			
		CO_2	N_2O	CH_4	Total
Fulton	420,525,583	190,035	476	163	190,674
Herkimer	734,459,120	338,698	848	291	339,837
Montgomery	767,887,947	366,964	919	315	368,198
Oneida	2,134,447,503	966,998	2,363	830	970,192
Otsego	685,087,994	314,911	788	271	315,970
Schoharie	620,466,537	299,017	749	257	300,023
Mohawk Valley NY Total	**5,362,874,684**	**2,476,625**	**6,144**	**2,125**	**2,484,894**

Notes:

1. VMT data for each county provided by NYSDOT.

2. NYSDOT regional-specific data on fleet profile and national fleet fuel economy data to estimate county-level GHG emissions.

Emission Type	Fuel Type	Mohawk Valley NY Annual GHG Emissions (metric tons CO_2e/yr)
Non-Biogenic	Gasoline[1]	1,936,345
	Diesel	408,014
	Total	***2,344,359***
Biogenic	Ethanol[1]	140,535
TOTAL		**2,484,894**

Notes:

1. Portion of Gasoline E-10.

2. NYSDOT regional-specific data on fleet profile and national fleet fuel economy data to estimate GHG emissions. The distribution of GHG emissions for the components of gasoline E-10 (i.e., gasoline and ethanol) is based on a fraction of 90% gasoline and 10% ethanol.

Fuel Type	Mohawk Valley NY Annual Energy Consumption[1] (MMBtu/yr)
Gasoline (E-10)	29,529,656
Diesel	5,635,324
Total	**35,164,980**

Notes:

1. Annual energy consumption is based on projected fuel consumption calculated from NYSDOT VMT data and national fleet fuel economy data.

County	Annual Fuel Consumption (MMBtu/yr)		
	Gasoline (E-10)	Diesel	Total
Fulton	2,305,976	383,921	2,689,897
Herkimer	4,037,129	753,247	4,790,376
Montgomery	4,242,655	940,638	5,183,293
Oneida	11,683,691	2,001,279	13,684,970
Otsego	3,788,559	803,565	4,592,124
Schoharie	3,471,646	752,674	4,224,320
Mohawk Valley NY Total	**29,529,656**	**5,635,324**	**35,164,980**

Notes:

fleet fuel economy data.

Table 1
Greenhouse Gas Emission Inventory Summary
Transportation: On-Road Vehicles
Mohawk Valley New York Region

Fuel Type	Mohawk Valley NY GHG Emissions (metric tons CO_2e/yr)			
	CO_2	N_2O	CH_4	Total
Finger Lakes	**2,476,625**	**6,144**	**2,125**	**2,484,894**
Gasoline	1,929,503	5,111	1,731	1,936,345
Ethanol	140,418	70	47	140,535
Diesel	406,704	963	347	408,014
Fulton	**190,035**	**476**	**163**	**190,674**
Gasoline	150,675	399	135	151,209
Ethanol	10,965	5	4	10,974
Diesel	28,395	71	24	28,490
Herkimer	**338,698**	**848**	**291**	**339,837**
Gasoline	263,791	699	237	264,726
Ethanol	19,197	10	6	19,213
Diesel	55,710	140	47	55,898
Montgomery	**366,964**	**919**	**315**	**368,198**
Gasoline	277,220	734	249	278,203
Ethanol	20,174	10	7	20,191
Diesel	69,570	175	59	69,804
Oneida	**966,998**	**2,363**	**830**	**970,192**
Gasoline	763,426	2,022	685	766,133
Ethanol	55,558	28	19	55,604
Diesel	148,015	314	126	148,454
Otsego	**314,911**	**788**	**271**	**315,970**
Gasoline	247,549	656	222	248,427
Ethanol	18,015	9	6	18,030
Diesel	49,347	124	42	49,513
Schoharie	**299,017**	**749**	**257**	**300,023**
Gasoline	226,841	601	204	227,646
Ethanol	16,508	8	6	16,522
Diesel	55,668	140	47	55,855

1. Portion of Gasoline E-10.
distribution of GHG emissions for the components of gasoline E-10 (i.e., gasoline and ethanol) is based on a fraction of 90%

Supporting data and calculations are provided in the following E&E Excel Workbook:
File Name:
MV Transportation - Onroad - 2013_1_15.xlsx
Date:
1/15/2013

Table 1
GHG Emission Summary
Transportation: Railroads
Mohawk Valley New York Region

County	Annual Diesel Consumption[1] (gal/yr)	Annual diesel Consuption (MMBtu/yr)	Direct GHG Emissions from Diesel Train Engine Systems[2] (metric tons CO_2e/yr)			
			CO_2	N_2O	CH_4	Total
Fulton	0	0	0	0	0	0
Herkimer	1,866,838	257,624	19,054	48	16	19,118
Montgomery	3,143,283	433,773	32,082	81	27	32,190
Oneida	2,269,425	313,181	23,163	58	20	23,241
Otsego	865,697	119,466	8,836	22	8	8,865
Schoharie	340,570	46,999	3,476	9	3	3,488
Mohawk Valley NY Total	**8,485,813**	**1,171,042**	**86,610**	**218**	**74**	**86,902**

Notes:
1. Diesel consumption based on NYSERDA Study of diesel consumption by rail systems in New York State in 2002. Fuel consumption data allocated spatially to counties by location of rail lines.
2. GHG emissions calculated by applying EPA emission factors to diesel consumption.

County	Annual Electrical Consumption[1] (kW-hr/yr)	Indirect GHG Emissions from Electric Train Systems[2] (metric tons CO_2e/yr)			
		CO_2	N_2O	CH_4	Total
Mohawk Valley NY Total	**0**	-	-	-	-

County	GHG Emissions from All Train Systems (metric tons CO_2e/yr)			
	CO_2	N_2O	CH_4	Total
Fulton	0	0	0	0
Herkimer	19,054	48	16	19,118
Montgomery	32,082	81	27	32,190
Oneida	23,163	58	20	23,241
Otsego	8,836	22	8	8,865
Schoharie	3,476	9	3	3,488
Mohawk Valley NY Total	**86,610**	**218**	**74**	**86,902**

Power/Fuel Type	Mohawk Valley NY Annual Energy Consumption (MMBtu/yr)
Diesel	1,171,042
Electric	0
Total	**1,171,042**

Notes:
1. Energy consumption for diesel systems calculated from diesel consumption based on NYSERDA Study of rail systems in New York State in 2002.
2. Energy consumption for electrical systems calculated by unit conversion.

Supporting data and calculations are provided in the following E&E Excel Workbook:
File Name:
MV Transportation - Rail - 2013_1_14.xlsx
Date:
1/14/2013

Table 1
GHG Emission Summary
Transportation: Commercial Marine Vessels
Mohawk Valley New York Region

Fuel Type	County	Annual Fuel Consumption[1] (gal/yr)	Annual Fuel Consumption[1] (MMBtu/yr)	GHG Emissions[2,3] (metric tons CO_2e/yr)			
				CO_2	N_2O	CH_4	Total
Diesel	Fulton	0	0	0	0	0	0
	Herkimer	37	5	0.8	0.001	0.0003	0.8
	Montgomery	62	9	1	0.002	0.0005	1
	Oneida	50	7	1	0.001	0.0004	1
	Otsego	0	0	0	0	0	0
	Schoharie	0	0	0	0	0	0
	Mohawk Valley NY Total	**150**	**21**	**3**	**0.004**	**0.001**	**3**
Residual Fuel Oil	Fulton	0	0	0	0	0	0
	Herkimer	0	0	0	0	0	0
	Montgomery	0	0	0	0	0	0
	Oneida	0	0	0	0	0	0
	Otsego	0	0	0	0	0	0
	Schoharie	0	0	0	0	0	0
	Mohawk Valley NY Total	**0**	**0**	**0**	**0**	**0**	**0**
All Fuel Types	**Fulton**	**0**	**0**	**0**	**0**	**0**	**0**
	Herkimer	**37**	**5**	**0.8**	**0.001**	**0.0003**	**1**
	Montgomery	**62**	**9**	**1**	**0.002**	**0.0005**	**1**
	Oneida	**50**	**7**	**1**	**0.001**	**0.0004**	**1**
	Otsego	**0**	**0**	**0**	**0.000**	**0.0000**	**0**
	Schoharie	**0**	**0**	**0**	**0.000**	**0.0000**	**0**
	Mohawk Valley NY Total	**150**	**21**	**3**	**0.004**	**0.001**	**3**

Notes:

1. Fuel consumption estimated by dividing annual CO_2 emissions by corresponding fuel heat value and emission-factor-energy.

2. CO_2 emissions calculated by multiplying EPA estimated annual SO_2 emission rate by ratio of CO_2 to SO_2 emissions for applicable fuel.
3. N_2O and CH_4 emissions estimated using using EPA emission factors and fuel consumption estimates.

Fuel Type	Mohawk Valley NY Annual Energy Consumption[1] (MMBtu/yr)
Diesel	21
Residual Fuel Oil	0
Total	**21**

Notes:

1. Annual energy consumption is based on projected fuel consumption.

Supporting data and calculations are provided in the following E&E Excel Workbook:
File Name:
MV Transportation - Com Marine - 2013_1_14.xlsx
Date:
1/14/2013

Table 1
Greenhouse Gas Emission Inventory Summary
Transportation: Aircraft
Mohawk Valley New York Region

County	Annual Jet Fuel Consumption[1] (gal/yr)	Annual Energy Consumption[2] (MMBtu/yr)	GHG Emissions[3,4] (metric tons CO_2e/yr)			
			CO_2	N_2O	CH_4	Total
Fulton	17,416	2,351	167	0.4	0.1	168
Herkimer	19,716	2,662	188	0.5	0.2	189
Montgomery	6,901	932	67	0.2	0.06	67
Oneida	202,422	27,327	1,943	5	1.7	1,950
Otsego	73,280	9,893	705	2	0.6	707
Schoharie	2,596	350	25	0.07	0.02	25
Mohawk Valley NY Total	**322,332**	**43,515**	**3,095**	**8**	**3**	**3,106**

Notes:

1. Jet fuel consumption estimated using the FAA's EDMS model with data input of total landing and take off cycles of specific aircraft types at each airport in each county.
2. Annual energy consumption is based on projected fuel consumption as estimated using FAA's EDMS model.
3. CO_2 emissions estimated using the FAA's EDMS model with data input of total landing and take off cycles of specific aircraft types at each airport in each county.
4. N_2O and CH_4 emissions estimated using using EPA emission factors and jet fuel consumption estimates.

Supporting data and calculations are provided in the following E&E Excel Workbook:
File Name:
MV Transportation - Aircraft - 2012_11_29.xlsx
Date:
11/29/2012

Table 1
GHG Emissions Summary
Transportation: Non-Road Equipment
Mohawk Valley New York Region

County	Energy Consumption (MMBtu/yr)	GHG Emissions[1,2] (metric tons CO_2e/yr)			
		CO_2	N_2O	CH_4	Total
Fulton	466,767	32,953	86	29	33,069
Herkimer	776,114	55,325	144	49	55,517
Montgomery	710,639	51,072	132	45	51,249
Oneida	1,616,964	115,235	298	101	115,635
Otsego	503,854	36,205	93	32	36,330
Schoharie	392,415	28,140	73	25	28,237
Mohawk Valley NY Total	**4,466,754**	**318,931**	**826**	**280**	**320,037**

Notes:

1. CO_2 emissions based on NYSDEC runs of the NONROAD emission model for the state emission inventory for Year 2007.
2. N_2O and CH_4 emissions based the use of EPA emission factors for N2O and CH4 based on fuel combustion. Fuel consumption estimated with reserve application of CO_2 emission factors (for fuel) to CO_2 emissions.

Fuel Type	Mohawk Valley NY Annual Fuel Consumption[1]		Mohawk Valley NY GHG Emissions[2,3] (metric tons CO_2e/yr)			
	(scf/yr)	(gal/yr)	CO_2	N_2O	CH_4	Total
CNG	29,567,988	-	1,612	1	1	**1,613**
Diesel	-	16,363,320	167,012	420	142	**167,574**
Gasoline	-	14,500,341	127,277	337	114	**127,728**
LPG	-	3,974,749	23,030	68	23	**23,121**
TOTAL	-	-	**318,931**	**826**	**280**	**320,037**

Notes:

1. Fuel consumption estimated with reserve application of CO_2 emission factors (for fuel) to CO_2 emissions.
2. CO_2 emissions based on NYSDEC runs of the NONROAD emission model for the state emission inventory for Year 2007.
3. N_2O and CH_4 emissions based the use of EPA emission factors for N_2O and CH_4 based on fuel combustion.

Fuel Type	Mohawk Valley NY Annual Energy Consumption (MMBtu/yr)
CNG	30,396
Diesel	2,258,138
Gasoline	1,812,543
LPG	365,677
Total	**4,466,754**

Notes:

1. Annual energy consumption is based on projected fuel consumption calculated from NYSDEC CO_2 emission estimates.

Supporting data and calculations are provided in the following E&E Excel Workbook:
File Name:
MV Transportation - Nonroad - 2013_1_14.xlsx
Date:
1/14/2013

Waste Disposal Emissions

	Regional average Municipal Solid Waste (MSW) generated per capita (short tons)	Total MSW (Short tons)[3]	Population	CO2e (Metric Tons), 2010[1,2]				
				Nonbiogenic CO2	CH_4	N_2O	Total non biogenic	CO2 biogenic[4]
Mohawk Valley: Direct Emissions[1]		**213,573**	**500,155**	**190**	**151,814**	**1**	**152,006**	**0**
Fulton		41,742	55,531	80	70,867	0	70,948	0
Herkimer		-	64,519	0	0	0	0	0
Montgomery		-	50,219	0	0	0	0	0
Onieda		171,831	234,878	110	52,042	0	52,153	0
Otsego		-	62,259	0	28,905	0	28,905	0
Scholarie		-	32,749	0	0	0	0	0
Mohawk Valley: Indirect Emissions[2]	**0.53**	**267,043**	**500,155**	**0**	**85,764**	**0**	**85,764**	**-**
Fulton	0.38	21,344	55,531	0	6,855	0	6,855	0
Herkimer	0.57	37,029	64,519	0	11,892	0	11,892	0
Montgomery	0.64	32,004	50,219	0	10,278	0	10,278	0
Onieda	0.57	134,802	234,878	0	43,293	0	43,293	0
Otsego	0.48	30,000	62,259	0	9,635	0	9,635	0
Scholarie	0.36	11,864	32,749	0	3,810	0	3,810	0

Notes

1. Total emissions as reported for all waste facilities in Mohawk Valley (includind closed facilities Fulton and Herkimer)in 2010 EPA MRR GHG Reporting Data
2. Indirect emissions calcuated based on tons of waste generated by each county using CARB FOD Model
3. Waste data from MV DEC Waste Summary_WORKING_Dec 17 2012.xlsx, provided by J Dumpert (E&E), compiled data from DEC 2010 Annual Planning Unit Recycling Reports
4. Biogenic emissions were not reported

Supporting data and calculations are provided in the following E&E Excel Workbook:
File Name:
MV Waste 1_14 BOD method.xlsx
Date: 1/15/2013

Wastewater Treatment Facility Emissions: Direct

				CO2e (Metric Tons)[2]			
	Wastewater volume flow (MGD)[1]	Number of Plants[1]	Population[2]	CO2	CH4	N2O	Total CO2e[3]
New York State[2]	**3,693.65**	**610**	**19,378,102**	**-**	**1,310,000**	**580,000**	**1,900,000**
Mohawk Valley[2]	**121.15**	**38**	**500,155**	**-**	**30,000**	**10,000**	**50,000**
Fulton	13.45	4	55,531		3,330	1,110	5,551
Herkimer	16.25	5	64,519		4,024	1,341	6,706
Montgomery	16.41	5	50,219		4,063	1,354	6,772
Oneida	67.21	15	234,878		16,642	5,547	27,737
Otsego	5.120	3	62,259		1,268	423	2,113
Scholarie	2.716	6	32,749		673	224	1,121

[1]Descriptive Data of Municipal Wastewater Treatment Plants in New York State, NYSDEC, January 2004

[2]State and Regional Totals calculated using the EPA State Inventory Tool, Wastewater module, for Municiple waterwater only, using NYS defaults, 2010 population from 2010 US Census.

[3]State and Regional totals reported as calculated by using the EPA State Inventory Tool--may not be exact sum of other rows due to rounding.

[4]County totals calculated based on ratio of 2004 County wastewater volumes and EPA State Inventory Tool results for the region. Significant figures of SIT (million MT, to 100ths) do not provide totals for the smaller population numbers.

Supporting data and calculations are provided in the following E&E Excel Workbook:
File Name:
MV Waste_water11_27.xlsx
Date: 11/27/2012

Manure Management Emissions

			CO_2e (Metric Tons) [2]			
	Population (# of animals)[1]	Number of Animal Farms [1]	CO_2	CH_4	N_2O	Total CO_2e
New York State						
Mohawk Valley	**181,370**	**4,607**		**46,590**	**9,659**	**56,250**
Fulton	6,012	245		1,459	296	1,756
Herkimer	39,688	836		10,112	2,108	12,219
Montgomery	42,130	711		9,869	2,035	11,904
Oneida	40,099	1,060		12,272	2,579	14,852
Otsego	34,331	1,113		8,367	1,724	10,090
Schoharie	19,110	642		4,512	917	5,429

Note

1. The animal and farm number data is from 2007 USDA Agricultural Census.

2.CO_2e calculation is based on the animal number and the factors from 2010 USEPA Draft Regional Greenhouse Gas Inventory Guidance and 2006 IPCC Guidelines for National Greenouse Gas Inventories .

Enteric Fermentation Emissions

			CO_2e (Metric Tons) [2]			
	Population (# of animals)[1]	Number of Animal Farms [1]	CO_2	CH_4	N_2O	Total CO_2e
New York State						
Mohawk Valley	**181,370**	**4,607**		**215,881**		**215,881**
Fulton	6,012	245		9,601		9,601
Herkimer	39,688	836		60,782		60,782
Montgomery	42,130	711		62,857		62,857
Oneida	40,099	1,060		531		531
Otsego	34,331	1,113		52,359		52,359
Schoharie	19,110	642		29,750		29,750

Notes

1. The animal and farm number data is from 2007 USDA Agricultural Census.

2.CO_2e calculation is based on the animal number and the factors from 2010 USEPA Draft Regional Greenhouse Gas Inventory Guidance.

Agricultural Soils Emissions

		CO_2e (Metric Tons) [2]			
	Cropland Harvested (acres)[1]	CO_2	CH_4	N_2O	Total CO_2e
New York State					
Mohawk Valley	**353,530**			**21,599**	**21,599**
Fulton	15,722			960	960
Herkimer	64,172			3,919	3,919
Montgomery	70,982			4,335	4,335
Oneida	87,040			5,324	5,324
Otsego	70,653			4,315	4,315
Schoharie	44,961			2,746	2,746

Notes

1. The cropland harvested data for synthetic fertilizer calculation is from 2007 US Agricultural Census. Assumed most of fertilizer are used on harvested cropland.

2.CO_2e calculation is from organic fertilizer N_2O emission with data sources from NYSDEC7/23/2012 and synthetic fertilizer N_2O emission with data sources from 2007 US Agricultural Census and EPA Commerical Fertilizer Purchased

Supporting data and calculations are provided in the following E&E Excel Workbook:
File Name:
MV_Agriculture102512.xlsx
Date:
10/25/12

Carbon Sequestration in Forests

	Forest Land (Acres)[1]	Forest Land (km^2)	Total Carbon Sequestration (metric tons C)[2]	Total Carbon Sequestration (metric tons CO2)
New York State				
Mohawk Valley	**2,196,666**	**8,890**	**112,125,020**	**411,498,822**
Fulton	288,843	1,169	15,179,560	55,708,984
Herkimer	735,009	2,974	38,844,366	142,558,823
Montgomery	71,530	289	3,374,087	12,382,900
Oneida	447,465	1,811	22,170,562	81,365,961
Otsego	404,866	1,638	19,972,797	73,300,164
Schohaire	248,953	1,007	12,583,648	46,181,989

Notes

1.The forest land data is from Forest Inventory Data Online (FIDO) FIA Standard Reports, New York Current Area, 2010.

2.The total carbon sequestration is calculated based on the carbon stock factor from COLE 1605 (b) Report for New York, July 24, 2012 and the forest land.

Carbon Sequestration in Urban Forests

	Urban Land Area (km^2) [1]	Tree Canopy Cover (%)[2]	Total Carbon Sequestration (metric tons C)[3]	Total Carbon Sequestration (metric tons CO2)
New York State				
Mohawk Valley	**332**		**24,116**	**88,507**
Fulton	37	44%	3,559	13,062
Herkimer	41	34%	3,074	11,283
Montgomery	38	35%	2,958	10,856
Oneida	190	29%	12,446	45,676
Otsego	18	40%	1,624	5,959
Schohaire	8	26%	456	1,672

Notes

1. The urban land area data is from 2000 US Census.

2. The tree canopy cover percentage data is from provided by Eric J. Greenfield, US Department of Agriculture Forest Service, Syracuse, NY on August 1, 2012.

3. The total carbon sequestration is calculated based on the urban land area, tree canopy coverage and the national average net sequestration rate.

Supporting data and calculations are provided in the following E&E Excel Workbook:
File Name:
MR_Forest_102512.xlsx
Date:
10/25/12