



# Chicago Metropolitan Agency for Planning

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## MEMORANDUM

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TO: Economic and Community Development Committee  
Environment and Natural Resources Committee  
FROM: Center for Neighborhood Technology (CNT)  
RE: Regional Energy Snapshot update  
DATE: May 19, 2009

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### **DRAFT-FOR REVIEW ONLY**

This memo serves to update the Committees on the Regional Energy Snapshot, scheduled to be completed in June 2009; it accompanies a CNT presentation to the Committees on May 26, 2009. (Although not included in this memo, CNT has also completed a Regional Greenhouse Gas Inventory, which will also be presented at the May 26<sup>th</sup> meeting.)

The focus of this update is to review the Regional Energy Profile section of the report, which shows specifically how energy is used today in the seven-county region. The sections of the profile will include the following, with the marked sections discussed in this memo:

- Description of Methodology
- Description of the Metadata and Data Collection Protocol.
  - Individual consumer usage data-Electric (ComEd)
  - Individual consumer usage data-Natural Gas (Nicor)
  - Individual consumer usage data-Natural Gas (People's Gas)
  - Individual consumer usage data-Natural Gas (North Shore)
  - Vehicle Miles Traveled
- Energy source: How much energy is used by energy source (e.g. electric, natural gas)?\*
- Energy consumption by sector: Who is using energy and how much are they using?\*
- Energy consumption by geography: How much energy is being used in each county?\*
- Energy consumption by key municipalities that represent the wide-ranging sizes of municipalities in the metropolitan region and different development patterns. Each has already begun to examine energy and other sustainability issues. The selected municipalities are Algonquin, Aurora, Blue Island, Highland Park, Joliet and Schaumburg.

## Electric

CNT Energy analyzed 2005 account data provided by ComEd for the entire CMAP seven county region. Electric consumption in 2005, gauged by number of billed kilowatt hours (kWh) in the seven county region reached over 73 billion kWh. Of this total, about two thirds can be attributed to commercial/industrial (C&I) consumption with the remainder by residential. (Figure 1)

The breakdown of total kWh consumption by county largely reflects the population rankings. Cook County, without surprise, is responsible for 64% of all electric consumption in the region, followed by DuPage, Lake, Kane, Will, McHenry and Kendall. (Figure 2)

While the 2/3 of regional consumption is by the C&I sector, the individual counties look somewhat different. Cook, DuPage, Kane and Lake Counties are characterized by more consumption in the C&I sectors and have similar percentages to that of the region as a whole. (Figure 3) This can be attributed to a larger commercial base in these counties.

Will, McHenry and Kendall Counties have a much larger percentage of residential consumption, 45%, 47% and 55%, respectively. This reflects the land use in these outlying communities.

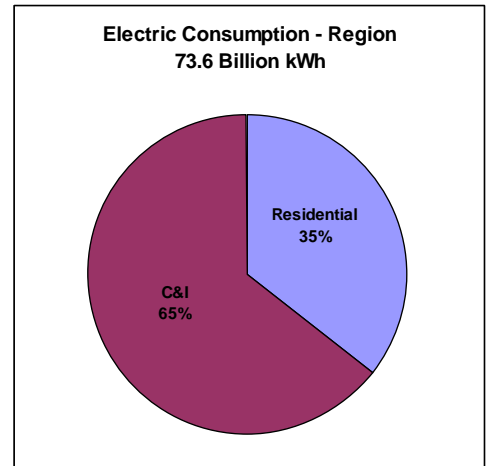


Figure 1

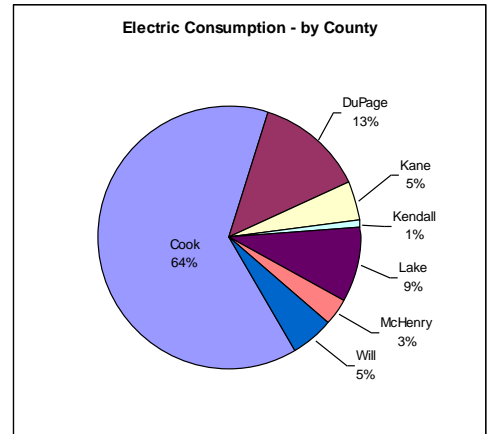


Figure 2

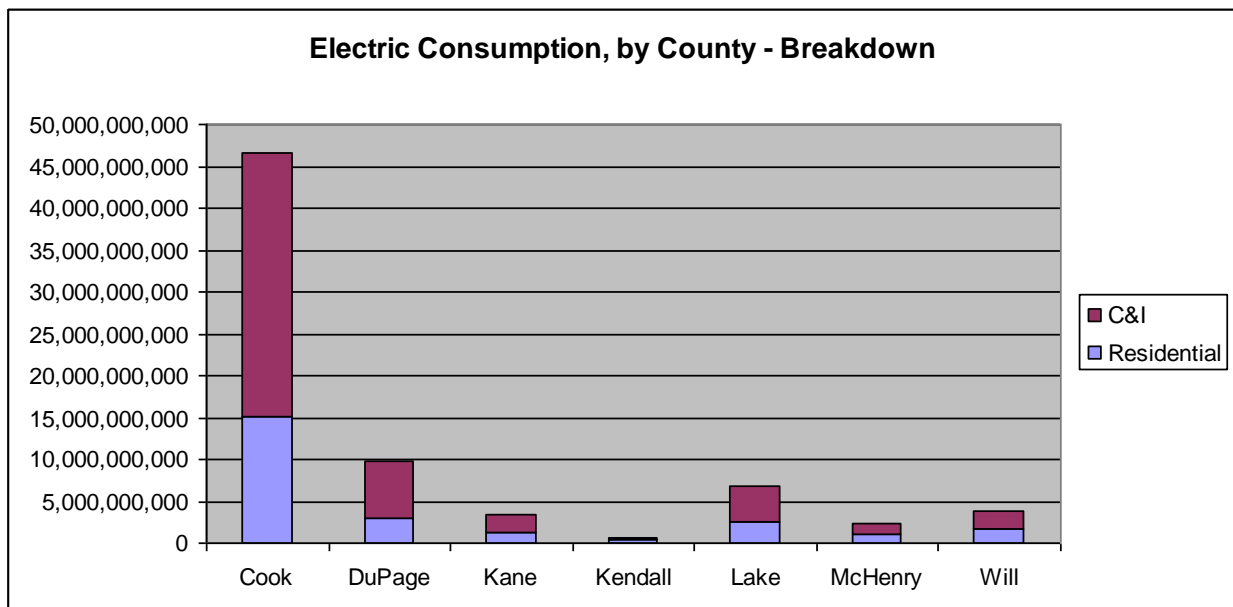


Figure 3

## Natural Gas

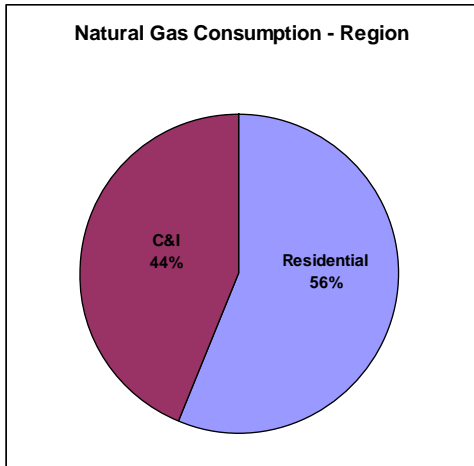


Figure 4

Next, CNT Energy analyzed 2005 account data provided by Nicor, People’s Gas and North Shore Gas. People’s Gas only serves Cook County, North Shore serves both Cook and Lake Counties, and Nicor serves all seven. Natural gas consumption, gauged by number of therms in the seven county region, reached over 5.6 billion therms in 2005. 15% of this total is transport gas, which is gas that is supplied by another utility, but passes through their pipes. All of the transport gas occurred in Cook and Lake Counties. For purposes of this discussion, we took out the transport gas to examine gas consumed by individual residential and C&I accounts. Without transport gas included, total consumption in the region reached 4.7 billion therms in 2005, with 56% attributed to the residential sector, and the remainder, commercial/industrial (C&I) (Figure 4)

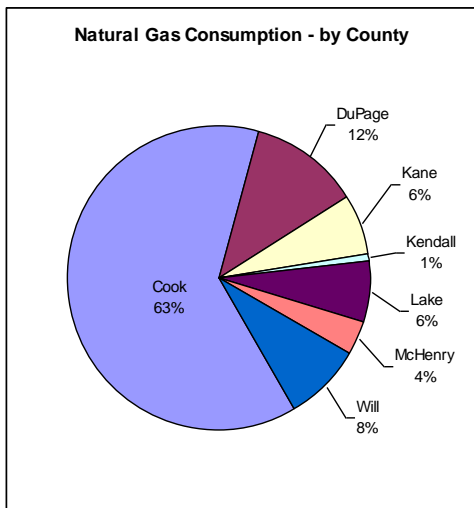


Figure 5

The breakdown of total therms by county largely reflects the population rankings. Cook County, without surprise, is responsible for 63% of all electric consumption in the region, followed by DuPage, Will, Lake, Kane, McHenry and Kendall. (Figure 5)

Four of the seven counties reflect a similar sector breakdown, with residential consumption near the regional average of 56%. However, Kane, Kendall and Will are different from the norm, and each other. Kendall is at 72% residential, while Kane and Will are only at 46% and 45%, respectively. (Figure 6)

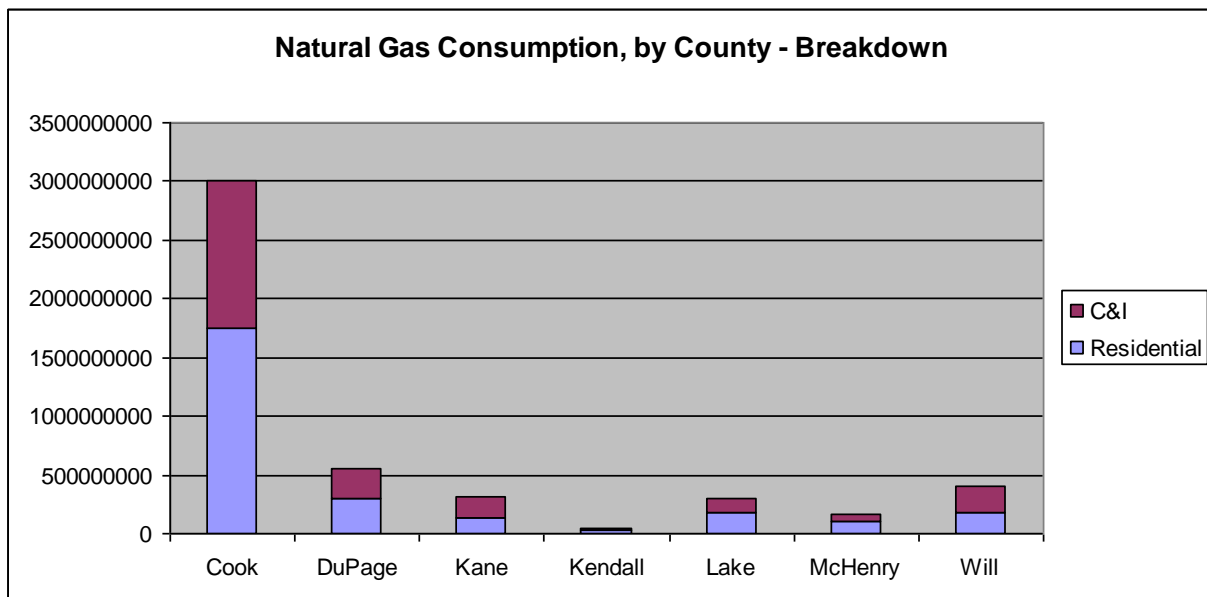


Figure 6

## Vehicle Miles Traveled

CNT Energy looked at vehicle miles traveled for the region and by county. In the seven county region, there were 60.5 billion miles traveled on our roads in 2005. (Figure 7) The majority were in Cook County, followed by DuPage, Lake, Will, Kane, McHenry and Kendall Counties. (Figure 8)

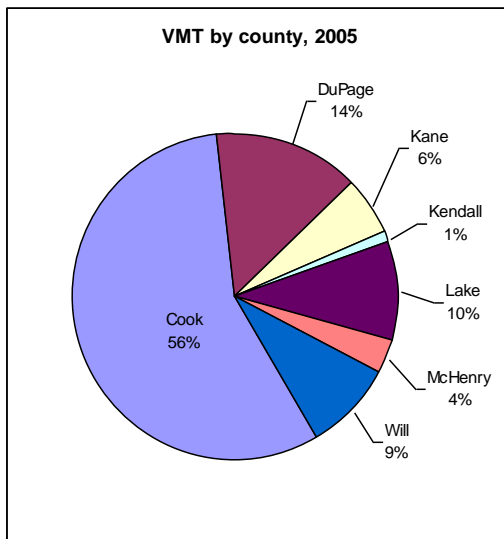


Figure 7

Cook	34,370,678,312
DuPage	8,675,394,497
Kane	3,520,486,524
Kendall	684,711,260
Lake	5,828,892,021
McHenry	2,146,275,643
Will	5,300,575,756
<b>Region</b>	<b>60,527,014,013</b>

Figure 8

## What's Next?

The second component of the Regional Energy Snapshot is the Regional Issues Analysis. The analysis will include the regional energy profile that describes current conditions or “business as usual”, along with profiles that reflect the GO TO 2040 scenarios, each with specific strategies for reducing energy consumption. The full list of strategies includes the following, and those marked will be discussed at the upcoming meeting:

- Existing Buildings
  - Residential Retrofits\*
  - Commercial Retrofits\*
  - Industrial Retrofits\*
  - Green Building Renovation
- New Construction
  - Green Building New Construction\*
  - Energy Code
- Transportation
  - NOTE: Just received CMAP numbers
- Behavioral
  - Behavior Change\*
  - Appliance Trade-in
- Supply Side
  - Small Scale Distributed Generation (Household Renewables)\*