User Guide for Local Clean Energy Self-Scoring Tool, Version 4.0

Kate Tanabe, Alexander Jarrah, and David Ribeiro
December 2019
Report U1909

Contents

About the Authors

Kate Tanabe assists the Local Policy Program with research and technical assistance and contributes to the *City Scorecar*d. Before joining ACEEE, she interned with the District of Columbia Department of Transportation and the Chesapeake Bay Foundation. She earned a bachelor of arts in environmental studies with a focus in sustainable development and policy from Dickinson College.

Alexander Jarrah is a research assistant on the Local Policy team. Before joining ACEEE, he interned at the American Council on Renewable Energy where he researched corporate sustainability initiatives and resilience planning. He earned a bachelor of science in economics and literature from American University.

David Ribeiro focuses on energy efficiency planning and implementation in cities and communities. He is the lead author of the annual *City Clean Energy Scorecard* and coordinates technical assistance to cities included in the *Scorecard*. David holds a bachelor of arts in history from the College of the Holy Cross and a master in science in energy policy and climate from Johns Hopkins University.

Acknowledgments

Quick Start Guide

The Local Clean Energy Self-Scoring Tool, Version 4.0 lets you assess any community's clean energy efforts. You do so by evaluating your community's locally enacted or implemented activities across local government operations, community-wide initiatives, buildings policies, energy and water utilities, and transportation policies. Through the scoring process, you can compare the community's clean energy efforts against median scores from the *2019 City Clean Energy Scorecard* (Ribeiro et al. 2019). Benchmarking puts communities' scores in perspective and can introduce you to practices that have proved successful in other communities. You can also use the tool to identify your community's strengths in clean energy policymaking as well as areas needing improvement.

You can download the Self-Scoring Tool at aceee.org/local-policy/city-scorecard.

Layout of the Local Clean Energy Self-Scoring Tool

The tool consists of eight Excel worksheets.

Introduction. This landing page discusses the tool's aims and has brief instructions for using it.

Metric categorization. This page describes each metric in the *2019 City Scorecard* in terms of clean energy policy area, assessment of policy or performance, equity considerations, and existence in previous reports.

GHG per capita tab. You input your city's GHG per capita data for all available years on this page. The data are used to calculate progress towards GHG goals.

Policy area worksheets. Five worksheets correspond to the areas in which you evaluate your community's clean energy policies: local government operations, community-wide initiatives, buildings, energy and water utilities, and transportation. You respond to questions on each of these worksheets to score your community.

Analysis. Our analysis displays your community's scores and benchmarks them against median scores from the *2019 City Scorecard*.

List of utilities. This page lists the names of electric and natural gas utilities. If your community is served by one of them, you can use data from ACEEE's State and Local Policy Database to answer some questions.

The following instructions are a concise guide you can reference while using the Self-Scoring Tool. We recommend that you review this entire user guide before engaging with the tool so you fully understand its goals and features.

Step 1. Read the information on the Introduction worksheet and enter the community information requested.

Step 2. Proceed to the GHG per capita data worksheet. Input GHG per capita data for all years available. These data are used to calculate your city's progress towards its GHG goals.

Step 3. Proceed to a policy area worksheet (such as local government operations) and glance over the metrics and questions in Columns A and B. You can find comments regarding many of the questions in Column B by moving the cursor over a cell.

Step 4. Return to the top of the worksheet and provide preliminary information. If you do not, scoring errors will occur. Answers provided to preliminary information questions may unlock different questions and scoring paths based on your community's authority. Other questions may appear as "Not applicable" on the basis of these answers.

Step 5. After you provide the preliminary information, respond to the first question posed in Column B by answering it in your own words in the answer column, Column C. It is important to complete this column fully by recording the pertinent policy or program names, local government ordinances, or other information. These data will allow us to verify that you scored your community correctly.

- We recommend that you review the scoring criteria found on the drop-down menus in Column D before answering questions to understand how the questions relate to the methodology.
- If you do not have the data to answer a question, see Column F for a recommended data source.
- Write your community's response in cells that are **light-blue**. Cells in Column C that are **medium-blue** are locked. In these cases, the cell values will be automatically filled in from information you previously provided.

Step 6. After answering a question in Column C, select a scoring criterion from the drop-down menu in Column D that best fits your answer in Column C. Once you select the scoring criterion, Column E will display the score.

Step 7. After working through the questions in one policy area worksheet, go to the next worksheet and complete it in the same way as outlined in steps 3 through 6. Repeat this until you have completed all policy area worksheets.

- It is important to answer all the questions on each policy area worksheet. This is the only way to get a comprehensive assessment and benchmarking of clean energy efforts.

Step 8. After you complete your community's evaluation, go to the Analysis worksheet to review the results and see a comparison of your community's score with median scores from the *2019 City Scorecard*.

We base our analysis on the metrics and questions to which you have provided responses. We provide a more detailed discussion of the tool's analytical functions in the instructions that follow in this user guide.

Introduction

The *2019 City Clean Energy Scorecard* ranks 75 large US cities on the basis of their policies and leadership in advancing clean energy (Ribeiro et al. 2019).[1] More than 50 metrics in the *City Scorecard* evaluate efforts across local government operations, community initiatives, building policies, energy and water utilities, and transportation policies. The *City Scorecard* applies these metrics to large cities, but the same metrics can be valuable to other communities trying to increase the use of energy efficiency and renewable energy.

With these ideas in mind, we translated the metrics of the *2019 City Scorecard* into the Excel-based Local Clean Energy Self-Scoring Tool, Version 4.0. You can use the tool to benchmark your community's current clean energy efforts across the same policy areas addressed in the *City Scorecard*. The Self-Scoring Tool also compares your community's scores with the median scores from the 75 cities in the *City Scorecard*. These comparisons help put your community's scores into better perspective. You can also measure progress over time by using the tool to reevaluate efforts as the community implements new policies. The analysis section of the Self-Scoring Tool outlines your community's scores in terms of metric type to provide a baseline score for energy efficiency, renewable energy, climate change mitigation, and equity considerations.

Because we have already scored the largest US cities in the *City Scorecard*, we envision small and medium-size localities to be the primary users of the tool. The tool can inform the climate and energy policy decisions of smaller, more resource-constrained local governments and assist them in prioritizing future investments. It gives a policymaker, stakeholder, student, or informed citizen the opportunity to score a community's clean energy efforts in an easy, transparent manner. The following are some ways that stakeholders can use the tool:

- Sustainability staff can benchmark municipal climate and energy efforts to get a better understanding of their progress and inform future policy decisions.

- Nonprofit organizations can learn about new clean energy programs and policies to consider for their community, which they can advocate for or work to implement.

- Informed citizens can measure and track the clean energy progress of their community and learn about the strengths and weaknesses of current programs, in order to keep local officials accountable for these efforts.

After scoring your community, we encourage you to submit your results to ACEEE by sending the completed Self-Scoring Tool to ktanabe@aceee.org. Resources permitting, we will publish the results of leading and innovative communities in our State and Local Policy Database.[2] This database lets us publicly recognize municipalities and share information on their activities with other local governments.

---

[1] The *City Clean Energy Scorecard* is available at aceee.org/research-report/u1904.

[2] The State and Local Policy Database is available at database.aceee.org.

When publishing or citing your results from the Self-Scoring Tool, please use the following format:

> [User's name]. [Year]. Based on analysis of self-reported data using the ACEEE Local Clean Energy Self-Scoring Tool (2019).

Please do not attribute the results and scores for a jurisdiction to ACEEE unless you have submitted the data to ACEEE and we have verified the scores.

There are no version requirements for using the Self-Scoring Tool on a PC or Mac computer. The tool should work on all versions of Microsoft Excel. If you encounter any issues while using the tool, please contact us.

Instructions

The Self-Scoring Tool gives you an opportunity to catalog locally enacted clean energy efforts and benchmark clean energy policies. It takes time to learn how to properly use the Self-Scoring Tool, collect the pertinent data on energy efficiency and renewable energy activities, and subsequently use the tool to score the community. The total time it takes depends on the complexity of your community's clean energy policies and how familiar you are with the community's policy landscape.

INTRODUCTION WORKSHEET

When opening the Self-Scoring Tool, you will start on the Introduction worksheet, as shown in figure 1.

Figure 1. Introduction worksheet

Before going to other worksheets, please read the introduction and instructions on this worksheet. They give important highlights from this user guide and suggest how to use the tool best. After reading those notes, please complete the community information requested on the worksheet, including population and number of households. The tool will use these values in calculations that follow.

GHG PER CAPITA WORKSHEET

After reading and completing the Introduction worksheet, proceed to the GHG per capita worksheet, as shown in figure 2.

GHG per capita data
Input GHG per capita data for all years your city has available. Note that the first row is reserved for local government GHG emissions per capita and the second row is for community-wide GHG emissions per capita. These data are used to assess your city's progress toward its GHG goals. For year-to-year population data, we recommend using the Census Bureau's American Community Survey One-Year Estimates.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Local government data												
Community-wide data												

© 2019 ACEEE

Figure 2. GHG per capita data worksheet

This worksheet allows us to calculate city progress toward GHG goals in subsequent worksheets. Using the table, enter the GHG per capita data for all years available between 1990 to 2019. Input emissions data from local government operations in the first row and community-wide emissions data in the second row. Please enter data in per capita form. To calculate per capita emissions for a given year, we recommend using the Census Bureau's American Community Survey One-Year estimates.

POLICY AREA WORKSHEETS

After completing the GHG per capita worksheet, you will choose one of the five policy area worksheets (local government operations, community-wide initiatives, buildings policies, energy and water utilities, and transportation policies) to begin scoring your community. Each worksheet is set up with a series of multiple-choice questions. We give you a set of questions, space to respond to the questions, and multiple-choice options. Figure 3 shows one of the policy area worksheets.

Figure 3. Transportation policies worksheet

The following is the column layout for the policy area worksheets:

- Column A: Metric. This column identifies the metric to which the question in Column B refers.

- Column B: Question. This column has a question related to the metric listed in Column A.

- Column C: Answer. This column has a cell where you can key in your reply to the question posed in Column B. It is important to fully complete this column in order to record the specific policy or program information for your community. You should record policy or program names, local government ordinances, or other references in these cells. In a few instances, you cannot alter cells in Column C. We have colored these cells **medium-blue**. In these cases, the value in the cell will be automatically filled in from information in previous inputs.

- Column D: Scoring criteria. Here you filter your answer in Column C into one of ACEEE's multiple-choice scoring criteria. You click on the cell to unlock a drop-down menu. Then you select the option that best fits your description in Column C.

- Column E: Score. Once you select an option in Column D, Column E automatically updates to reflect the score for a metric.

- Column F: Recommended source. This column suggests a data source to help you respond to each question.

We also include questions at the top of each worksheet in a box labeled "Preliminary information." You must answer these before completing others in the section. If you do not, scoring errors will occur.

4

Questions on these worksheets will change depending on the preliminary information you provide. If the text in a cell changes to "Not applicable," skip that question.

Data Source Recommendations

To complete the Self-Scoring Tool, you will need to collect information from different data sources. To help streamline this process, we recommend sources when possible so you can locate relevant data quickly. In some cases, central data sources contain the information to address questions in the tool. In these cases, we provide web links in Column F of each policy area worksheet that take you directly to the data sources. We have also provided comments in the cells with the web links to explain how to retrieve data once you have clicked through to the website.

For many metrics, we recommend engaging with local government staff to collect information. We signify this for a metric by inputting the term "Community research" in Column F. This will be necessary when a central data source does not exist to address those metrics. When conducting community research, you may wish to follow a few guidelines to get the data you need:

- Investigate whether the community has a comprehensive energy or climate plan that addresses clean energy–related topics.

- Conduct a simple web search or browse your community's local government website to determine which agency or department administers energy and climate goals or programs.

- If no one agency or department oversees clean energy policy, you may need to ask multiple offices for information. For instance, the office of administrative services may have information on clean energy initiatives in local government operations, while the planning department has information on location-efficient zoning codes.

- Finally, it may be easier to contact an energy manager or sustainability staff member directly. This person will be able to guide you to the appropriate information or answer your questions.

Other Navigational Features

To make the tool intuitive and help you use it accurately, we have embedded features directly in each policy area worksheet. Please keep these in mind as you use the tool.

- We provide comments for many metrics to help you understand each question's context. You can read comments for a particular metric by holding the cursor over a question, or you can see all comments on a worksheet by selecting the Show All Comments button in the Excel toolbar. Each metric with a comment has a small red triangle in the upper right-hand corner of the cell.

- We have color-coded all scoring cells in the Self-Scoring Tool to distinguish the locked cells from those you need to address. Respond to the **light-blue** cells; those in **medium-blue** are locked, so you cannot edit them.

ANALYSIS WORKSHEET

The Analysis worksheet analyzes scores as you respond to questions on the policy area worksheets. You can review the Analysis worksheet as you respond to each metric to get a snapshot of how your community is performing.

The purpose of the analysis is to put scores in a comparative framework. While a community's overall score is an objective representation of performance, it is difficult to know if a community is "doing well" without having a means of comparison. For example, if your municipality receives a score of 55, is it failing in its efficiency efforts? Or does a 55 indicate a strong suite of clean energy programs? The analysis tries to answer these questions.

The points we allocate to each policy area and metric are the same as they are in the *2019 City Scorecard*. You can find the maximum score for each policy area and metric on the Analysis worksheet. The highest possible total score a community can receive is 100. The *2019 City Scorecard* provides more information on each metric and its point allocation (Ribeiro et al. 2019).

The Analysis worksheet has several sections, including a high-level snapshot of results and a detailed breakdown of scores. The first feature of this worksheet is a bar graph aggregating your community's score and comparing it with median scores from the *2019 City Scorecard*. Figure 4 displays this bar graph from the tool.
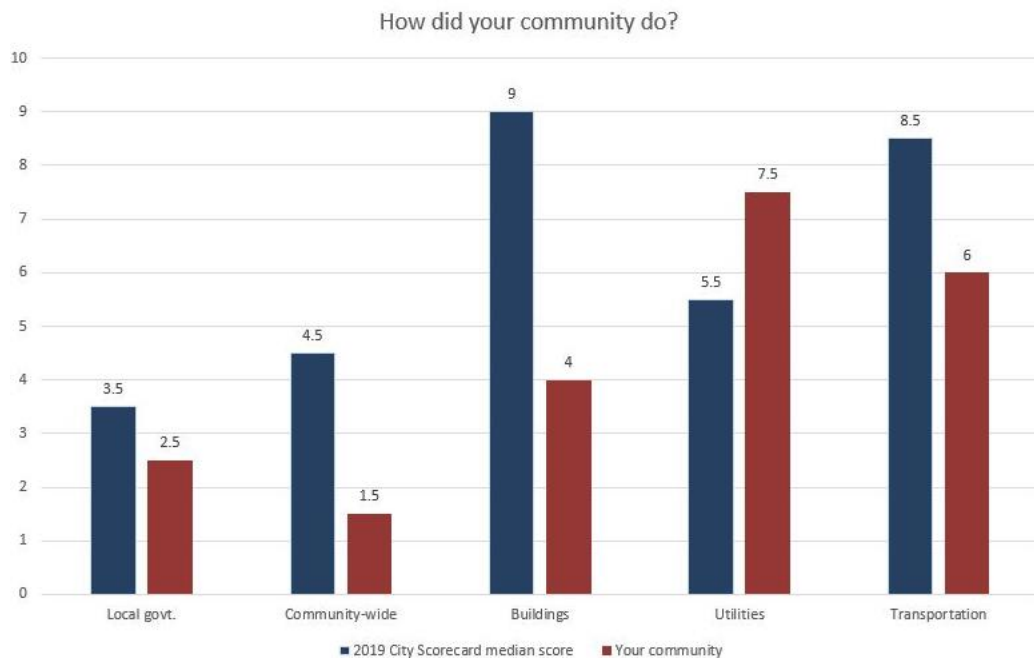

Figure 4. Comparison with *City Scorecard* median scores, from Analysis worksheet

The next section offers a more detailed analysis. Here you can see a table that displays scores associated with each individual metric in the Self-Scoring Tool. In it we list the

maximum score for the metric, the median score in the *City Scorecard* for the metric, and your community's score for the metric. Figure 5 provides more detail.

ACEEE scorecard detailed results			
	Max scores	Median City Scorecard scores	Your community
Grand totals	**100**	**29**	**12.0**
Local government operations	**9**	**3.5**	**4.5**
Climate and energy goals	**4**	**1**	**2.5**
Climate change goal stringency	1	0.5	0.5
Climate goal progress	1	0	0.5
Existence of energy savings and generation goals	1	0	0.5
Energy savings goal stringency	1	0	0.5
Renewable electricity goal stringency bonus	1	N/A	0.5
Procurement & construction policies	**2.5**	**1**	**1**
Fleet procurement policies	0.5	0.5	0.5
Fleet composition	0.5	0	0
Efficient public lighting	1	0.5	0.5
Green building requirements	0.5	0.5	0
Asset management	**2.5**	**1.5**	**1**
Building energy benchmarking	1	0.5	0
Municipal building retrofit strategies	1	0.5	0.5
Public workforce commuting	0.5	0.5	0.5
Community-wide initiatives	**16**	**4.5**	**7.5**
Community-wide goals	**9**	**2.5**	**4.5**
Climate goal stringency	2	0	2
Climate goal progress	2	0	2
Existence of energy savings and generation goals	2	1	0
Energy savings or generation goal stringency	2	0	0
Energy data provision	1	0	0.5
Distributed energy systems	**4**	**1**	**1**
Efficient distributed energy systems	2	0	1
Clean distributed energy systems	2	0	0
Equitable climate action and energy planning	**1.5**	**0**	**0.5**

Figure 5. Detailed results from Analysis worksheet

By reviewing this table, you will see where your community is performing best and where it can most improve. Using the results, you can identify particular metrics and prioritize policy actions of interest. You can also use ACEEE's State and Local Database to learn about other communities' policy accomplishments. We organize the database by city, and then by topic areas corresponding to the policy areas in the Self-Scoring Tool. We also present the policy information for each city in the same order as we do in the tool. Additionally, you can view the complete policy information for each metric in a *list all* format.[3]

The next section pulls out points from specific metrics to highlight your community's work across various aspects of clean energy: energy efficiency, renewable energy, climate change mitigation, and equity. The tally will show if your community is excelling in its pursuit of any component of clean energy policy. Figure 6 displays the table from the tool.

---

[3] The State and Local Policy Database is available at database.aceee.org.

City score by metric categorization	Max score	Average score	Your community
Energy efficiency	79	27.25	26.0
Renewable energy	16	2.22	7.0
Climate change mitigation	12	11.5	8.5
Equity	9	3.95	8.5

Figure 6. Results of city score by metric categorization

The final section of the Analysis worksheet compares your community to cities with similar scores in the *2019 City Scorecard*, as shown in figure 7. This allows you to compare your progress with that of communities taking similar actions. It also gives you a sense of where your community would rank within the *City Scorecard*.

Similar cities	Your city	Hartford	Cleveland
Grand total	38.0	43.5	40.5
Local government operations	4.5	2	5.0
Community-wide initiatives	7.5	5	10.5
Buildings	10.0	13	8
Energy and water utility policies	5.0	8.5	6
Transportation	11.0	15	11
2019 Rank	N/A	24	27

Figure 7. Scoring comparison with similar cities

NEXT STEPS

The tool represents our efforts to translate the scoring methodology of the *City Scorecard* into a scoring instrument for other communities. This is an updated version of the Local Energy Efficiency Self-Scoring Tool we released in August 2017 (Ribeiro, Bailey, and Castro-Alvarez 2017).

When you have finished scoring your community, we encourage you to return the results to us by emailing the completed Self-Scoring Tool to ktanabe@aceee.org. Time and resources permitting, we will verify the data and may include policy information and scores in our State and Local Policy Database. The database details energy efficiency program and policy information for more than 75 jurisdictions and provides an opportunity to recognize your community's efforts.

After you use the tool, the following are some next steps you could consider:

- To find more-detailed information on local government clean energy policies and programs, you can visit our State and Local Policy Database.

- ACEEE has developed resources to help policymakers and program managers engaged in advancing clean energy in their communities. These resources help enable action on low-cost, high-impact policies so communities can achieve energy savings. On our website, we provide technical assistance toolkits related to local energy planning, local government efforts to lead by example, local government–utility partnership strategies, and community resilience planning. You can access these toolkits on our Local Technical Assistance Toolkit web page (ACEEE 2016).

- If you cannot find information on a specific policy or program of interest, let us know. We may be able to develop new toolkits that further address local government needs.

We welcome feedback on the format and functionality of the Self-Scoring Tool and encourage your suggestions on possible improvements. Please send any feedback to ktanabe@aceee.org.

References

ACEEE. 2016. "Local Technical Assistance Toolkit." aceee.org/sector/local-policy/toolkit.

Ribeiro, D., T. Bailey, and F.S. Castro-Alvarez. 2017. *Local Energy Efficiency Self-Scoring Tool, Version 3.0.* Washington, DC: ACEEE. aceee.org/research-report/u1709.

Ribeiro, D., S. Samarripas, K. Tanabe, H. Bastian, E. Cooper, A. Drehobl, S. Vaidyanathan, A. Jarrah, and M. Shoemaker. 2019. *The 2019 City Clean Energy Efficiency Scorecard.* Washington, DC: ACEEE. aceee.org/research-report/u1904.