Illinois Greenhouse Gas Emissions Inventory and Projections

Prepared for the Illinois Climate Change Advisory Group
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World Resources Institute

Overview

This report was produced by the World Resources Institute to provide background and baseline data for consideration by the Illinois Climate Change Advisory Group. Unless otherwise noted, all data used in this report comes from the U.S. module of the Climate Analysis Indicators Tool (CAIT-US) from the World Resources Institute (see Appendix A). The report includes a comprehensive greenhouse gas (GHG) inventory for the State of Illinois for the year 2003, trend data from 1990 to 2003, baseline emissions projections to 2020, and general discussion.

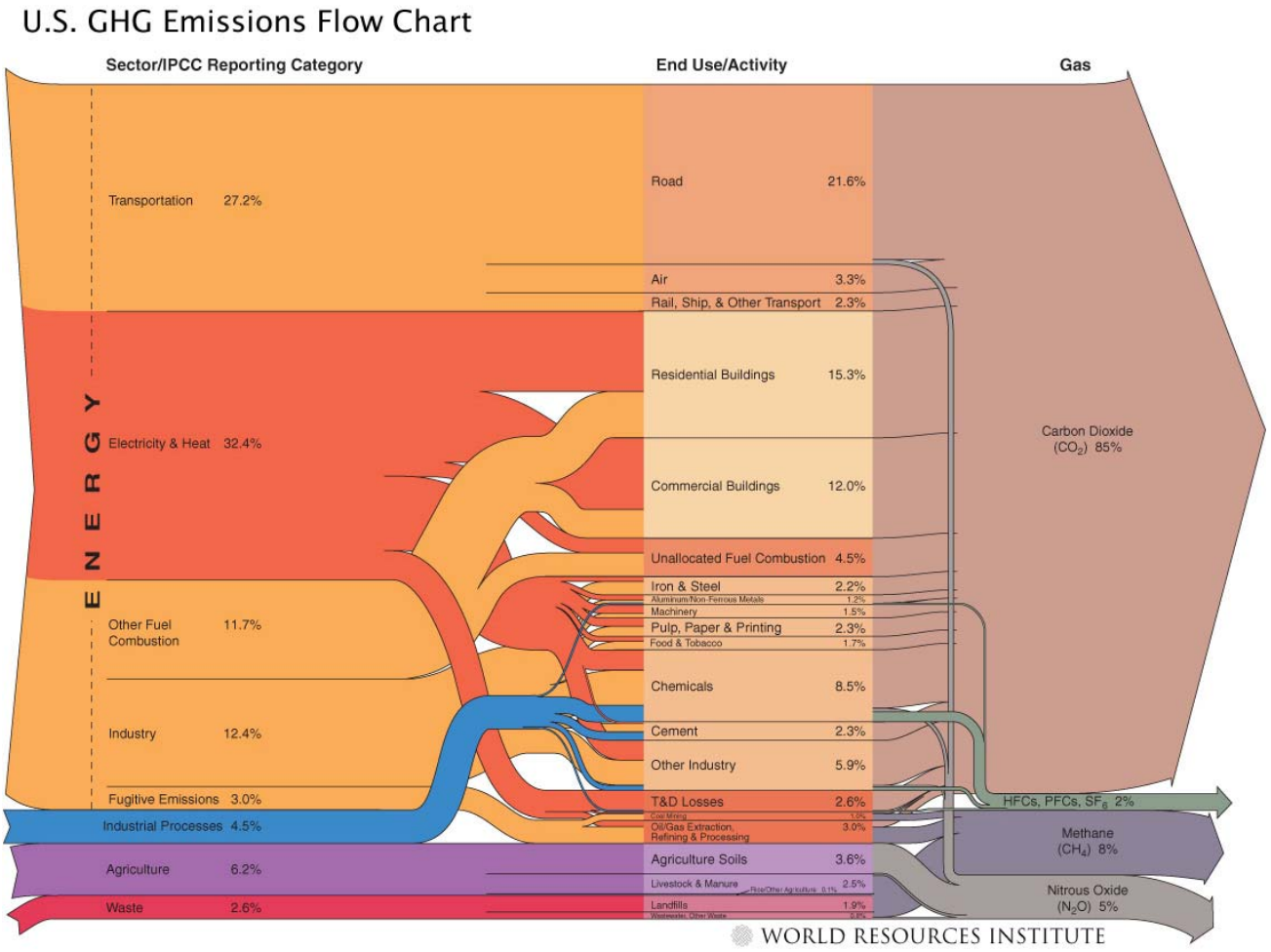
GHG Emissions in the United States

Carbon dioxide (CO_2) is by far the most plentiful GHG, comprising 85 percent of emissions in the U.S. Most CO_2 comes from combustion of fossil fuels in various forms. Methane (CH_4) comprises 8 percent of U.S. emissions; it comes mostly from livestock, landfills, coal mining, and oil and gas refining and processing. Nitrous oxide (N_2O) comprises 5 percent of emissions, coming from agricultural soils and commercial nitrogen fertilizers. The remaining three major greenhouse gases collectively make up 2 percent of U.S. emissions: hydrofluorocarbons (HFC), perfluorocarbons (PFC) and sulfur hexalfuoride (SF_6) arise from manufacturing of industrial materials, and in the case of SF_6, from electricity transmission. Together these three categories of gases are called "F-gases" or "high-GWP gases" for reasons explained below.

These gases have different *global warming potentials* (GWPs), which refers to the degree to which the gas converts solar radiation into heat energy in the atmosphere. Each gas has a GWP index which allows their effects to be compared. CO_2 has a GWP index of 1, CH_4 an index of 21 (i.e., 21 times the global warming potential of CO_2), and N_2O an index of 310. The HFCs and PFCs have GWPs ranging from 140 to 11,700, and the GWP for SF_6 is 23,900. These high GWP gases are emitted in much smaller quantities than the other GHGs, so their impact, while still significant, is comparatively small. Emissions of non-CO_2 gases are commonly referred to in terms of "CO_2 equivalent," or CO_2e, referring to their global warming potential relative to CO_2.

Energy use in various forms drives the majority of GHG emissions (over 85 percent). Electricity and power generation alone contribute about a third of U.S. emissions, and transportation—road, rail, and air—contribute another fourth. The remainder of energy-related emissions comes from a range of industrial and manufacturing sectors, "fugitive emissions" from coal mining, oil and gas refining and processing, and "other fuel combustion," primarily for building heat. Residential and commercial building use collectively comprises over 27 percent of GHG emissions when building electricity use is included.

Figure 1 illustrates GHG emissions at the national level for 2003:[1]



[1] Emissions data comes from the *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2003*, U.S. EPA. Allocations from "Electricity & Heat" and "Industry" to end uses are WRI estimates based on energy use data from the International Energy Agency (IEA, 2005). All data are for 2003. All calculations are based on CO_2 equivalents, using 100-year global warming potentials from the IPCC (1996), based on total U.S. emissions of 6,978 $MtCO_2e$. Emissions from fuels in international bunkers are included under Transportation. Emissions from solvents are included under Industrial Processes. Emissions and sinks from land use change and forestry (LUCF), which account for a sink of 821.6 $MtCO_2e$, and flows less than 0.1 percent of total emissions are not shown. For detailed descriptions of sector and end use/activity definitions, see *Navigating the Numbers: Greenhouse Gas Data and International Climate Policy* (WRI, 2005).

GHG Emissions in Illinois

In 2003, the most recent year for which data are available, Illinois produced an estimated 274.9 million metric tons of GHGs on a CO_2 equivalent basis, ranking it 5th compared to other states, only slightly ahead of Florida and Indiana (table 1). Illinois generated 4.1% of total U.S. emissions in 2003. If the state were its own nation, it would be the 26th largest emitter in the world, slightly ahead of the Netherlands.

Table 1. Top 10 GHG Emitting States		$MtCO_2Eq$	% of US
1	Texas	772.2	11.5%
2	California	449.8	6.7%
3	Ohio	300.4	4.5%
4	Pennsylvania	298.2	4.4%
5	**Illinois**	**274.9**	**4.1%**
6	Indiana	271.7	4.0%
7	Florida	270.0	4.0%
8	New York	240.7	3.6%
9	Michigan	210.9	3.1%
10	Louisiana	202.6	3.0%

Table 2 provides a breakout of emissions data by sector and gas, as further illustrated in Figure 2.

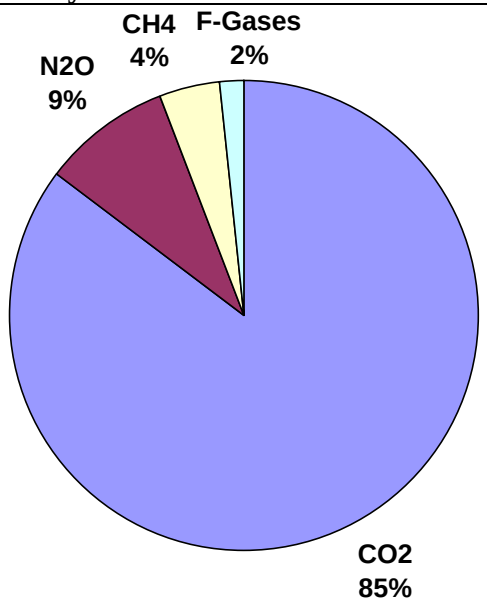
Table 2. Illinois GHG Emissions by Sector and Gas – 2003

1,000 Tons CO2 Eq.	CO2	CH4	N2O	FGases	Total
Electricity Generation	85,509	*21	*393		85,923
Residential	26,229	*110	*28		26,367
Commercial	12,571	*30	*12		12,613
Industrial	38,149	*74	*125		38,348
Transport	64,004	95	1,417		65,516
Fugitive Emissions		1,878			1,878
Industrial Processes	8,216			4,852	13,068
Agriculture		3,047	21,317		24,364
Waste		6,079	732		6,811
Energy - Other	76,949				77,328
Total	**234,678**	**11,334**	**24,024**	**4,852**	**274,888**

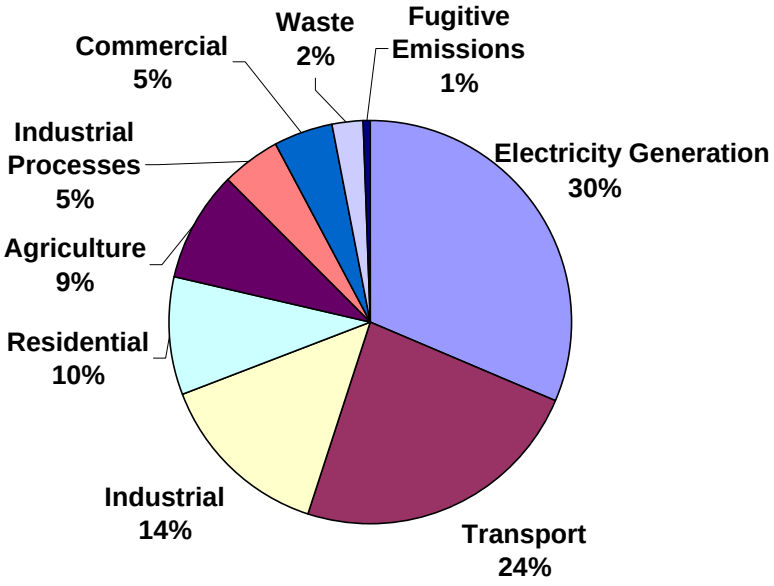
* 2001 inventories were used for CH4 and N2O in the Electricity Generation, Residential, Commercial, Industrial, and Agriculture sectors to adjust for missing or questionable proxy data in the 2003 inventories.

Figure 2. Illinois Emissions by Gas and Sector

Illinois Emissions by Gas (2003)	MtCO2eq.	%
Total – All Sectors	**274.9**	
CO2	234.7	85%
CH4	11.3	4%
N2O	24.0	9%
High-GWP Gases (HFCs, PFCs, SF6)	4.9	2%



Illinois Emissions by Sector (2003)	MtCO2eq.	%
Total – All GHGs	**274.9**	
Total Energy	**230.7**	84%
Electricity Gen.	85.9	30%
Residential	26.4	10%
Commercial	12.6	5%
Industrial	38.4	14%
Transportation	65.5	24%
Fugitive Emissions	1.9	1%
Industrial Processes	13.1	5%
Agriculture	24.4	9%
Waste	6.8	2%



Emissions by Gas

Broken out by gas, CO_2 comprises the largest share of GHGs, slightly smaller than at the national level. N_2O comprises a *larger* share of GHGs in Illinois than does CH_4—the opposite of the case at the national level—owing to the greater prevalence of cultivated crops and fertilizer use in Illinois. F-gases play a small role in Illinois emissions, similar to the national pattern.

Emissions by Sector[2]

Broken out by sector, Illinois GHG emissions have a similar composition to those of the nation as a whole, with energy use contributing the overwhelming majority of GHGs.

Emissions in the electricity generation sector mostly come from fuels used to produce electricity, which is distributed to other sectors: residential, commercial and industrial. The residential and commercial sectors mostly represent fuels used to produce building heat, while the industrial sector includes fuels used in a wide variety of manufacturing processes. These three sectors do *not* include emissions from electricity use in these sectors (unless it is generated on-site), which is included in the electricity generation sector. Emissions from the transportation sector include all modes of transportation. Fugitive emissions are included as a subdivision of energy use, and come from the mining and processing of fossil fuels—coal mining, oil refining and natural gas pipelines—as opposed to the combustion of fuels to produce energy.

Emissions classified under industrial processes arise from the production processes of raw materials, as opposed to the fuels consumed to produce them. For instance, CO_2 is a byproduct in chemical manufacturing, as well as the conversion of calcium carbonate into lime to make cement.

Emissions from agriculture arise from livestock production and soil use. Methane comes from manure and the digestive processes of many livestock. Nitrous oxide arises from commercial (farm) soil use and the application of nitrogen fertilizers. Emissions in the waste sector arise from landfills and wastewater, and consist almost entirely of methane.

GHG Emissions Trends in Illinois

Total emissions in Illinois increased between 1990 and 2003, as they did in all other states. In Illinois' case, they increased in the aggregate by 15.8 percent. By comparison, the national rate was 13.9 percent. However, an analysis of trends at the sector level reveals significant differences between emissions growth in Illinois and the country as a whole. Table 3 presents emission trends in Illinois and the U.S., and figure 3 presents the annual trends in Illinois emissions by sector between 1990 and 2003.

[2] For a comprehensive description of emissions sectors with specific application to the state of Illinois, see *Illinois Inventory of Greenhouse Gas Emissions: 2000,* Illinois Department of Natural Resources, July 2004.

Table 3. Emissions Growth in Illinois vs. U.S.

Illinois	1990	2003	Growth	Annual Rate
Total (MtCO2Eq)	**237.3**	**274.9**	**15.8%**	**1.1%**
Electricity Generation	56.3	85.9	52.5%	3.3%
Residential	25.6	26.4	3.0%	0.2%
Commercial	12.5	12.6	1.1%	0.1%
Industrial	44.9	38.4	-14.6%	-1.2%
Transportation	55.3	65.5	18.5%	1.3%
Fugitive Emissions	4.2	1.9	-55.6%	-6.1%
Industrial Processes[3]	3.5	13.1	277.2%	10.8%
Agriculture[4]	25.9	24.4	-5.7%	-0.5%
Waste	9.2	6.8	-25.8%	-2.3%

U.S.[5]	1990	2003	Growth	Annual Rate
Total (MtCO2Eq)	**6,108.9**	**6,959.1**	**13.9%**	**1.0%**
Electricity Generation	1,803.6	2,272.2	26.0%	1.8%
Residential	338.0	378.8	12.1%	0.9%
Commercial	222.6	235.8	5.9%	0.4%
Industrial	1,082.2	1,065.4	-1.6%	-0.1%
Transport	1,460.0	1,818.4	24.6%	1.7%
Fugitive Emissions	254.9	217.4	-14.7%	-1.2%
Industrial Processes	301.1	304.1	1.0%	0.1%
Agriculture	439.6	439.1	-0.1%	0.0%
Waste	210.0	194.8	-7.2%	-0.6%

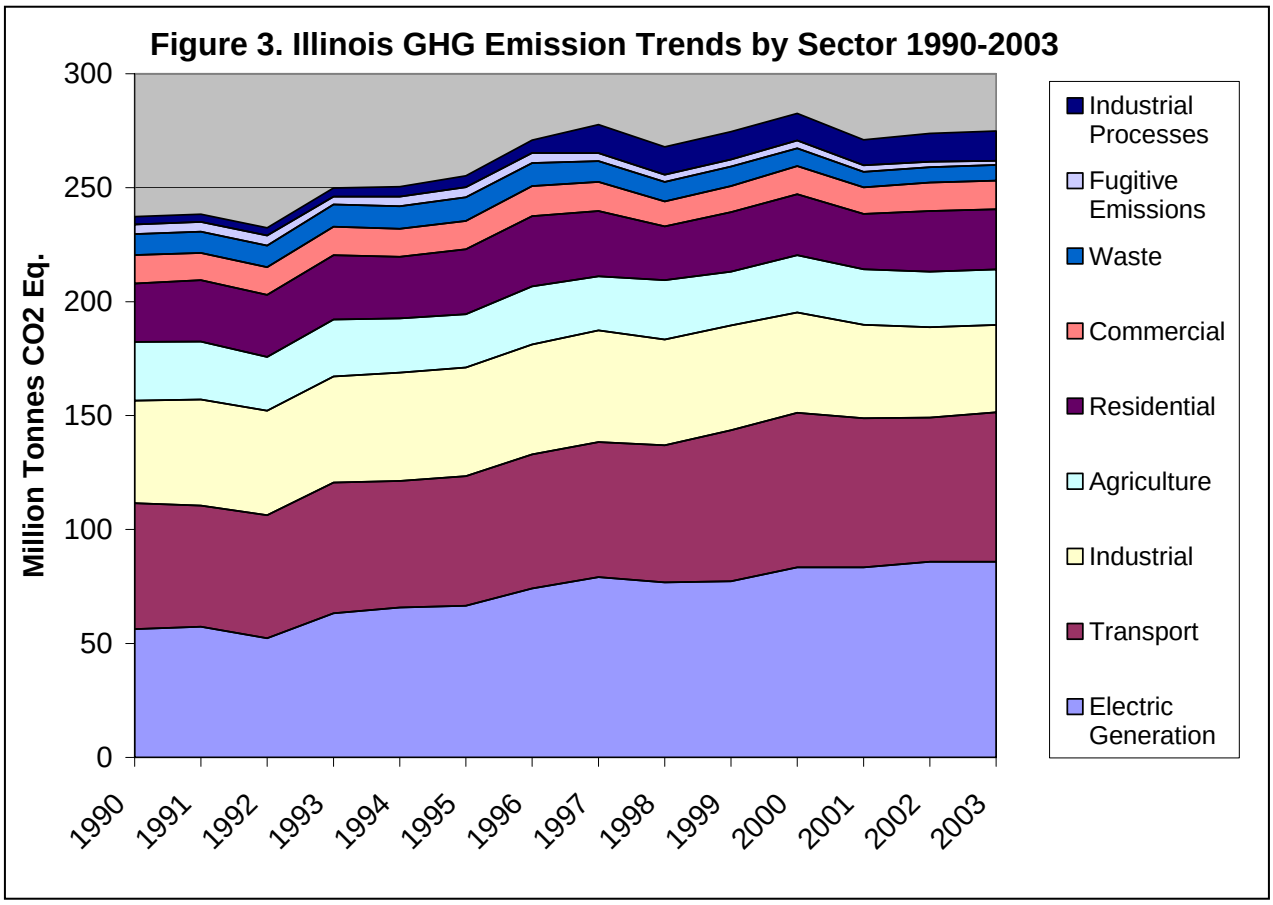
Illinois' emissions from the electricity generation sector increased at nearly twice the national rate. This is likely due to two reasons. First, and most importantly, electricity production in Illinois increased 46 percent between 1990 and 2003 compared to 28 percent for the U.S. as a

[3] State level emissions data in the Industrial Processes sector is highly uncertain and is considered unreliable. As this sector is the major source of F-gases it remains in this inventory; however, trends in this category are considered to be questionable.

[4] Owing to anomalies in the underlying data, Illinois 2001 emissions from agriculture are used in the 2003 column of this table.

[5] U.S. data are sourced from EPA's Inventory of U.S. Greenhouse Gas Sources and Sinks: 1990-2004. Because of differences in sector definitions and methods for assigning GHG emissions to economic sectors, emissions trends for the Residential, Commercial and Industrial sectors are illustrative but not directly comparable to those presented for Illinois. Only CO2 emissions from direct fossil fuel combustion are displayed for the Residential, Commercial and Industrial sectors, thus the sum of U.S. sector data does not match the actual total shown in Table 3.

whole. Second, the electricity mix changed in Illinois over these 13 years. In 1990, coal accounted for 43% of electricity production (in GwH), while nuclear generation (a zero emissions source) accounted for 56 percent, and natural gas accounted for just 1.1 percent. In 2001, coal had risen to 47 percent, while nuclear generation decreased to 50 percent, and natural gas increased to 2.1 percent. Despite the increase in fossil fuel electricity generation, Illinois generates far more electricity from nuclear power than any other state.



Emissions from transportation also increased significantly (nearly 19 percent); however, this is less than the national rate over this period. The increase was driven by greater vehicle use; vehicle miles traveled (VMT) in Illinois increased by 27.8 percent in the aggregate and 15.8 percent per capita between 1990 and 2003. By comparison, VMT at the national level increased 34.8 percent between 1990 and 2003, and per capita VMT increased 15.7 percent. Another important trend is that ethanol use increased 188 percent between 1990 and 2003. So while Illinois' transport emissions were mostly driven by increased population (as opposed to increased driving), they were in all likelihood moderated by increases in ethanol use.

Emissions from the agriculture sector decreased 6 percent in Illinois between 1990 and 2003 compared to an essentially flat rate nationally. The decrease is attributable to smaller methane

emissions due to decreased numbers of livestock, especially cattle and swine.[6] Emissions from the waste sector decreased nearly 26 percent, over triple the national rate. The decrease in waste emissions is mostly due to the population based estimates of emissions from this sector (see Appendix A). Between 1990 and 2003, Illinois experienced slower population growth compared to the national rate; this caused waste emissions to be allocated to Illinois in decreasing amounts over time. It is difficult to attribute the trends in the residential and commercial sectors owing to the seasonal and annual variations in temperature. The decline in industrial emissions is due primarily to fuel switching away from coal and towards natural gas as well as increased efficiency as energy use in the sector remained stable through this period.[7]

Illinois emissions increased steadily between 1990 and 2003, though there are three notable periods where emissions declined. Two of these periods are related to lower economic output. Between 1991-92 and 2001-02, the U.S. experienced mild economic recessions. U.S. and Illinois GHG emissions exhibited similar decreases during these periods. As the national and state economies picked up again, emissions increased. Emissions in 2002 and 2003 have not increased significantly primarily due to a lack of continued growth in electric generation emissions in these years. The one other instance of a decrease in Illinois emissions occurred in 1998 and did not coincide with any national emissions decrease. This is explained by the fact that Illinois experienced a significantly warmer than normal winter in 1998 resulting in lower than average emissions from the residential and commercial sectors.

Projections of Illinois GHG Emissions

To provide a range of possible future emissions trends, three projection cases "low", "best guess" and "high", were developed for this analysis. In the low case, emissions increased at an average annual rate of 0.64 percent between 2003 and 2020. Under this scenario, emissions grow to 306.3 $MtCO_2Eq$ by 2020, and increase of 29.1 percent above 1990 levels. In the high case projection, emissions increase at an average annual rate of 1.39 percent between 2003 and 20202. Under this scenario emissions are 347.8 $MtCO_2Eq$ in 2020 or 46.6 percent above 1990 levels.

Under the best guess case, GHG emissions in Illinois are projected to increase at an average annual rate of 1.0 percent between 2003 and 2020. By 2020, Illinois' emissions are projected to grow to 325.5 $MtCO_2Eq$, an increase of 50.5 $MtCO_2Eq$ over 2003 levels, or 18.4 percent. Compared to 1990 emissions, 2020 projected emissions represent an increase of 88.2 $MtCO_2Eq$, or 37.2 percent.

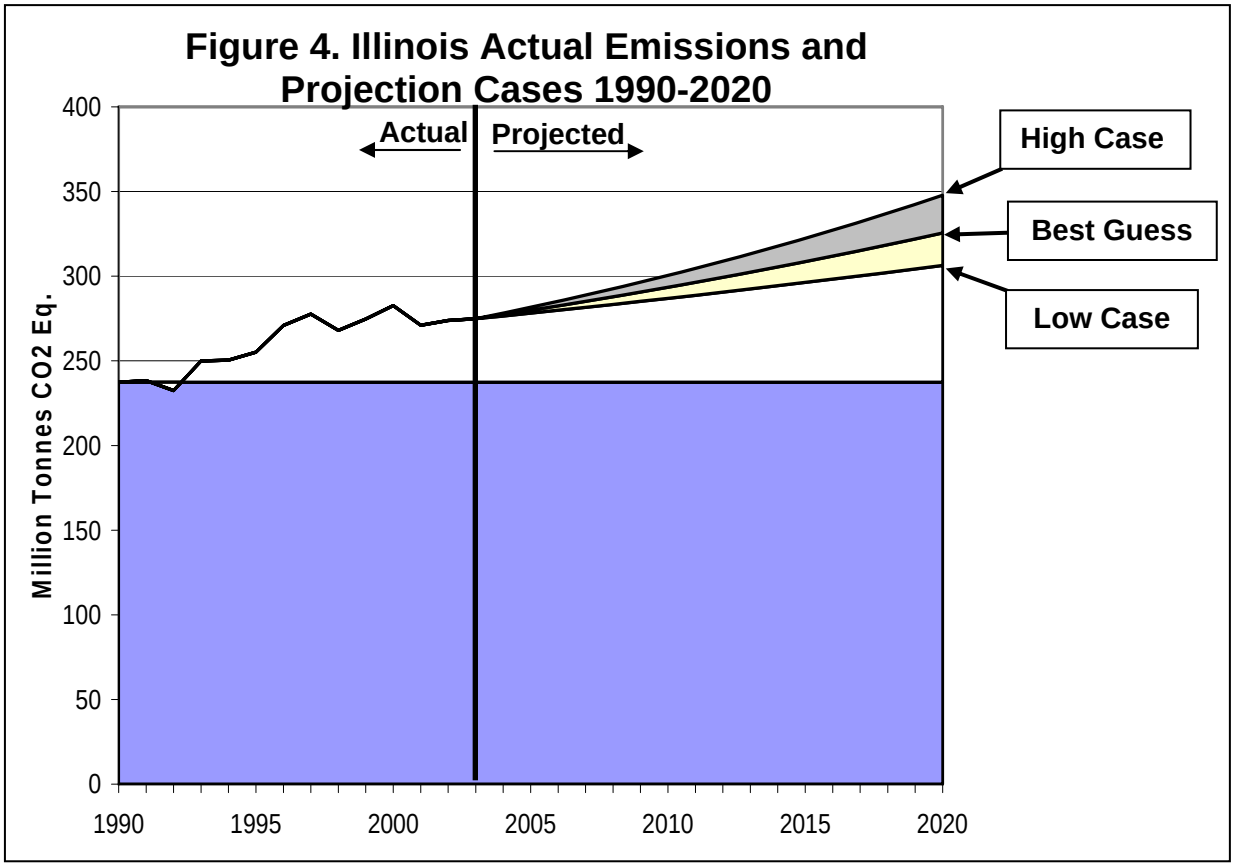
Under the best guess case, projected emissions growth, though substantial, is slower than the projected growth for the nation as whole. The rate of growth is also slightly lower than historic emissions growth in Illinois between 1990 and 2003 and is therefore seen as the most plausible scenario. Illinois projected emissions are expected to be driven by a continuing increase in

[6] *Illinois Inventory of Greenhouse Gas Emissions: 2000.*
[7] Ibid.

emissions from electric power generation from fossil fuels. Emissions from transportation are also expected to increase substantially.

The projections presented here are based on regional growth rates for energy consumption developed by the Energy Information Administration and published in the Annual Energy Outlook 2006. Projected emissions for electric power, waste agriculture and industrial processes are derived from historic trends. See Appendix B for a discussion of the methodology and assumptions used in these projections.

Figure 4 illustrates actual emissions and emission projection cases in Illinois to 2020, with comparison to 1990 levels. Data points for the best guess case are listed in Appendix B, Table 6.



Appendix A – The Climate Analysis Indicators Tool

The Climate Analysis Indicators Tool (CAIT) is an inventory and analysis tool developed by the World Resources Institute. Among other data, the CAIT-US module includes greenhouse gas (GHG) inventories for all 50 states plus the District of Columbia for the six major greenhouse gases between 1990 and 2003.[8]

Years, Gases and Sectors

CAIT-US covers 1990-2003 (in the pre-release version). Table 4 shows which gases are included in each sector.

Table 4. CAIT-US Sector and Gas Coverage

Sector	CO_2	CH_4	N_2O	F-Gases
Energy				
Electricity Generation	X	X	X	
Residential	X	X	X	
Commercial	X	X	X	
Industrial	X	X	X	
Transportation	X	X	X	
Fugitive Emissions		X		
Industrial Processes	X			X
Agriculture		X	X	
Waste		X	X	

This inventory excludes two common categories of emissions (although they are included in CAIT-US):

- International Bunker Fuels. These emissions come from fuel use during international transport; for instance, air travel or shipping to and from other countries. Attribution of these emissions is controversial; it is unclear whether to attribute them to the country of origin or the destination. This issue is even more difficult at the U.S. state level.

- Land-use Change and Forestry (LUCF). This category is comprised of changes in GHG levels due to afforestation, deforestation, reforestation, forest management and similar activities. Carbon is released into the atmosphere as forests are cleared or burned, and is sequestered through forest growth. On balance, this category may either be a source of GHGs if released carbon released exceeds sequestered carbon or a "sink" if sequestered carbon exceeds released carbon. LUCF is believed to be a significant sink at the national level but there are significant data uncertainties at the state level. The best estimates are that within a reasonable level of statistical certainty, Illinois emissions from LUCF range

[8] 2003 data is available in a forthcoming release which is not publicly available at the time this report was written.

from being a slight net sink to being a small net source. The ambiguity and uncertainty of the underlying data make it difficult to identify trends in this sector with any reliability or assurances that emissions are greater or less than zero; therefore, contributions from LUCF are excluded in this inventory.

Data Sources

CAIT-US indicators derive from the EPA's Emissions Inventory Improvement Program (EIIP), which provides guidance and methodologies to states that are developing their own emissions inventories. The EIIP has developed a set of tools that accompany its latest technical reports. The tools contain state-level proxy data that a state may use to calculate its emissions. A state may supplement or replace the "default" (EPA-supplied) data if it has its own sources that it considers more reliable.

CAIT-US uses a simple process to produce its inventories; it selects the default proxy data for each state, uses the tools to compute emissions using the tool-supplied emissions coefficients (determined by the tools), and extracts the results. The same process is used for each state and the District of Columbia. Although the inventory tools allow states to enter their own data, for the sake of comparability, CAIT-US does not incorporate state-supplied proxy data where available.

The state-level proxy data in the EPA inventory tools comes from a variety of sources, mostly federal agencies:

Table 5. Proxy Sources for CAIT-US by Sector

Sector	Source
Electricity Generation, Residential, Commercial, Industrial & Transport	Energy Information Administration (EIA) Federal Highway Administration
Fugitive Emissions	US EPA
Industrial Processes	U.S. Geological Survey (USGS) *Directory of Chemical Producers* (SRI 2000)
Agriculture	US Department of Agriculture (USDA) *Commercial Fertilizers Report*, Fertilizer Institute
Waste	US EPA

Data Limitations

The *Inventory of U.S. Greenhouse Gas Emissions and Sinks* (US EPA) provides a detailed explanation of uncertainties for all sectors that arise at any level due to estimation methods. Additionally, all sectors in this inventory are subject to some level of uncertainty owing to the fact that the default proxy data comes from federal agencies, and the data becomes less precise at

the state level. This is especially true for non-energy sectors and fugitive emissions; some important end use data is missing entirely, as noted below. However, in nearly all cases, data uncertainties and missing data have only a small effect on the aggregate state-level emissions inventory.

- *Fugitive Emissions.* Emissions from oil and natural gas processing and refining are not included due to lack of production data. These industries represent 3% of emissions at the national level.

- *Industrial Processes.* At the national level, emissions from this sector represent 2% of total emissions. Significant uncertainties in this sector arise from variations in the productions methods of raw materials from state to state. Production data for ozone depleting substance substitutes and semiconductors are estimated from national production data based on state population and state-level shipments, respectively. Emissions from manufacture of nitric acid, adipic acid, aluminum, HFCF-22 and magnesium are not included due to lack of data.

- *Waste.* Emissions from landfills (waste in place) and wastewater are estimates from national statistics using state-level population as a proxy for assigning emissions to individual states. Emissions from industrial wastewater methane (fruits & vegetables, meat & poultry, pulp & paper) are not included due to lack of data.

Appendix B – Methodology and Assumptions for Projections

Projections in this report were computed separately for each sector using the following methods and assumptions, using the 2003 inventory as a baseline.

Energy Sectors

The Energy Information Administration (EIA) of the U.S. Department of Energy publishes the *Annual Energy Outlook* (AEO), a comprehensive set of forecasts for energy consumption, production, prices, and related indicators (including CO_2 emissions) for the United States. The AEO only projects CO_2 emissions at the national level. In the 2006 edition, the AEO projected that CO_2 emissions nationally would rise 19 percent over 2003 levels by 2020.

Although the AEO does not project CO_2 emissions at anything less than a national level, it does project energy growth at a regional level. The East North Central (ENC) region comprises Illinois, Indiana, Ohio, Michigan and Wisconsin. For the residential, commercial, industrial, and transportation sectors, the growth rates for total energy use in Illinois were assumed to be the same as those for the larger region. The growth rate for energy use is used to project CO_2 emissions growth for these four sectors: -0.21% annually in the residential sector, 0.32% in the commercial sector, 0.13% in the industrial sector, and 0.94% in transportation.

Growth of emissions in the electric generation sector may be significantly different in Illinois compared to the ENC region. Between 1990 and 2003, emissions from this sector grew 24 percent nationally and 21 percent in the ENC region, but they grew at 53 percent in Illinois. These rates suggest that the ENC projections may not be a suitable proxy for Illinois.

In our three projection cases all sector growth rates are identical with the exception of electric generation. The AEO ENC projection for energy growth from 2003-2020 (1.34% annually) is used as the electric generation rate for the "low" case. Actual emissions growth in Illinois' electric generation sector from 1990-2003 (3.30 percent) is used in the "high" case. The average of the low and high electric generation rates (2.32% annual) is the rate used for projecting growth in the electric generation sector for the "best guess" case.

These projections assume that fugitive emissions growth is flat (zero percent), which is a conservative assumption. The AEO projections do not include fugitive emissions, so the only basis available for projections is historical performance. Unfortunately, historical data is inconclusive, partly because CAIT does not include emissions from oil and natural gas processing, and partly due to significant year-to-year fluctuations in the available data (from coal mining). The data suggest that fugitive emissions have declined to some degree since 1990 at both the national level (where the data is more certain) and at the state level, although the magnitude of the decline in Illinois is uncertain. For this reason, and because fugitive emissions account for only two percent of total emissions in Illinois, the assumption that fugitive emissions growth will remain flat is conservative.

Industrial Processes

The AEO does not project emissions from industrial processes. These projections assume that growth in emissions from industrial processes is flat (zero percent). As discussed previously,

estimates of emissions from this sector are problematic at the state level, owing in part to the variety of activities involved and to data uncertainty. At the national level, historic growth in the industrial process sector has been almost flat since 1990. Given this trend and the small percentage of Illinois' emissions classified under industrial processes, a zero percent growth rate is reasonable.

Agriculture

Likewise, the AEO does not project emissions from agriculture. These projections assume that emissions growth in the agriculture sector is flat through 2020. As discussed previously, agriculture emissions declined by 6 percent between 1990 and 2001[9]. However, this decline was attributed to a decrease in large-animal livestock—cattle and swine—with a corresponding decrease in methane emissions from enteric fermentation and manure management. Policy changes are not cited as contributing factors to decreases in livestock, and we assume here that they arise from market forces, the future of which is uncertain. The assumption of zero percent growth is therefore a conservative estimate.

Waste

Likewise, the AEO does not project emissions from waste, but these forecasts assume that these emissions will decline by an annual rate of 2.27%, consistent with historical declines from 1990-2003. Historic declines in this sector were due to slower population growth as compared with the nation as a whole. This population trend is projected to continue with Illinois growing at a rate of 0.32% between 2000 and 2020 and U.S. population growing at a rate of 0.89%. This disparity lends us to conclude that while the 2.27% rate of decline is in line with historic trends it is likely to be a conservative estimate. In 2020, emissions from the waste sector are projected to be 4.68 $MtCO_2$ eq, a 39.7% decline from 6.81 $MtCO_2$ eq in 2003.

Table 6 presents actual and projected total annual emissions for Illinois from 1990 to 2020 under the best guess case.

[9] As noted previously, this inventory uses the 2001 emissions estimate for agriculture owing to data anomalies in the years 2002 and 2003.

Table 6. Illinois Actual and Projected Emissions 1990-2020 (in Thousand tonnes CO2 Eq.)		
	Actual	**Projected**
1990	237,309	
1991	238,363	
1992	232,448	
1993	249,873	
1994	250,382	
1995	255,212	
1996	270,844	
1997	277,621	
1998	267,928	
1999	274,630	
2000	282,613	
2001	271,050	
2002	273,766	
2003	274,888	
2004		277,374
2005		279,915
2006		282,513
2007		285,169
2008		287,885
2009		290,660
2010		293,497
2011		296,396
2012		299,359
2013		302,387
2014		305,481
2015		308,643
2016		311,874
2017		315,175
2018		318,548
2019		321,994
2020		325,515