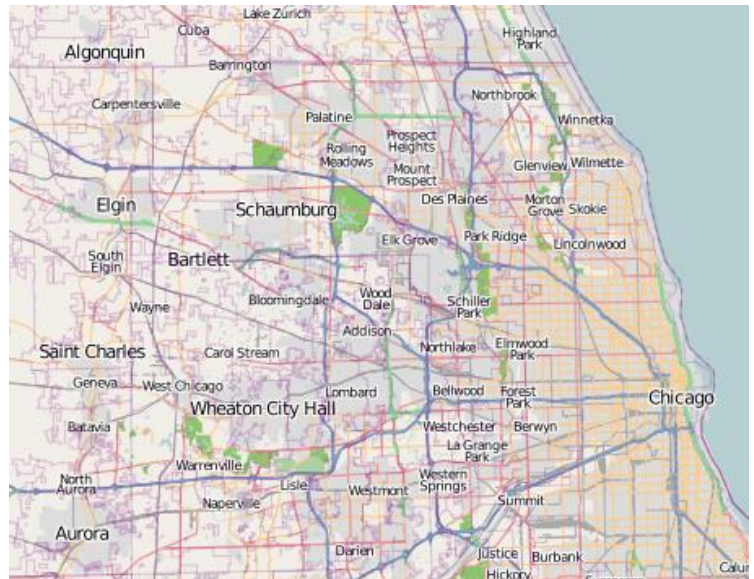


Sustainability Plan Catalog and Analysis



Identifying indicators of environmental action and
addressing demographic disparities

About Delta Institute

Delta works in partnership with business, government and communities in the Great Lakes region to create and implement innovative, market-driven solutions that build environmental resilience, economic vitality and healthy communities.

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Sustainability Plan Catalog and Analysis

Executive Summary

This analysis considers the strength of sustainability plans as indicators of environmental initiatives, with demographic characteristics, electricity aggregation, and outside environmental certifications as cross-references. These factors question possible correlation and socioeconomic disparities between existing indicators of environmental action. There is potential to reduce demographic disparities by: (1) promoting the adoption of sustainability plans in resource-constrained municipalities; (2) making environmental certifications available to resource-constrained municipalities; (3) encouraging other sustainability efforts in low-income communities; and (4) promoting environmental justice by ensuring equal access for all communities to engage in environmental improvement efforts.

This analysis demonstrates that sustainability plans and electricity aggregation contracts are strong indicators of outside environmental certification. The 36 of the 282 municipalities in the seven-county Chicago Metropolitan Region that had adopted sustainability plans were more likely to be recognized by outside environmental certifications. Electricity aggregation contracts were related to outside environmental certifications but not sustainability plans. Demographic distinctions can be made for sustainability plan adoption, electricity aggregation, and outside certification. Municipalities with sustainability plans in place contained more highly educated and higher income populations. Those with electricity aggregation were more racially diverse, more highly educated, and less economically stable (by percentage of low-income households). Though this study may be complicated by stark demographic disparities across environmental certifications, it is the first known investigation of environmental efforts with quantitative metrics of this kind.

Table of Contents

I. Introduction.....	5
II. Methods	7
III. Results	10
IV. Discussion.....	14
V. Recommendations	18
VI. Conclusion	21
VIII. Appendices	22
Appendix A: Outside Environmental Certification Descriptions.....	23
Appendix B: Sustainability Plan Directory	25
Appendix C: T-Test Results: Presence of Sustainability Plans	27
Appendix D: T-Test Results: Presence of Electricity Aggregation Contracts	29
Appendix E: T-Test Results: Presence of Outside Environmental Certifications..	31
Appendix F: T-Test Results: Municipalities with Sustainability Plans Compared to Municipalities with the Presence of Outside Certifications	33
Appendix G: T-Test Results: Clean Air Counts Municipalities Compared to Greenest Region Compact Municipalities	34
Appendix H: Sustainability Plans, Electricity Aggregation, and Outside Certifications by Municipality.....	35
IX. Resources	40

I. Introduction

To enhance sustainability efforts at the local level, municipalities have opted to draft plans to identify and track targets. These plans describe current environmental conditions and existing city initiatives, establish targets and goals for improvement, and create a framework for plan implementation. Strong sustainability plans propose specific actions and programs, while instituting a mechanism for measuring progress. Some city governments require progress reports and plan updates.

Sustainability plans are typically separated into the following target areas: natural resource planning, energy conservation, water management, waste reduction, transportation, and awareness and community development. There are many types of sustainability plans: action, strategic, vision, and community plans. Sustainability plans may be incorporated into components of comprehensive plans with varying stringency.

Adopting municipalities benefit from the recognition of previous successes and the opportunity to foster community by incorporating citizens into the drafting process. These plans do not come without cost, however. The drafting of these plans requires substantial time and resources. As such, city governments often lack the resources to compile reports in house and contract the plans to outside organizations. Non-governmental organization authors include Delta Institute, Seven Generations Ahead, Chicago Metropolitan Agency for Planning (CMAP), and Center for Neighborhood Technology (CNT). Reports are also published by private consulting firms, such as Teska Associates, Inc.; Inter-Sec Group; AECOM; URS Corporation; and Camiros, Ltd.

Sustainability plan adoption is common in more progressive areas; in California, all municipalities are required to adopt a plan of some sort. The concern with the growing trend of plan adoption is one of efficiency and rigor. Are cities allocating their resources to a cause that will (1) set ambitious goals, (2) identify realistic plans for reaching these goals, and (3) be worth the opportunity cost of implementing other programs?

Correlation between sustainability plans and outside environmental certifications would identify a relationship between sustainability plans and participation in environmental improvement efforts. Are municipalities with sustainability plans committing to stronger agreements or receiving recognition for past environmental efforts? Conversely, are sustainability plans poor indicators of initiative?

Municipalities that have adopted sustainability plans have expressed at least a minimum level of concern for environmental issues, and are demonstrating a commitment to natural resource protection. Because executing a sustainability plan requires both external and internal resources, resource-constrained communities are less likely to enact such plans. Sustainability plans provide a metric by which to compare socioeconomic groups and ultimately reveal issues of access. A significant difference between the demographic composition of municipalities with and

without plans would: confirm the stereotype that environmental efforts are pursued by predominately high-income populations, and reveal the inability of low-income communities to confront environmental issues. It can be argued that communities lacking environmental agendas deserve attention and support from outside sources, especially if this demographic is unable to independently finance such efforts.

A secondary focus of this analysis is the implication of municipal electricity aggregation on environmental certification and demographic composition. Community Choice Aggregation is a procurement framework that provides a city with access to wholesale electricity markets. Participating communities meet the energy requirements of residents and businesses by aggregating their demand and negotiating collectively. Electricity aggregation seeks to reduce energy consumption, lower electricity costs, and increase reliance on renewable energy sources, as participating communities have the ability to dictate their allocation of power across sources.

Electricity aggregation contracts represent communities that (1) value residential savings, (2) hope to reduce energy consumption, (3) are interested in renewable sources¹, (4) were able to organize themselves to gain support, and (5) have the administrative capacity to pursue a more complex billing structure. Of particular interest is whether communities pursuing community aggregation demonstrate environmental efforts, as represented by sustainability plans and outside certifications. Are electricity aggregation contracts better indicators of environmental agendas than sustainability plans? Aggregation contracts and sustainability plans raise similar socioeconomic concerns regarding the demographic characteristics of those municipalities able to participate. Which program serves a more diverse set of municipalities? The following statistical analysis questions whether all populations are able to pursue electricity aggregation.

¹ US Environmental Protection Agency. *Community Choice Aggregation: Leveraging a Collective Procurement Model to Drive New Renewable Energy Generation*. October 16, 2012. http://www.epa.gov/greenpower/events/6mar12_webinar.htm (accessed July 24, 2013).

II. Methods

The Chicago Metropolitan Area is comprised of 282 municipalities within Cook, DuPage, Kane, Kendall, Lake, McHenry, and Will counties.

A *sustainability plan* is defined by this study as:

- A document with a title including the words “sustainability,” “environment,” “green,” “nature,” or “climate”;
- Addressing at least 3 of 6 target areas (natural resources, energy, water, waste, transportation, and education/community development);
- Comprehensive or strategic plans that include a substantial separate sustainability section, approximately 1 page in length or more.

The following are not recognized as sustainability plans:

- Forestry plans;
- Reports on existing environmental conditions and challenges that do not identify goals;
- Comprehensive or strategic plans that do not meet the above criteria.

Operational sustainability plans: provide numeric measurements of current conditions and future tracking; set quantifiable targets; create timelines and deadlines; and detail how progress will be monitored throughout the course of implementation. Alternatively, *visionary* sustainability plans identify goals but do not create quantitative plans of action. The use of these terms is admittedly subjective in nature, but seeks to provide some indication of a plan’s rigor.

Comprehensive plans confront at least 5 of the 6 target areas (previously identified). This definition of ‘comprehensive’ is unrelated to the comprehensive plan documents drafted by municipalities to address land use more generally.² Whether or not a plan is comprehensive is independent of its operational or visionary status.

The following factors were compiled into a catalog of sustainability plans: the presence of a plan, name of document, link to online location, year published, author, whether the plan is operational or visionary, and whether the plan is comprehensive. Information regarding each city’s online presence was also recorded: the presence of an environmental page on the official website; the link to the online location; whether the page is unofficial (for a citizen group) or

² Comprehensive planning is defined by *Planning in the USA: Policies, Issues, and Processes* (Cullingworth 1997) as: “a process that determines community goals and aspirations in terms of community development. The outcome of comprehensive planning is the Comprehensive Plan, which dictates public policy in terms of transportation, utilities, land use, recreation, and housing. Comprehensive plan typically encompass large geographical areas, a broad range of topics, and cover a long-term time horizon.”

See Cullingworth, John. *Planning in the USA: Policies, Issues, and Processes*. London: Routledge, 1997.

official (through a government structure); and if official, if it has higher standing (as a department or commission) or lower standing (as a council, committee, or board).

The first sustainability plans to be considered were those previously identified by Delta Institute, the Metropolitan Mayors Caucus, and the Animalia Project. A search for sustainability plans was conducted for each remaining municipality, in alphabetical order. The official website of each city was browsed for government-affiliated web pages (departments, commissions, councils/committees/boards) and unaffiliated web pages of citizen groups. No more than 5 minutes was spent searching each municipality's website.

A list of the municipalities pursuing electricity aggregation contracts was found on the Plug In Illinois website.³ Municipalities were not considered participants in community aggregation if they were not separately listed by Plug In Illinois. A few counties were reported, but if participating municipalities were not defined, they were not included in the list of aggregated communities in this study.

Seven recognition programs were included as *outside environmental certifications*:

- Clean Air Counts (Metropolitan Mayors Caucus),
- Greenest Region Compact (Metropolitan Mayors Caucus),
- ICLEI (Local Governments for Sustainability),
- Tree Cities USA (Arbor Day Foundation),
- U.S. Mayors Climate Protection Agreement (U.S. Conference of Mayors),
- Chicago Area Clean Cities Coalition (U.S. Department of Energy Clean Cities Program),
and
- Energy Star.

These certifications provided a diverse and extensive measure of environmental initiatives, ranging from endorsement via membership fees to commitment to specific actions with progress checks (see *Appendix A*). Most of the certifications were free to municipalities in compliance, but the actions required for eligibility are assumed to consume municipal resources. Not all certifications are free: ICLEI charges an annual membership fee of \$500. Lists of municipalities receiving these recognitions were found through online searches for all factors but the Greenest Region Compact and ICLEI, which were provided via email by the respective program sponsors.

Demographic data were collected from the 2011 American Communities Survey 5-year estimates on the U.S. Census Bureau American FactFinder website. The datasets used include: Selected Social Characteristics in the United States, Selected Economic Characteristics, and Race.

Comparisons of municipalities with and without each variable were achieved with *t-tests*,

³ Plug In Illinois. *List of Communities Pursuing an Opt-Out Municipal Aggregation Program*. July 17, 2013. <http://www.pluginillinois.org/MunicipalAggregationList.aspx> (accessed July 18, 2013).

statistical tests that determine the likelihood that two groups are from the same population. A *p-value* measures this probability on a scale from 0 to 1. High p-values indicate no discernable differences for a given factor, whereas low p-values represent a high likelihood of difference. P-values below .05 (which represents a 5% chance that two groups come from the same population) are considered significant. T-tests were run with the following assumptions: independent samples, 2-tails, and equal variance. A positive *t-statistic* indicates a greater mean for Group 1 of each test: municipalities without plans, electricity aggregation contracts, or outside environmental certifications.⁴

⁴ T-tests were run using Microsoft Excel's 'T.TEST' function. The t-statistic was calculated manually on Excel through combinations of the sum of squares of deviations (DEVSQ) and the standard error.

III. Results

Figure 1 provides the summarized results of t-tests for sustainability plans, electricity aggregation contracts, and outside environmental certifications.

Figure 1. Summarized t-test results for sustainability plans, electricity aggregation contracts, and outside environmental certifications.

ENVIRONMENTAL AND DEMOGRAPHIC DIFFERENCES BETWEEN COMMUNITIES WITH SUSTAINABILITY PLANS, ELECTRICITY AGGREGATION, AND OUTSIDE CERTIFICATION 1

		Sustainability Plans		Electricity Aggregation		Outside Certification	
		p-value	Significant?	p-value	Significant?	p-value	Significant?
ONLINE ENVIRONMENTAL PRESENCE	Environmental Page on City Website?	0.000000	✓	0.046127	✓	0.000000	✓
	Higher-level (Department and Commission)	0.000001	✓	0.391168		0.000264	✓
	Lower-Level (Council, Committee, or Board)	0.001908	✓	0.026197	✓	0.000679	✓
	Sponsored by Citizen Organization	0.000509	✓	0.684575		0.024677	✓
ELECTRICITY CONTRACTS	Pursuing community choice electricity aggregation contracts?	0.918879				0.008813	✓
OUTSIDE ENVIRONMENTAL CERTIFICATION	Clean Air Counts	0.000011	✓	0.242678			
	Greenest Region Compact	0.012592	✓	0.019636	✓		
	ICLEI	0.000079	✓	0.239410			
	Tree Cities USA	0.000292	✓	0.352833			
	US Mayors Climate Protection Agreement	0.000016	✓	0.282119			
	Chicago Area Clean Cities Coalition	0.000015	✓	0.298284			
	Energy Star Partner	0.003692	✓	0.009638	✓		
	Total Certifications	0.000000	✓	0.016248	✓		
	Presence of Certification (municipalities that received any certifications)	0.001544	✓	0.008813	✓		
DEMOGRAPHICS (2011 ACS 5-year Estimates)	Population Size	0.000762	✓	0.129462		0.098544	
AGE	Median age (years)	0.751264		0.424347		0.922615	
	Under 18 years	0.249782		0.197173		0.493683	
	18 to 34 years	0.639139		0.019139	✓	0.541276	
	35 to 49 years	0.396570		0.342951		0.668688	
	50 to 64 years	0.820118		0.275496		0.853275	
	65 years and over	0.861291		0.968685		0.624953	

Figure 1 (continued). Summarized t-test results for sustainability plans, electricity aggregation contracts, and outside environmental certifications.

ENVIRONMENTAL AND DEMOGRAPHIC DIFFERENCES BETWEEN COMMUNITIES WITH SUSTAINABILITY PLANS, ELECTRICITY AGGREGATION, AND OUTSIDE CERTIFICATION 2

		Sustainability Plans		Electricity Aggregation		Outside Certification	
		p-value	Significant?	p-value	Significant?	p-value	Significant?
RACE	White alone	0.806425		0.021608	✓	0.746992	
	Black or African American alone	0.924966		0.002015	✓	0.186102	
	Minority community? (White alone < 50%)	0.751109		0.007002	✓	0.053693	
CITIZENSHIP	Foreign Born	0.701322		0.005110	✓	0.000158	✓
	Not a U.S. Citizen	0.828865		0.050874		0.044757	✓
LANGUAGE SPOKEN (AGE 5 YEARS AND OVER)	Speak a language other than English	0.976427		0.011988	✓	0.011660	✓
	Speak English less than "very well"	0.891331		0.079669		0.035147	✓
EDUCATIONAL ATTAINMENT (AGE 25 YEARS AND OVER)	Percent high school graduate or higher	0.160671		0.244301		0.007550	✓
	Percent bachelor's degree or higher	0.000827	✓	0.022575	✓	0.000000	✓
	Graduate or professional degree	0.001117	✓	0.013778	✓	0.000001	✓
EMPLOYMENT (AGE 16 YEARS AND OVER)	Unemployed	0.139233		0.001062	✓	0.000120	✓
ANNUAL HOUSEHOLD INCOME	Median household income (dollars)	0.283963		0.102070		0.007700	✓
	Mean household income (dollars)	0.090499		0.044548	✓	0.003028	✓
	Less than \$14,999	0.306115		0.012048	✓	0.002692	✓
	\$15,000 to \$34,999	0.301162		0.096706		0.000119	✓
	\$35,000 to \$74,999	0.015875	✓	0.433945		0.004397	✓
	\$75,000 to \$149,999	0.289929		0.842666		0.477707	
	\$150,000 or over	0.026523	✓	0.085837		0.000206	✓
	All families below the poverty level (income in the last 12 months)	0.729009		0.018325	✓	0.001924	✓

Sustainability Plans

Of the 282 municipalities in the Chicago Metropolitan Area, 36 (12.77%) were found to have sustainability plans in place (Fig. 2). Of these plans, 19 (52.3%) were visionary, while 17 (47.2%) were operational. The majority (75.0%) of the plans were comprehensive. Sixteen (44.4%) were both operational and comprehensive. The average year of publication was 2011 (see *Appendix B*).

Figure 2. Participation percentages and totals for sustainability plans, electricity aggregation, and outside certifications.

	Participation Percentage	Total Participating Municipalities
Sustainability Plan	12.8%	36
Community Electricity Aggregation	36.9%	104
Clean Air Counts	32.3%	91
Greenest Region Compact	31.9%	90
ICLEI	3.2%	9
Tree Cities USA	36.9%	104
US Mayors Climate Agreement	13.5%	38
Chicago Clean Cities	5.0%	14
Energy Star Partner	3.2%	9
Total Certifications	1.26	355
Presence of Certification	59.2%	167

When comparing municipalities with sustainability plans to those without, we find a significant difference in the presence of a number of environmental indicators (see *Appendix C*). Cities with sustainability plans were significantly:

- More likely to have an environmental page on their website (t-test, $p=0.000000$, $t=-8.49$, $df=280$).
- More likely to receive any outside environmental certification (t-test, $p=0.001544$, $t=-3.20$, $df=280$).
- Of the seven certifications considered, most likely to receive recognition from Clean Air Counts (t-test, $p=0.000011$, $t=-4.48$, $df=280$) and least likely to receive recognition from the Greenest Region Compact (t-test, $p=0.012592$, $t=-2.51$, $df=280$).

Community Choice Electricity Aggregation

Municipalities with sustainability plans did not have significantly higher participation rates of community choice electricity aggregation (t-test, $p=0.918879$, $t=+0.10$, $df=280$) (see *Appendix D*).

The presence of sustainability plans is a better indicator of environmental certification than the presence of community choice electricity aggregation contracts. Communities with community aggregation are significantly:

- More likely to have an environmental page on their website (t-test, $p=0.046127$, $t=-2.00$, $df=280$).
- More likely to receive any outside certification (t-test, $p=0.008813$, $t=-2.64$, $df=280$), but not more likely to be certified by Clean Air Counts, ICLEI, Tree Cities USA, US Mayors Climate Protection Agreement, or the Chicago Clean Area Cities Coalition individually.
- More likely to be certified by the Greenest Region Compact (t-test, $p=0.019636$, $t=-2.34$, $df=280$) and Energy Star (t-test, $p=0.009638$, $t=-2.61$, $d=280$).

Socioeconomic Factors

Differences between municipalities with and without sustainability plans were significant for the following demographic factors: population size, educational attainment, and the middle and upper income brackets (see *Appendix C*). Differences in age, race, citizenship, and poverty level were not significant.

A separate set of demographic characteristics was significantly different between cities with and without electricity aggregation: race, population foreign born, language spoken, educational attainment, unemployment, mean household income, and poverty level. Population size and higher income bracket differences were not significant (see *Appendix D*).

Environmental certifications were the strongest indicator of demographic disparities (see *Appendix E*). There were significant demographic differences between communities with and without outside environmental certifications for all tested categories except: population size, age, and race.

The municipalities that adopted sustainability plans and participated in outside certification programs shared a similar demographic composition. No factors were significantly different except the lowest income bracket, of which municipalities with sustainability plans had a higher frequency (t-test, $p=0.033220$, $t=1.58$, $df=201$).

A similar demographic participated in Clean Air Counts, which did not offer a physical reward, and the Greenest Region Compact, which offered a one-time reward of CFL light bulbs (see *Discussion: Outside Environmental Certifications*). No demographic factors were significantly different between the communities that received each certification.

IV. Discussion

Sustainability Plans

Sustainability plans provide a good indicator of environmental action, according to the presence of the seven outside certifications considered in this study. The strong relationship between sustainability plans and outside environmental certifications should be acknowledged; municipalities with sustainability plans were significantly more likely to be recognized by a certification program (t-test, $p=0.001544$, $t=-3.20$, $df=280$). While communities with adopted sustainability plans may be more likely to have received outside certification, it is unknown whether sustainability plans caused or corresponded to the effort.

It is possible that municipalities that prioritize an environmental agenda would receive outside certifications regardless of a plan that formalizes their efforts. The majority (52.3%) of existing sustainability plans were solely visionary, failing to provide numeric measurements for future tracking, set quantifiable targets, create timelines and deadlines, or detail how progress will be measured throughout the course of implementation. Twenty-five percent of the plans were not comprehensive. Plans lacking operational and comprehensive qualities are unlikely to greatly contribute to sustainability efforts; the large portion of visionary sustainability plans suggests plan adoption is not a main cause of certification compliance. Additionally, sustainability plans cannot cause outside environmental certifications if the plans are more recently adopted. Many of the certification programs were strongest before the average year of plan adoption, 2011.

Regardless of effectiveness in enabling outside environmental certification, sustainability plans provide concrete support to communities in a number of ways. All municipalities would benefit from the adoption of plans, especially resource-constrained municipalities. Sustainability plans can serve these communities as a rallying point, a way to foster community, a source of administrative focus, and a significant accomplishment that can be used to attract outside funding.

Unfortunately, resource-constrained municipalities do not currently enjoy the benefits of sustainability plans, which according to this analysis serve municipalities with higher income populations. Communities with sustainability plans achieved higher educational attainment and had a larger portion of households in the top income bracket. Equitable access to sustainability plans and their benefits is a legitimate concern.

Sustainability plans are likely to be pursued by municipalities that already value environmental issues and want to articulate their efforts in a plan as a supplementary initiative. It is unclear whether sustainability plans are the most impactful action that could be undertaken by municipalities that have not yet attempted environmental stewardship. Whether or not these plans effectively promote more quantitative efforts cannot be sufficiently determined from this study. Given the economic disparities between populations with and without sustainability plans,

sustainability plans may simply be an additional project for municipalities that have already increased conservation and are not limited by budget restraints.

Community Choice Electricity Aggregation

Community choice electricity aggregation has no correlation with the presence of sustainability plans. Electricity aggregation is also less related to outside environmental certifications; communities with aggregation contracts are only more likely to be certified by the Greenest Region Compact and Energy Star.

This finding suggests community choice aggregation is not strongly motivated by environmental stewardship, assuming outside certifications are an accurate, non-discriminatory metric. Of course, the demographic disparities between communities with and without electricity aggregation indicate that aggregation contracts affect higher percentages of low-income and racially diverse populations. Electricity aggregation may be a means for resource-constrained and diverse communities to promote environmental conservation in a method that simultaneously saves money. These data, however, also suggest that these same communities are less likely to prioritize quantifiable environmental actions.

This study reveals an intriguing relationship between community aggregation and income that may affect the ability of municipalities to adopt sustainability plans. Communities with aggregation contracts have large populations of low-income households, likely because community aggregation is advertised as a resident cost-saving measure. While residents save a marginal amount on their monthly electricity bills, the cost to municipal governments is substantial. City administrations pay hefty legal fees and devote staff time to the adoption of aggregation contracts. Resources are allocated toward electricity aggregation and away from other city initiatives. As the overall cost and benefit of electricity aggregation is disputed, this analysis recommends declining electricity aggregation in favor of maintaining administrative capacity for other uses, both environmental and resident cost saving.

Outside Environmental Certifications

Municipalities of all socioeconomic backgrounds would benefit from outside environmental certifications by: joining the constituency of environmentally-active communities, receiving support and resources associated with the certification programs, earning awards that can enhance community pride, and increasing citizen awareness of environmental issues. Outside certifications should be made equally available to all municipalities, regardless of demographics.

Certifications were more common among municipalities with higher socioeconomic status, however. Whether or not sustainability plans serve a more narrow population than does the environmental movement as a whole is unclear, as the demographic disparities were more stark for the presence of outside environmental certifications. The differences between groups with and without outside environmental certifications were more pronounced than those of both sustainability plans and municipal aggregation, with significance in nearly every factor considered.

While municipalities with outside certifications were significantly different than municipalities without, they shared similar demographic composition with municipalities with sustainability plans (see *Appendix F*). Almost every demographic factor was significantly different, except the lowest income bracket (annual household income less than \$14,999); communities with sustainability plans had a higher frequency of lowest-earners. It is impossible to project if sustainability plans encourage attainment of outside certifications, or if environmental efforts are so limited to an affluent demographic that any degree of environmental initiative is strongly related to upper socioeconomic class. Critiques of sustainability plan prejudice should be equally applied to outside certifications, because the beneficiaries are from the same population.

The substantial disparities across communities that have and have not received outside environmental certifications suggest certifications are not accessible to resource-constrained municipalities. Metrics, like outside environmental certifications, that exclude a distinct portion of the population are biased.

Incentives for certification programs may provide an explanation for wealth disparities across participants and non-participants. Communities burdened by budget constraints do not have the ability to pursue an unlimited number of programs that do not generate revenue for their residents. Resource-constrained municipalities are more likely to pursue environmental initiatives if they offer economic benefits to its citizens or do not limit the government's budget.

The role of incentives is addressed in this study by the comparison of community characteristics between Clean Air Counts and Greenest Region Compact communities. These programs are similar in facilitation, as both certify communities for completing a number of initiatives that are not necessarily resource-intensive. Incentives vary across the programs, however. Clean Air Counts operated with EPA and private foundation funding from 2003 to 2009 and provided municipalities with recognition alone. In 2009, the Greenest Region Compact provided signatories with a generous number of CFL light bulbs (awarded per municipality capita). Though a comparison of demographic characteristics between Clean Air Counts and Greenest Region Compact communities did not detect any significant differences (see *Appendix G*), sustainability plans were more strongly related to Clean Air Counts than the Greenest Region Compact (see *Appendix C*). A physical incentive may have attracted participation in Greenest Region Compact that was atypical of other certifications and environmental efforts.

Though this study's findings regarding incentives are primarily speculative, the power of incentives in increasing access to environmental programs is promising. Incentives present a method of increasing participation in environmental certifications by low-income communities. Further studies that compare participation in programs by incentive structure would test the strength of incentives.

The overwhelming contrast between communities with and without any outside certifications reveals a potential weakness in the environmental movement. The conclusion that environmental efforts and awareness are universally concentrated in high-income populations would have two implications. First, the significance of studies comparing demographics amongst specific certifications would be diminished to some extent, as socioeconomic factors may be more related to the environmental movement overall than the variable studied. Second, the stereotype that environmental causes exclude low-income communities would be supported and should be addressed. Environmental causes will be more equitable and successful if communities of all socioeconomic status are engaged; therefore, steps must be taken to ensure low-income, resource-constrained communities are able to engage in environmental initiatives.

V. Recommendations

Though sustainability plans are indeed related to other environmental actions (as measured by outside certifications), this study does not indicate whether sustainability plans enabled these certifications, and if these certifications are a reliable and fair metric of environmental stewardship. A low-income municipality that would like to pursue environmental action should be able to participate in certifications that are less resource dependent. To enhance equality, either low-cost alternatives must be identified and promoted, or the existing solutions must be made more accessible. From this analysis, a number of policy and program recommendations can be drawn.

1. Promote the adoption of sustainability plans in resource-constrained municipalities.

Though causation of environmental efforts from sustainability plans cannot be determined (see *Discussion: Sustainability Plans*), sustainability plans and outside environmental certifications are undoubtedly related. Sustainability plans should be made more available to municipalities of all socioeconomic status. Plans for low-income communities should be catered to their unique needs, with a greater emphasis on public health and fiduciary responsibility.

Organizations can provide assistance to these municipalities to adopt plans at reduced cost. Municipalities and consultants drafting sustainability plans should work together to secure outside sources to fund a portion of the fee charged to municipal governments.

Organizations with sufficient resources and stature, like CMAP, can facilitate the standardization of sustainability plans across the region. CMAP should create standards that plans have to meet before they are adopted. Plan uniformity would improve coherency of sustainability efforts across municipalities, assist CMAP in regional planning efforts, and provide low-capacity municipalities with necessary guidance. CMAP can coordinate the drafting of joint sustainability plans by identifying potential partner communities that have similar resources and demographic characteristics. Municipalities would be able to share administrative resources and adopt a sustainability plan at a lower cost than would be incurred if pursued separately. CMAP can further assist underserved communities by drafting a model plan catered to the needs of low-income communities, which municipalities would adjust and adopt at minimal cost.

2. Make certifications available to resource-constrained municipalities.

Municipalities that are potentially eligible for outside certifications would benefit from recognition and should be provided the necessary support. Organizations should assist low-income communities in receiving outside certifications by identifying low-cost

solutions that help municipalities achieve compliance with existing certifications.

Encouraging participation in existing certifications is strategic in that it utilizes current certification infrastructure and requires minimal capacity from municipalities. This strategy is less resource-intensive than plan adoption by municipalities and program modification or creation by outside organizations.

If communities lack the capacity to achieve existing certifications, organizations should work with program sponsors to modify the criteria and offer additional support for low-income communities. Stakeholder engagement is necessary to determine if certifications are useful, desired, and cost-effective to municipalities.

Certifications that are low-cost to municipalities, like Clean Air Counts, should be supported. Clean Air Counts identified a number of easy and effective strategies for low-income communities before its EPA grant ended in 2009. Funding must be secured to reinvigorate Clean Air Counts and similar programs.

Resources should be focused within the existing infrastructure of environmental certifications in the area. However, should barriers present themselves and funding is located, organizations can also administer their own certifications that are attainable for low-income communities.

3. Encourage other sustainability efforts in low-income communities.

Since the impact of sustainability plans and outside certifications is disputed, organizations can support low-income communities with targeted concrete efforts. Without the capacity to take on programs themselves, municipalities rely on outside sources for technical and financial support. Individual campaigns can more effectively guarantee a specific sustainability-increasing outcome. Though specific actions (providing residents with energy-saving light bulbs or water conservation educational materials) may not contribute to outside certification, they support the mission of increasing environmental action and awareness.

4. Promote environmental justice by incorporating all demographics into the environmental movement.

A narrative of social justice must be integrated into the region's environmental efforts. The socioeconomic disparities in sustainability plans and environmental certifications detected by this study are likely true of the greater environmental movement. Because communities of all socioeconomic status should be able to enjoy a healthy environment, and because low-income and racially diverse communities are often those with the worst

environmental quality, environmental initiatives must be rooted in justice. Equal access should be a goal of every environmental program in the region and beyond. Planning and policy efforts, like sustainability plans and environmental certifications, for example, should be adapted given a new awareness of the problem.

Environmental justice efforts can be led and coordinated by regional planning organizations, which are able to oversee and guide the efforts of local governments. CMAP can advocate for equality in the environmental movement by offering services to resource-constrained municipalities. If the economic barrier to entry is too high for municipalities with low-income populations to engage in environmental initiatives, efforts must be made to subsidize environmental action for these communities. Municipal governments can be supported financially or through resources to help administrators maximize environmental benefits to all communities. CMAP can encourage more affluent municipalities to target efforts at their low-income residents and assist their neighboring cities. The American Planning Association also has zoning commission trainings, which can be utilized as a platform for environmental justice awareness.

Regional efforts can help create lasting infrastructure to promote equal access to environmental improvement efforts. CMAP can facilitate partnerships between resource-constrained municipalities by identifying and recommending municipalities with similar priorities, budgets, population size, and demographic characteristics. Joint environmental departments would greatly increase the capacity of low-income and small municipalities.

VI. Conclusion

This analysis is the first to quantify the environmental initiatives and demographic disparities related to sustainability plans. This investigation would be enhanced by a measure of environmental action that is not dependent on income. As these data are currently unavailable, many of the findings presented are speculative. Further studies are needed to confirm the rigor of this analysis. Studies cannot accurately measure environmental initiatives when the metric (outside environmental certification) establishes an economic barrier to entry that excludes low-income communities. A metric must be developed to compare environmental interest that is not skewed by income. The following are recommended for investigation: emission reductions, household electricity and gasoline consumption, recycling rates, and increases in community awareness. An organization can develop and distribute a survey for city officials to assess their barriers to and status of environmental efforts.

Despite concerns about outside environmental certifications as a metric, this analysis provides strong conclusions regarding the relationship between sustainability plans, outside environmental certifications, and socioeconomic status. These data beg the question whether the environmental movement currently represents all demographics, which is a concern to be acknowledged by all those interested in municipal sustainability.

VIII. Appendices

Appendix A: Outside Environmental Certification Descriptions

OUTSIDE ENVIRONMENTAL CERTIFICATION DESCRIPTIONS

1

Source	Sponsor	Description	Requirements	Benefits
Clean Air Counts	Metropolitan Mayors Caucus	Clean Air Counts "is a collaborative effort between the Metropolitan Mayors Caucus, City of Chicago, U.S. Environmental Protection Agency Region 5, and Illinois Environmental Protection Agency. This multi-year initiative seeks to achieve specific and significant reductions in targeted smog-forming pollutants and major reductions in energy consumption"	To achieve a 'bronze' level of certification a municipality must: designate a specific contact person and undergo four outreach efforts (via newsletter, article/links on website, or outreach to encourage others to join Clean Air Counts) to promote clean air initiatives.	Members are recognized on a list on www.cleancounts.org . "Most of the campaign strategies are voluntary but include incentives to encourage source reductions that traditionally have been difficult to target such as non-regulated businesses, local government and individual households."
Greenest Region Compact	Metropolitan Mayors Caucus	"The Greenest Region Compact is an initiative of the Metropolitan Mayors Caucus to voluntarily improve the region's air, water and land, reduce greenhouse gases, minimize waste, and reduce energy consumption. The Compact outlines a number of cost effective environmental sustainability measures that enhance health and safety, reduce the consumption of energy and fossil fuels, conserve water, and reduce hazardous and solid waste, and air pollution emissions."	Commit to 3 of 8 of the following: promotion of residential water conservation, enactment of e-waste recycling system, participation in the Northern Illinois Energy Project's Residential Lighting Program, and variety of air, energy, land, waste, and water strategies.	For a limited time shortly after the creation of the Compact in 2007, all compact signatories received CFL light bulbs proportional to their total population.
ICLEI USA	ICLEI Local Governments For Sustainability USA	"In the United States, ICLEI USA is the recognized leader on climate action and clean energy, setting national standards and providing cutting-edge software tools, trainings, and technical support to help cities and counties advance their goals. ICLEI USA serves as a gateway to solutions, and helps local governments learn from one another and share best practices."	"Pay [\$500] annual dues; report results and progress; participate in membership activities such as elections, events, surveys and calls for action; provide information, stories and illustrations upon request; and support recruiting efforts and membership promotion when appropriate."	Technical support from ICLEI staff; quick start guides for recommended actions; resource library; and discounts on online tools, skills trainings, comprehensive guidance documents, and networking events.
Tree Cities USA	Arbor Day Foundation	"The Tree City USA program is a national program that provides the framework for community forestry management for cities and towns across America."	"Communities achieve Tree City USA status by meeting four core standards of sound urban forestry management: maintaining a tree board or department, having a community tree ordinance, spending at least \$2 per capita on urban forestry and celebrating Arbor Day."	"Tree boards, parks departments, public works officials and volunteers, alike, are recognized for the valuable work they provide to the community through sustainable tree management. Many communities share in their Tree City USA recognition across city departments, elected officials, volunteers, students and business leaders."

OUTSIDE ENVIRONMENTAL CERTIFICATION DESCRIPTIONS

2

Source	Sponsor	Description	Requirements	Benefits
US Mayors Climate Protection Agreement	US Conference of Mayors	" On February 16, 2005 the Kyoto Protocol, the international agreement to address climate disruption, became law for the 141 countries that have ratified it to date. On that day, Seattle Mayor Greg Nickels launched this initiative to advance the goals of the Kyoto Protocol through leadership and action by at least 141 American cities. By the 2005 U.S. Conference of Mayors Annual Meeting in June, 141 mayors had signed the Agreement."	"Strive to meet or beat the Kyoto Protocol targets in their own communities, through actions ranging from anti-sprawl land-use policies to urban forest restoration projects to public information campaigns; Urge state governments, and the federal government, to enact policies and programs to meet or beat the greenhouse gas emission reduction target suggested for the United States in the Kyoto Protocol -- 7% reduction from 1990 levels by 2012; and Urge the U.S. Congress to pass the bipartisan greenhouse gas reduction legislation, which would establish a national emission trading system."	Participating mayors are included in a list and map on the www.USmayors.org website.
Chicago Area Clean Cities Coalition	US DOE Clean Cities Program	"A voluntary, locally based coalition dedicated to expanding the use of clean, domestic fuels and clean vehicle technologies in the Chicago metropolitan area."	\$100 annual membership fee for one representative, \$25 annually for each additional representative; annual Clean Cities survey and membership form	"As a member of CACC, your organization's name is included in the list of members on CACC's website at www.chicagocleancities.org . You also receive regular email updates on upcoming events, projects, and fundraising opportunities."
Energy Star	US EPA	"The ENERGY STAR label has grown into an incredibly valuable asset—to the environment, to consumers, and to the product manufacturers, home builders, and building owners and property managers who earn it. As a voluntary program, partnership is the driver for ENERGY STAR across all sectors. Organizations from small school districts to large Fortune 500 companies have embraced the value of ENERGY STAR and made it their own. The interplay of government, business, and market forces brought together through ENERGY STAR has changed the energy efficiency landscape."	Measure, track, and benchmark energy performance where possible; Develop and implement a plan to improve energy performance through ENERGY STAR's strategy; Educate staff and the public about the partnership and achievements with ENERGY STAR	Partners receive support to "measure, track, and improve energy performance" and are recognized as a Partner and Challenge supporter on the ENERGY STAR website.

Appendix B: Sustainability Plan Directory

1

SUSTAINABILITY PLAN DIRECTORY

MUNICIPALITY	TITLE	AUTHOR	YEAR	Operational?	Visionary?	Comprehensive?
Aurora City	Sustainability Plan	RiverEdge Park Environmental and Sustainable Concepts Task Force	2009		✓	✓
Batavia City	Comprehensive Plan: Environment Element	City of Batavia	2010		✓	✓
Buffalo Grove Village	Environmental Plan	Village of Buffalo Grove Environmental Committee	2012		✓	✓
Chicago City	Climate Action Plan	Chicago Climate Task Force	2008	✓		✓
Chicago Heights City	Environmental Vision Plan	URS Corporation	2004	✓		✓
Elburn Village	Sustainability Plan of Comprehensive Plan	CMAP	2013		✓	✓
Elgin City	Sustainability Action Plan	Citizens participating in Elgin's sustainability working groups	2011	✓		✓
Elmhurst City	Sustainability Policy	City of Elmhurst	2013		✓	✓
Evanston City	Climate Action Plan	Network for Evanston's Future	2008	✓		✓
Glencoe Village	Sustainability Study	Contextual Design Review Commission	2009		✓	✓
Glenview Village	A Plan for Nature in Glenview	Village of Glenview Natural Resource Commission & Applied Ecological Services	2005		✓	✓
Highland Park City	Sustainability Strategic Plan	HarteTech LLC	2010	✓		✓
Hoffman Estates Village	Sustainability Plan	Village of Hoffman Estates	2013	✓		✓
Homer Glen Village	Green Vision Plan	Green Communities Demonstration Grant Program	2002	✓		✓
La Grange Park Village	Sustainability Plan	Village of La Grange Park Cool Village Commission	2102		✓	✓
Lombard Village	Local Climate Action Plan	Village of Lombard Environmental Concerns Committee; ComEd	2012	✓		✓
Mettawa Village	Comprehensive Plan: Land Use, Natural Resources, Community Services	Teska Associates, Inc.	2006		✓	✓
Millbrook Village	Comprehensive Plan	SEC Group, Inc.	2009		✓	✓
Monee Village	Green Communities Vision	Green Communities Demonstration Grant Program	2004		✓	✓

SUSTAINABILITY PLAN DIRECTORY

2

MUNICIPALITY	TITLE	AUTHOR	YEAR	Operational?	Visionary?	Comprehensive?
Montgomery Village	Green Community Vision Plan	Green Illinois, Illinois EPA	2004	✓		✓
Naperville City	Environmental Sustainability Plan	City of Naperville	2010		✓	✓
Niles Village	Environmental Action Plan	CMAP	2013	✓		✓
Northbrook Village	Comprehensive Plan	City of Northbrook	2010		✓	
Oak Park Village	Sustainability Plan	Delta Institute; Seven Generations Ahead	2011	✓		✓
Oswego Village	Green Community Vision Plan	Green Illinois, Illinois EPA	2004	✓		✓
Park Forest Village	Sustainability Plan	CMAP; CNT	2012	✓		✓
River Forest Village	Sustainability Plan	Delta Institute; Seven Generations Ahead	2011	✓		✓
Robbins Village	Environmental Vision	Green Communities Demonstration Grant Program	2004		✓	
Schaumburg Village	Green Action Plan	City of Schaumburg Community Development Department	2008		✓	✓
Sleepy Hollow Village	Green Community Plan	Green Communities Demonstration Grant Program	2004		✓	
South Chicago Heights Village	Environmental Vision Plan	URS Corporation	2004	✓		✓
St. Charles City	Comprehensive Plan	Bob Hupp, Director of Planning and Development, St. Charles	1996	✓		✓
Wheaton City	Sustainability Report	AECOM	2012	✓		✓
Wheeling Village	Comprehensive Plan	Camiros, Ltd.	2003		✓	
Winnetka Village	Environmental and Forestry Commission Strategic Plan	Village of Winnetka Environmental and Forestry Commission	2010		✓	✓
Woodstock City	Environmental Plan	City of Woodstock Environmental Commission	2010		✓	✓
Total Plans	36			17	19	27
Percentage of Municipalities	12.77%			6.03%	6.74%	9.57%
Percentage of Sustainability Plans			2010.7	47.22%	52.78%	75.00%

Appendix C: T-Test Results: Presence of Sustainability Plans

MUNICIPALITIES WITH SUSTAINABILITY PLANS VERSUS MUNICIPALITIES WITHOUT SUSTAINABILITY PLANS

1

		Municipalities Without Sustainability Plans		Municipalities With Sustainability Plans		T-Test (2-tails, p=.05, Equal Variance)			
		Mean	Standard Deviation	Mean	Standard Deviation	P-value	t	df	Significant?
ONLINE ENVIRONMENTAL PRESENCE	Environmental Page on City Website?	19.92%	0.3994	80.56%	0.3958	0.000000	-8.49	280	✓
	Higher-level (Department and Commission)	9.35%	0.2911	38.89%	0.4875	0.000001	-5.11	280	✓
	Lower-Level (Council, Committee, or Board)	5.28%	0.2237	19.44%	0.3958	0.001908	-3.13	280	✓
	Sponsored by Citizen Organization	5.69%	0.2317	22.22%	0.4157	0.000509	-3.52	280	✓
ELECTRICITY CONTRACTS	Pursuing community choice electricity aggregation contracts?	36.99%	0.4828	36.11%	0.4803	0.918879	0.10	280	
OUTSIDE ENVIRONMENTAL CERTIFICATIONS	Clean Air Counts	27.64%	0.4472	63.89%	0.4803	0.000011	-4.48	280	✓
	Greenest Region Compact	29.27%	0.4550	50.00%	0.5000	0.012592	-2.51	280	✓
	ICLEI	1.63%	0.1265	13.89%	0.3458	0.000079	-4.01	280	✓
	Tree Cities USA	32.93%	0.4699	63.89%	0.4803	0.000292	-3.67	280	✓
	US Mayors Climate Protection Agreement	10.16%	0.3022	36.11%	0.4803	0.000016	-4.39	280	✓
	Chicago Area Clean Cities Coalition	2.85%	0.1663	19.44%	0.3958	0.000015	-4.41	280	✓
	Energy Star Partner	2.03%	0.1411	11.11%	0.3143	0.003692	-2.93	280	✓
	Total Certifications	1.07	1.1978	2.58	1.8314	0.000000	-6.54	280	✓
	Presence of Certification (municipalities that received any certifications)	55.69%	0.4968	83.33%	0.3727	0.001544	-3.20	280	✓
DEMOGRAPHICS (2011 ACS 5-year Estimates)	Population Size	15677	17732	111892	439372	0.000762	-3.40	280	✓
AGE	Median age (years)	38.67	5.8958	38.34	5.3343	0.751264	0.32	280	
	Under 18 years	25.60%	0.0524	26.67%	0.0483	0.249782	-1.15	280	
	18 to 34 years	20.01%	0.0656	19.47%	0.0570	0.639139	0.47	280	
	35 to 49 years	22.37%	0.0365	21.84%	0.0246	0.396570	0.85	280	
	50 to 64 years	19.63%	0.0489	19.44%	0.0439	0.820118	0.23	280	
	65 years and over	12.37%	0.0562	12.54%	0.0480	0.861291	-0.17	280	

MUNICIPALITIES WITH SUSTAINABILITY PLANS VERSUS
MUNICIPALITIES WITHOUT SUSTAINABILITY PLANS

2

		Municipalities Without Sustainability Plans		Municipalities With Sustainability Plans		T-Test (2-tails, p=.05, Equal Variance)			
		Mean	Standard Deviation	Mean	Standard Deviation	P-value	t	df	Significant?
RACE	White alone	77.02%	0.2362	76.01%	0.1947	0.806425	0.25	280	
	Black or African American alone	11.28%	0.2266	10.90%	0.1902	0.924966	0.09	280	
	Minority community? (White alone < 50%)	13.01%	0.3364	11.11%	0.3143	0.751109	0.32	280	
CITIZENSHIP	Foreign Born	14.07%	0.1079	14.81%	0.1001	0.701322	-0.38	280	
	Not a U.S. Citizen	6.94%	0.0695	7.21%	0.0536	0.828865	-0.22	280	
LANGUAGE SPOKEN (AGE 5 YEARS AND OVER)	Speak a language other than English	22.52%	0.1719	22.43%	0.1366	0.976427	0.03	280	
	Speak English less than "very well"	8.98%	0.0893	8.77%	0.0801	0.891331	0.14	280	
EDUCATIONAL ATTAINMENT (AGE 25 YEARS AND OVER)	Percent high school graduate or higher	89.16%	0.0813	91.19%	0.0747	0.160671	-1.41	280	
	Percent bachelor's degree or higher	33.38%	0.1909	45.02%	0.2022	0.000827	-3.38	280	✓
	Graduate or professional degree	12.52%	0.0969	18.49%	0.1270	0.001117	-3.29	280	✓
EMPLOYMENT (AGE 16 YEARS AND OVER)	Unemployed	9.38%	0.0439	8.21%	0.0451	0.139233	1.48	280	
ANNUAL HOUSEHOLD INCOME	Median household income (dollars)	77739	32387	84056	35939	0.283963	-1.07	280	
	Mean household income (dollars)	96170	48600	111355	58133	0.090499	-1.70	280	
	Less than \$14,999	4.30%	0.0420	5.09%	0.0484	0.306115	-1.03	280	
	\$15,000 to \$34,999	11.97%	0.0736	10.63%	0.0583	0.301162	1.04	280	
	\$35,000 to \$74,999	28.69%	0.0961	24.51%	0.0970	0.015875	2.43	280	✓
	\$75,000 to \$149,999	36.78%	0.0978	34.95%	0.0883	0.289929	1.06	280	
	\$150,000 or over	18.26%	0.1632	24.81%	0.1696	0.026523	-2.23	280	✓
	All families below the poverty level (income in the last 12 months)	6.37%	0.0605	6.75%	0.0607	0.729009	-0.35	280	

Appendix D: T-Test Results: Presence of Electricity Aggregation Contracts

**MUNICIPALITIES WITH COMMUNITY CHOICE ELECTRICITY AGGREGATION PLANS VERSUS 1
MUNICIPALITIES WITHOUT COMMUNITY CHOICE ELECTRICITY AGGREGATION**

		Municipalities Without Electricity Aggregation		Municipalities With Electricity Aggregation		T-Test (2-tails, p=.05, Equal Variance)			
		Mean	Standard Deviation	Mean	Standard Deviation	P-value	t	df	Significant?
SUSTAINABILITY PLAN	Drafted a sustainability plan?	12.92%	0.3354	12.50%	0.3307	0.918879	0.10	280	
ONLINE ENVIRONMENTAL PRESENCE	Environmental Page on City Website?	23.60%	0.4246	34.62%	0.4757	0.046127	-2.00	280	✓
	Higher-level (Department and Commission)	11.80%	0.3226	15.38%	0.3608	0.391168	-0.86	280	
	Lower-Level (Council, Committee, or Board)	4.49%	0.2072	11.54%	0.3195	0.026197	-2.24	280	✓
	Sponsored by Citizen Organization	7.30%	0.2602	8.65%	0.2812	0.684575	-0.41	280	
OUTSIDE ENVIRONMENTAL CERTIFICATIONS	Clean Air Counts	29.78%	0.4573	36.54%	0.4815	0.242678	-1.17	280	
	Greenest Region Compact	26.97%	0.4438	40.38%	0.4907	0.019636	-2.35	280	✓
	ICLEI	2.25%	0.1482	4.81%	0.2139	0.239410	-1.18	280	
	Tree Cities USA	34.83%	0.4764	40.38%	0.4907	0.352833	-0.93	280	
	US Mayors Climate Protection Agreement	11.80%	0.3226	16.35%	0.3698	0.282119	-1.08	280	
	Chicago Area Clean Cities Coalition	3.93%	0.1944	6.73%	0.2506	0.298284	-1.04	280	
	Energy Star Partner	1.12%	0.1054	6.73%	0.2506	0.009638	-2.61	280	✓
	Total Certifications	1.11	1.2960	1.52	1.5063	0.016248	-2.42	280	✓
	Presence of Certification (municipalities that received any certifications)	53.37%	0.4989	69.23%	0.4615	0.008813	-2.64	280	✓
	DEMOGRAPHICS (2011 ACS 5-year Estimates)	Population Size	16815.6	21565.0	47033.7	262661.3	0.129462	-1.52	280
AGE	Median age (years)	38.84	5.6693	38.27	6.0733	0.424347	0.80	280	
	Under 18 years	26.04%	0.0514	25.21%	0.0526	0.197173	1.29	280	
	18 to 34 years	19.25%	0.0582	21.12%	0.0728	0.019139	-2.36	280	✓
	35 to 49 years	22.46%	0.0347	22.04%	0.0360	0.342951	0.95	280	
	50 to 64 years	19.85%	0.0479	19.20%	0.0488	0.275496	1.09	280	
	65 years and over	12.38%	0.0540	12.41%	0.0573	0.968685	-0.04	280	

MUNICIPALITIES WITH COMMUNITY CHOICE ELECTRICITY AGGREGATION PLANS VERSUS 2
MUNICIPALITIES WITHOUT COMMUNITY CHOICE ELECTRICITY AGGREGATION

		Municipalities Without Electricity Aggregation		Municipalities With Electricity Aggregation		T-Test (2-tails, p=.05, Equal Variance)			
		Mean	Standard Deviation	Mean	Standard Deviation	P-value	t	df	Significant?
RACE	White alone	74.48%	0.2595	81.03%	0.1646	0.021608	-2.31	280	✓
	Black or African American alone	14.34%	0.2567	5.90%	0.1293	0.002015	3.12	280	✓
	Minority community? (White alone < 50%)	16.85%	0.3743	5.77%	0.2332	0.007002	2.72	280	✓
CITIZENSHIP	Foreign Born	12.81%	0.1046	16.49%	0.1070	0.005110	-2.82	280	✓
	Not a U.S. Citizen	6.38%	0.0642	8.01%	0.0720	0.050874	-1.96	280	
LANGUAGE SPOKEN (AGE 5 YEARS AND OVER)	Speak a language other than English	20.59%	0.1656	25.79%	0.1665	0.011988	-2.53	280	✓
	Speak English less than "very well"	8.25%	0.0849	10.16%	0.0923	0.079669	-1.76	280	
EDUCATIONAL ATTAINMENT (AGE 25 YEARS AND OVER)	Percent high school graduate or higher	88.99%	0.0829	90.15%	0.0764	0.244301	-1.17	280	
	Percent bachelor's degree or higher	32.83%	0.1956	38.35%	0.1924	0.022575	-2.29	280	✓
	Graduate or professional degree	12.13%	0.0983	15.26%	0.1082	0.013778	-2.48	280	✓
EMPLOYMENT (AGE 16 YEARS AND OVER)	Unemployed	9.88%	0.0496	8.10%	0.0300	0.001062	3.31	280	✓
ANNUAL HOUSEHOLD INCOME	Median household income (dollars)	76089.6	31269.2	82748.0	35195.7	0.102070	-1.64	280	
	Mean household income (dollars)	93516.7	45088.0	105967.9	57001.5	0.044548	-2.02	280	✓
	Less than \$14,999	4.89%	0.0494	3.56%	0.0265	0.012048	2.53	280	✓
	\$15,000 to \$34,999	12.34%	0.0748	10.86%	0.0657	0.096706	1.67	280	
	\$35,000 to \$74,999	28.51%	0.0960	27.56%	0.0991	0.433945	0.78	280	
	\$75,000 to \$149,999	36.46%	0.1030	36.70%	0.0854	0.842666	-0.20	280	
	\$150,000 or over	17.80%	0.1608	21.31%	0.1709	0.085837	-1.72	280	
All families below the poverty level (income in the last 12 months)	7.07%	0.0684	5.31%	0.0417	0.018325	2.37	280	✓	

Appendix E: T-Test Results: Presence of Outside Environmental Certifications

MUNICIPALITIES WITHOUT ANY OUTSIDE ENVIRONMENTAL CERTIFICATION VERSUS 1
MUNICIPALITIES WITH AT LEAST ONE OUTSIDE ENVIRONMENTAL CERTIFICATION

		Municipalities Without Outside Certification		Municipalities With Outside Certification		T-Test (2-tails, p=.05, Equal Variance)			
		Mean	Standard Deviation	Mean	Standard Deviation	P-value	t	df	Significant?
SUSTAINABILITY PLANS	Drafted a sustainability plan?	5.22%	0.2224	17.96%	0.3839	0.001544	-3.20	280	
	Is plan operational?	1.74%	0.1307	8.98%	0.2859	0.011927	-2.53	280	✓
	Is plan visionary?	3.48%	0.1832	8.98%	0.2859	0.070427	-1.82	280	
	Is plan comprehensive?	2.61%	0.1594	14.37%	0.3508	0.000911	-3.35	280	
ONLINE ENVIRONMENTAL PRESENCE	Environmental Page on City Website?	8.70%	0.2818	40.72%	0.4913	0.000000	-6.29	280	✓
	Higher-level (Department and Commission)	4.35%	0.2039	19.16%	0.3936	0.000264	-3.69	280	
	Lower-Level (Council, Committee, or Board)	0.87%	0.0928	11.38%	0.3175	0.000679	-3.44	280	✓
	Sponsored by Citizen Organization	3.48%	0.1832	10.78%	0.3101	0.024677	-2.26	280	
ELECTRICITY CONTRACTS	Pursuing community choice electric aggregation contracts?	27.83%	0.4481	43.11%	0.4952	0.008813	-2.64	280	
DEMOGRAPHICS (2011 ACS 5-year Estimates)	Population Size	8825.2	11577.1	41136.5	208088.9	0.098544	-1.66	280	
AGE	Median age (years)	38.67	6.18	38.60	5.58	0.922615	0.10	280	
	Under 18 years	25.48%	0.0577	25.91%	0.0477	0.493683	-0.69	280	
	18 to 34 years	20.22%	0.0696	19.74%	0.0608	0.541276	0.61	280	
	35 to 49 years	22.41%	0.0376	22.23%	0.0335	0.668688	0.43	280	
	50 to 64 years	19.67%	0.0564	19.56%	0.0418	0.853275	0.19	280	
	65 years and over	12.20%	0.0562	12.53%	0.0545	0.624953	-0.49	280	
RACE	White alone	76.36%	0.2665	77.26%	0.2035	0.746992	-0.32	280	
	Black or African American alone	13.34%	0.2526	9.77%	0.1974	0.186102	1.33	280	
	Minority community? (White alone < 50%)	17.39%	0.3790	9.58%	0.2943	0.053693	1.94	280	

MUNICIPALITIES WITHOUT ANY OUTSIDE ENVIRONMENTAL CERTIFICATION VERSUS
MUNICIPALITIES WITH AT LEAST ONE OUTSIDE ENVIRONMENTAL CERTIFICATION

2

		Municipalities Without Outside Certification		Municipalities With Outside Certification		T-Test (2-tails, p=.05, Equal Variance)			
		Mean	Standard Deviation	Mean	Standard Deviation	P-value	t	df	Significant?
CITIZENSHIP	Foreign Born	11.29%	0.1045	16.15%	0.1041	0.000158	-3.83	280	✓
	Not a U.S. Citizen	6.00%	0.0711	7.65%	0.0643	0.044757	-2.02	280	✓
LANGUAGE SPOKEN (AGE 5 YEARS AND OVER)	Speak a language other than English	19.47%	0.1784	24.59%	0.1568	0.011660	-2.54	280	✓
	Speak English less than "very well"	7.62%	0.0883	9.87%	0.0869	0.035147	-2.12	280	✓
EDUCATIONAL ATTAINMENT (AGE 25 YEARS AND OVER)	Percent high school graduate or higher	87.87%	0.0909	90.48%	0.0710	0.007550	-2.69	280	✓
	Percent bachelor's degree or higher	26.79%	0.1794	40.43%	0.1878	0.000000	-6.08	280	✓
	Graduate or professional degree	9.72%	0.0916	15.74%	0.1035	0.000001	-5.01	280	✓
EMPLOYMENT (AGE 16 YEARS AND OVER)	Unemployed	10.44%	0.0536	8.39%	0.0341	0.000120	3.90	280	✓
ANNUAL HOUSEHOLD INCOME	Median household income (dollars)	72259.72	35412.86	82873.50	30356.31	0.007700	-2.68	280	✓
	Mean household income (dollars)	87469.50	49023.88	105435.0	49644.61	0.003028	-2.99	280	✓
	Less than \$14,999	5.32%	0.0561	3.77%	0.0291	0.002692	3.03	280	✓
	\$15,000 to \$34,999	13.77%	0.0836	10.44%	0.0590	0.000119	3.90	280	✓
	\$35,000 to \$74,999	30.14%	0.0987	26.79%	0.0939	0.004397	2.87	280	✓
	\$75,000 to \$149,999	36.05%	0.1117	36.89%	0.0850	0.477707	-0.71	280	
	\$150,000 or over	14.72%	0.1606	22.11%	0.1620	0.000206	-3.76	280	✓
	All families below the poverty level (income in the last 12 months)	7.76%	0.0781	5.50%	0.0422	0.001924	3.13	280	✓

Appendix F: T-Test Results: Municipalities with Sustainability Plans Compared to Municipalities with the Presence of Outside Certifications

**MUNICIPALITIES WITH SUSTAINABILITY PLANS VERSUS
MUNICIPALITIES WITH ANY ENVIRONMENTAL CERTIFICATIONS**

		Municipalities With Sustainability Plans		Municipalities With Outside Certifications		T-Test (2-tails, p=.05, Unequal Variance)			
		Mean	Standard Deviation	Mean	Standard Deviation	P-value	t	df	Significant?
ELECTRICITY CONTRACTS	Pursuing community choice electric aggregation contracts?	36.11%	0.4803	43.11%	0.4952	0.442342	-0.79	201	
DEMOGRAPHICS (2011 ACS 5-year Estimates)	Population Size	111892	439372	41136	208089	0.148713	0.94	201	
AGE	Median age (years)	38.34	5.3343	38.60	5.5759	0.798876	-0.26	201	
	Under 18 years	26.67%	0.0483	25.91%	0.0477	0.390686	0.86	201	
	18 to 34 years	19.47%	0.0570	19.74%	0.0608	0.802968	-0.26	201	
	35 to 49 years	21.84%	0.0246	22.23%	0.0335	0.509173	-0.81	201	
	50 to 64 years	19.44%	0.0439	19.56%	0.0418	0.870326	-0.16	201	
	65 years and over	12.54%	0.0480	12.53%	0.0545	0.986337	0.02	201	
RACE	White alone	76.01%	0.1947	77.26%	0.2035	0.736582	-0.35	201	
	Black or African American alone	10.90%	0.1902	9.77%	0.1974	0.755291	0.32	201	
	Minority community? (White alone < 50%)	11.11%	0.3143	9.58%	0.2943	0.781212	0.27	201	
CITIZENSHIP	Foreign Born	14.81%	0.1001	16.15%	0.1041	0.484154	-0.72	201	
	Not a U.S. Citizen	7.21%	0.0536	7.65%	0.0643	0.700945	-0.43	201	
LANGUAGE SPOKEN (AGE 5 YEARS AND OVER)	Speak a language other than English	22.43%	0.1366	24.59%	0.1568	0.445271	-0.84	201	
	Speak English less than "very well"	8.77%	0.0801	9.87%	0.0869	0.485352	-0.74	201	
EDUCATIONAL ATTAINMENT (AGE 25 YEARS AND OVER)	Percent high school graduate or higher	91.19%	0.0747	90.48%	0.0710	0.595518	0.52	201	
	Percent bachelor's degree or higher	45.02%	0.2022	40.43%	0.1878	0.192737	1.25	201	
	Graduate or professional degree	18.49%	0.1270	15.74%	0.1035	0.169465	1.22	201	
EMPLOYMENT	Age 16+ unemployed	8.21%	0.0451	8.39%	0.0341	0.780221	-0.23	201	
ANNUAL HOUSEHOLD INCOME	Median household income (dollars)	84056	35939	82873	30356	0.838675	0.18	201	
	Mean household income (dollars)	111355	58133	105435	49645	0.532354	0.57	201	
	Less than \$14,999	5.09%	0.0484	3.77%	0.0291	0.033220	1.58	201	✓
	\$15,000 to \$34,999	10.63%	0.0583	10.44%	0.0590	0.858200	0.18	201	
	\$35,000 to \$74,999	24.51%	0.0970	26.79%	0.0939	0.191813	-1.29	201	
	\$75,000 to \$149,999	34.95%	0.0883	36.89%	0.0850	0.220416	-1.21	201	
	\$150,000 or over	24.81%	0.1696	22.11%	0.1620	0.371254	0.87	201	
	All families below the poverty level (income in the last 12 months)	76.01%	0.1947	77.26%	0.2035	0.736582	-0.35	201	

Appendix G: T-Test Results: Clean Air Counts Municipalities Compared to Greenest Region Compact Municipalities

MUNICIPALITIES CERTIFIED BY CLEAN AIR COUNTS VERSUS MUNICIPALITIES CERTIFIED BY GREENEST REGION COMPACT

		Clean Air Counts Municipalities		Greenest Region Compact Municipalities		T-Test (2-tails, p=.05, Unequal Variance)			
		Mean	Standard Deviation	Mean	Standard Deviation	P-value	t	df	Significant?
ELECTRICITY CONTRACTS	Pursuing community choice electric aggregation contracts?	41.76%	0.4932	46.67%	0.4989	0.508844	-0.67	179	
DEMOGRAPHICS (2011 ACS 5-year Estimates)	Population Size	59663	279987	55247	281640	0.916331	0.11	179	
AGE	Median age (years)	38.76	5.6530	38.34	5.1117	0.596803	0.53	179	
	Under 18 years	25.60%	0.0491	25.49%	0.0466	0.874279	0.16	179	
	18 to 34 years	19.82%	0.0519	20.44%	0.0508	0.419028	-0.81	179	
	35 to 49 years	22.38%	0.0309	22.31%	0.0354	0.889339	0.14	179	
	50 to 64 years	19.45%	0.0423	19.22%	0.0343	0.697829	0.39	179	
	65 years and over	12.72%	0.0590	12.49%	0.0578	0.793767	0.26	179	
RACE	White alone	78.25%	0.1716	75.90%	0.2044	0.406285	0.84	179	
	Black or African American alone	7.76%	0.1553	10.99%	0.2073	0.239731	-1.18	179	
	Minority community? (White alone < 50%)	6.59%	0.2482	11.11%	0.3143	0.286967	-1.07	179	
CITIZENSHIP	Foreign Born	17.84%	0.1021	16.23%	0.1035	0.296515	1.05	179	
	Not a U.S. Citizen	8.63%	0.0664	7.48%	0.0603	0.228070	1.22	179	
LANGUAGE SPOKEN (AGE 5 YEARS AND OVER)	Speak a language other than English	26.48%	0.1524	24.72%	0.1500	0.436388	0.78	179	
	Speak English less than "very well"	10.92%	0.0863	9.95%	0.0844	0.452264	0.76	179	
EDUCATIONAL ATTAINMENT (AGE 25 YEARS AND OVER)	Percent high school graduate or higher	90.60%	0.0688	90.14%	0.0629	0.645197	0.46	179	
	Percent bachelor's degree or higher	41.18%	0.1689	37.31%	0.1678	0.125444	1.55	179	
	Graduate or professional degree	15.85%	0.1002	14.19%	0.0983	0.265388	1.12	179	
EMPLOYMENT	Age 16+ unemployed	8.12%	0.0269	8.77%	0.0325	0.145265	-1.47	179	
ANNUAL HOUSEHOLD INCOME	Median household income (dollars)	80432	24251	78092	27706	0.548260	0.60	179	
	Mean household income (dollars)	100611	38582	97693	46499	0.648155	0.46	179	
	Less than \$14,999	3.53%	0.0248	3.92%	0.0307	0.353280	-0.93	179	
	\$15,000 to \$34,999	10.27%	0.0508	10.89%	0.0538	0.426060	-0.80	179	
	\$35,000 to \$74,999	26.79%	0.0824	28.05%	0.0903	0.331870	-0.98	179	
	\$75,000 to \$149,999	38.15%	0.0762	38.09%	0.0886	0.960966	0.05	179	
	\$150,000 or over	21.25%	0.1378	19.04%	0.1440	0.294567	1.06	179	
	All families below the poverty level (income in the last 12 months)	5.20%	0.0367	5.70%	0.0440	0.407720	-0.83	179	

Appendix H: Sustainability Plans, Electricity Aggregation, and Outside Certifications by Municipality

Catalog of Sustainability Plans, Electricity Aggregation Contracts, and Outside Environmental Certifications 1

MUNICIPALITY	Sustainability Plan	Community Electricity Aggregation	Clean Air Counts	Greenest Region Compact	ICLEI	Tree Cities USA	Mayors Climate Agreement	Chicago Clean Cities	Energy Star Partner	Total Certifications	Presence of Certification
Addison Village		✓	✓	✓							✓
Algonquin Village			✓	✓	✓	✓	✓				✓
Alsip Village			✓	✓							✓
Antioch Village		✓									
Arlington Heights Village		✓	✓	✓		✓		✓			✓
Aurora City	✓	✓	✓	✓			✓	✓			✓
Bannockburn Village		✓				✓					✓
Barrington Hills Village											
Barrington Village						✓				1	✓
Bartlett Village			✓	✓						2	✓
Batavia City	✓		✓	✓		✓				3	✓
Beach Park Village											
Bedford Park Village		✓		✓						1	✓
Beecher Village		✓									
Bellwood Village								✓		1	✓
Bensenville Village		✓				✓				1	✓
Berkeley Village											
Berwyn City						✓	✓			2	✓
Big Rock Village											
Bloomington Village			✓	✓		✓				3	✓
Blue Island City				✓		✓	✓			3	✓
Bolingbrook Village			✓			✓	✓			3	✓
Braidwood City											
Bridgeview Village		✓		✓						1	✓
Broadview Village											
Brookfield Village		✓		✓	✓	✓				3	✓
Buffalo Grove Village	✓		✓	✓		✓				3	✓
Bull Valley Village											
Burbank City						✓				1	✓
Burlington Village		✓									
Burnham Village											
Burr Ridge Village			✓			✓				2	✓
Calumet City		✓		✓						1	✓
Calumet Park Village											
Campton Hills Village											
Carol Stream Village			✓	✓			✓			3	✓
Carpentersville Village						✓				1	✓
Cary Village		✓	✓							1	✓
Channahon Village		✓	✓	✓		✓				3	✓
Chicago City	✓	✓	✓	✓	✓	✓	✓	✓	✓	7	✓
Chicago Heights City	✓										
Chicago Ridge Village		✓		✓						1	✓
Cicero town		✓									
Clarendon Hills Village						✓				1	✓
Coal City Village		✓									
Country Club Hills City				✓		✓				2	✓
Countryside City		✓	✓							1	✓
Crest Hill City		✓									
Crestwood Village											
Crete Village				✓						1	✓
Crystal Lake City		✓	✓							1	✓
Darien City		✓									
Deer Park Village											
Deerfield Village		✓	✓			✓	✓			3	✓
Des Plaines City			✓	✓		✓	✓			4	✓
Dixmoor Village											
Dolton Village											
Downers Grove Village						✓		✓		2	✓
East Dundee Village		✓	✓							1	✓
East Hazel Crest Village						✓				1	✓

Catalog of Sustainability Plans, Electricity Aggregation Contracts, and Outside Environmental Certifications 2

MUNICIPALITY	Sustainability Plan	Community Electricity Aggregation	Clean Air Counts	Greenest Region Compact	ICLEI	Tree Cities USA	Mayors Climate Agreement	Chicago Clean Cities	Energy Star Partner	Total Certifications	Presence of Certification
Elburn Village	✓		✓	✓		✓				3	✓
Elgin City	✓		✓	✓	✓	✓	✓			5	✓
Elk Grove Village											
Elmhurst City	✓		✓			✓	✓			3	✓
Elmwood Park Village											
Elwood Village											
Evanston City	✓	✓	✓	✓		✓	✓	✓	✓	6	✓
Evergreen Park Village		✓	✓	✓				✓	✓	4	✓
Flossmoor Village			✓	✓						2	✓
Ford Heights Village											
Forest Park Village											
Forest View Village											
Fox Lake Village											
Fox River Grove Village		✓									
Frankfort Village						✓				1	✓
Franklin Park Village		✓	✓					✓		2	✓
Geneva City				✓						1	✓
Gilberts Village		✓		✓						1	✓
Glen Ellyn Village			✓			✓				2	✓
Glencoe Village	✓	✓	✓	✓		✓				3	✓
Glendale Heights Village						✓				1	✓
Glenview Village	✓	✓				✓				1	✓
Glenwood Village											
Godley Village											
Golf Village						✓				1	✓
Grayslake Village			✓	✓		✓		✓		4	✓
Green Oaks Village											
Greenwood Village											
Gurnee Village						✓				1	✓
Hainesville Village			✓	✓						2	✓
Hampshire Village		✓		✓						1	✓
Hanover Park Village		✓	✓	✓		✓				3	✓
Harvard City											
Harvey City											
Harwood Heights Village		✓									
Hawthorn Woods Village		✓	✓							1	✓
Hazel Crest Village						✓	✓			2	✓
Hebron Village											
Hickory Hills City		✓		✓		✓				2	✓
Highland Park City	✓		✓	✓		✓	✓			4	✓
Highwood City		✓	✓							1	✓
Hillside Village		✓									
Hinsdale Village		✓		✓		✓				2	✓
Hodgkins Village											
Hoffman Estates Village	✓	✓	✓	✓		✓	✓			4	✓
Holiday Hills Village											
Homer Glen Village	✓		✓			✓				2	✓
Hometown City											
Homewood Village			✓	✓		✓	✓			4	✓
Huntley Village		✓									
Indian Creek Village											
Indian Head Park Village			✓			✓				2	✓
Inverness Village		✓				✓				1	✓
Island Lake Village		✓		✓						1	✓
Itasca Village			✓			✓				2	✓
Johnsburg Village											
Joliet City						✓	✓			2	✓
Justice Village											
Kaneville Village											
Kenilworth Village		✓									

Catalog of Sustainability Plans, Electricity Aggregation Contracts, and Outside Environmental Certifications 3

MUNICIPALITY	Sustainability Plan	Community Electricity Aggregation	Clean Air Counts	Greenest Region Compact	ICLEI	Tree Cities USA	Mayors Climate Agreement	Chicago Clean Cities	Energy Star Partner	Total Certifications	Presence of Certification
Kildeer Village											
La Grange Park Village	✓			✓	✓	✓				3	✓
La Grange Village		✓							✓	1	✓
Lake Barrington Village		✓				✓				1	✓
Lake Bluff Village						✓				1	✓
Lake Forest City		✓		✓	✓	✓	✓			4	✓
Lake in the Hills Village			✓			✓	✓			3	✓
Lake Villa Village											
Lake Zurich Village			✓	✓		✓				3	✓
Lakemoor Village											
Lakewood Village		✓	✓			✓			✓	3	✓
Lansing Village											
Lemont Village		✓		✓						1	✓
Libertyville Village		✓		✓		✓				2	✓
Lily Lake Village				✓						1	✓
Lincolnshire Village			✓	✓		✓				3	✓
Lincolnwood Village		✓	✓	✓		✓				3	✓
Lindhurst Village				✓						1	✓
Lisbon Village											
Lisle Village		✓	✓	✓		✓				3	✓
Lockport City											
Lombard Village	✓		✓	✓		✓	✓			4	✓
Long Grove Village											
Lynwood Village											
Lyons Village			✓							1	✓
Manhattan Village		✓					✓			1	✓
Maple Park Village		✓									
Marengo City											
Markham City											
Matteson Village											
Maywood Village			✓							1	✓
McCook Village											
McCullom Lake Village											
McHenry City											
Melrose Park Village		✓									
Merrionette Park Village											
Mettawa Village	✓		✓							1	✓
Midlothian Village			✓	✓						2	✓
Millbrook Village	✓										
Millington Village											
Minooka Village							✓			1	✓
Mokena Village		✓				✓				1	✓
Monee Village	✓										
Montgomery Village	✓	✓	✓	✓						2	✓
Morton Grove Village						✓				1	✓
Mount Prospect Village			✓	✓		✓				3	✓
Mundelein Village		✓									
Naperville City	✓		✓			✓		✓	✓	4	✓
New Lenox Village						✓		✓		2	✓
Newark Village		✓									
Niles Village	✓		✓	✓						2	✓
Norridge Village		✓									
North Aurora Village			✓							1	✓
North Barrington Village		✓				✓				1	✓
North Chicago City				✓						1	✓
North Riverside Village		✓									
Northbrook Village	✓	✓	✓			✓	✓	✓		4	✓
Northfield Village						✓				1	✓
Northlake City			✓	✓						2	✓
Oak Brook Village		✓		✓						1	✓

Catalog of Sustainability Plans, Electricity Aggregation Contracts, and Outside Environmental Certifications 4

MUNICIPALITY	Sustainability Plan	Community Electricity Aggregation	Clean Air Counts	Greenest Region Compact	ICLEI	Tree Cities USA	Mayors Climate Agreement	Chicago Clean Cities	Energy Star Partner	Total Certifications	Presence of Certification
Oak Forest City			✓	✓						2	✓
Oak Lawn Village		✓		✓		✓	✓			3	✓
Oak Park Village	✓		✓		✓	✓	✓	✓		5	✓
Oakbrook Terrace City		✓		✓	✓	✓				3	✓
Oakwood Hills Village		✓									
Old Mill Creek Village		✓									
Olympia Fields Village		✓									
Orland Hills Village			✓	✓		✓				3	✓
Orland Park Village		✓	✓	✓		✓	✓			4	✓
Oswego Village	✓	✓	✓	✓	✓	✓	✓			5	✓
Palatine Village		✓	✓	✓		✓	✓			4	✓
Palos Heights City			✓	✓		✓				3	✓
Palos Hills City		✓	✓	✓		✓				3	✓
Palos Park Village			✓	✓		✓				3	✓
Park City											
Park Forest Village	✓			✓			✓			2	✓
Park Ridge City		✓	✓			✓	✓			3	✓
Peotone Village		✓									
Phoenix Village											
Pingree Grove Village											
Plainfield Village		✓				✓	✓			2	✓
Plano City											
Plattville Village											
Port Barrington Village				✓						1	✓
Posen Village											
Prairie Grove Village		✓									
Prospect Heights City			✓	✓						2	✓
Richmond Village											
Richton Park Village			✓	✓						2	✓
Ringwood Village											
River Forest Village	✓	✓				✓				1	✓
River Grove Village						✓				1	✓
Riverdale Village				✓		✓				2	✓
Riverside Village		✓	✓			✓				2	✓
Riverwoods Village		✓									
Robbins Village	✓										
Rockdale Village		✓									
Rolling Meadows City						✓	✓			2	✓
Romeoville Village		✓	✓							1	✓
Roselle Village			✓	✓		✓				3	✓
Rosemont Village		✓									
Round Lake Beach Village		✓	✓							1	✓
Round Lake Heights Village											
Round Lake Park Village			✓							1	✓
Round Lake Village			✓	✓						2	✓
Sandwich City											
Sauk Village				✓						1	✓
Schaumburg Village	✓	✓	✓	✓			✓		✓	4	✓
Schiller Park Village				✓						1	✓
Shorewood Village						✓				1	✓
Skokie Village			✓			✓		✓		3	✓
Sleepy Hollow Village	✓					✓				1	✓
South Barrington Village		✓									
South Chicago Heights Villa	✓										
South Elgin Village		✓	✓			✓				2	✓
South Holland Village		✓		✓		✓				2	✓
Spring Grove Village											
St. Charles City	✓					✓				1	✓
Steger Village											
Stickney Village		✓				✓				1	✓

Catalog of Sustainability Plans, Electricity Aggregation Contracts, and Outside Environmental Certifications 5

MUNICIPALITY	Sustainability Plan	Community Electricity Aggregation	Clean Air Counts	Greenest Region Compact	ICLEI	Tree Cities USA	Mayors Climate Agreement	Chicago Clean Cities	Energy Star Partner	Total Certifications	Presence of Certification
Stone Park Village											
Streamwood Village				✓		✓				2	✓
Sugar Grove Village		✓		✓		✓				2	✓
Summit Village											
Symerton Village											
Third Lake Village											
Thornton Village											
Tinley Park Village		✓									
Tower Lakes Village											
Trout Valley Village											
Union Village											
United City of Yorkville		✓	✓	✓				✓		3	✓
University Park Village			✓							1	✓
Vernon Hills Village		✓				✓				1	✓
Villa Park Village		✓	✓	✓			✓			3	✓
Virgil Village											
Volo Village		✓									
Wadsworth Village											
Warrenville City				✓		✓	✓			3	✓
Wauconda Village			✓	✓		✓				3	✓
Waukegan City			✓				✓			2	✓
Wayne Village						✓				1	✓
West Chicago City		✓		✓						1	✓
West Dundee Village			✓	✓						2	✓
Westchester Village											
Western Springs Village						✓				1	✓
Westmont Village		✓	✓			✓	✓			3	✓
Wheaton City	✓		✓			✓		✓		3	✓
Wheeling Village	✓	✓	✓			✓				2	✓
Willow Springs Village											
Willowbrook Village		✓									
Wilmette Village			✓			✓	✓			3	✓
Wilmington City											
Winfield Village			✓							1	✓
Winnetka Village	✓			✓						1	✓
Winthrop Harbor Village											
Wonder Lake Village											
Wood Dale City		✓	✓	✓						2	✓
Woodridge Village		✓		✓		✓				2	✓
Woodstock City	✓	✓									
Worth Village		✓		✓						1	✓
Zion City		✓									
Participation Percentage	12.8%	36.9%	32.3%	31.9%	3.2%	36.9%	13.5%	5.0%	3.2%	1.26	59.2%
Total Participation	36	104	91	90	9	104	38	14	9	355	167

IX. Resources

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