The Ins and Outs of the LA Energy Atlas
WEBINAR LOGISTICS

Questions:
At any point during the webinar, you can type your question into the question text box and click send. All questions directed towards a speaker will be read aloud and answered at the end of the presentations, as long as time permits.
AGENDA

Welcoming Remarks
Krista Kline
LA Regional Collaborative for Climate Action and Sustainability/
Alliance of Regional Collaboratives for Climate Adaptation

The Ins and Outs of the LA Energy Atlas
Zoe Elizabeth
California Center for Sustainable Communities

Special Guest: Ron Mohr, County of Los Angeles
LARC
Los Angeles Regional Collaborative for Climate Action and Sustainability

Krista Kline, Managing Director
And the ultimate alliance...
The Alliance of Regional Collaboratives on Climate Action

ARCCA

- Capital Region Climate Readiness Collaborative
- Bay Area Regional Collaborative
- Sierra CAMP
- LARC (Los Angeles Regional Collaborative for Climate Action and Sustainability)
Our current members:
LA Energy Atlas

A first of its kind interactive website built with the largest set of publicly available disaggregated energy data in the nation.

Map | Table | Profiles | Strategies.
The LA Energy Atlas is a project of the California Center for Sustainable Communities at UCLA

Principal Investigator: Stephanie Pincetl, Phd
Project Manager: Zoe Elizabeth (presenter)
• Researchers and decision-makers need disaggregated energy data for California meet its energy goals.

• Local governments need disaggregated data to inform energy programs, to build meaningful greenhouse gas inventories

• In the building sector, historic lack of data access from energy providers has impeded understanding necessary to implement effective, targeted programs. Privacy has been stated as a primary obstacle to data sharing.

• The Energy Atlas represents a major step forward in unlocking the power of disaggregated energy data.

• UCLA looks forward to working with stakeholders across the state to further improve access and information
Why Los Angeles?

- 25% of the State’s population and energy consumption
- 50% of the State’s disadvantaged population
- Diverse demographics, building stock, geography and climate
- UCLA looks forward to working with others to expand to additional geographies.
Overview

- Backed by a powerful geospatial relational database with over 500 million records of address level energy consumption
- Developed through an active 2-year collaborative stakeholder driven process
- Connects energy consumption to building characteristics, sociodemographics and other meaningful variables
- Data is aggregated to protect customer privacy
- The underlying database, though not publicly available, provides a flexible and dynamic platform to answer policy questions in a timely manner
Website Components

- Data for over 90 cities and over 200 neighborhoods
- All data is downloadable in CSV or Excel
- Interactive map showing total and normalized consumption metrics
- Detailed, printable, factsheets for each geography
- Data table that enables comparison across geographies and across variables
- Data stories that describe statistically derived patterns across the County
- A strategy section provides an overview of energy policies and programs
Los Angeles County

Consumption (BTU) in 2010

- 9.82M Total Population (100% of LA County)
- 2,405 Population Per Square Mile
- $56,250 Median Household Income
- 47.14B kWh total Solar Potential
- 1,018 Vulnerable CalEnviroScreen Census Tracts

Summary

- 454.42T BTU Total Consumption (BTU)
- 0.29% change from 2006 through 2010
- 100% of LA County's Total Consumption

Building Types

- 43,995 BTU Consumption (BTU) Per Square Foot
- 0% above LA County Average

- Total Consumption in 2010
- Built Space (Square Feet)
- Median Consumption Per Square Foot All Building Types
On this page, you can access the data across a range of different variables, including geographies, building types, energy use units and consumption type. You can also download the data by clicking on the “Download Data” button at the top right.

<table>
<thead>
<tr>
<th>LA County Median</th>
<th>74.06M BTU</th>
<th>48,735 BTU</th>
<th>174.92M BTU</th>
<th>14,932 BTU</th>
<th>44,245 BTU</th>
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</thead>
<tbody>
<tr>
<td>Gateway Cities COG (COG)</td>
<td>[Blue]</td>
<td>[Green]</td>
<td>[Red]</td>
<td>[Orange]</td>
<td>[Purple]</td>
</tr>
<tr>
<td>Las Virgenes-Malibu COG (COG)</td>
<td>[Blue]</td>
<td>[Green]</td>
<td>[Red]</td>
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<tr>
<td>San Fernando Valley COG (COG)</td>
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<tr>
<td>San Gabriel Valley COG (COG)</td>
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<tr>
<td>South Bay Cities COG (COG)</td>
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<td>[Red]</td>
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<tr>
<td>Westside Cities COG (COG)</td>
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<td>[Red]</td>
<td>[Orange]</td>
<td>[Purple]</td>
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</table>
• On average poorer areas use more energy per square foot and less energy per person

• Malibu uses nearly 10 times more energy on a per capita basis than Hawaiian Gardens

• In Los Angeles, smaller buildings use a considerable amount of energy

• Newer homes used less energy per square foot than older ones, while newer commercial buildings used more energy per square foot than older ones
Comparing Single-Family and Multi-Family?

<table>
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<th></th>
<th>Median Energy Use Intensity (BTU/sq-ft)</th>
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<tbody>
<tr>
<td></td>
<td>residential btu</td>
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<tr>
<td>Median (all Nbhds)</td>
<td>58,629</td>
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<tr>
<td>Broadway-Manchester</td>
<td>69,350</td>
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<tr>
<td>Chesterfield Square</td>
<td>66,044</td>
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<tr>
<td>Florence-Firestone</td>
<td>70,518</td>
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<td>Harvard Park</td>
<td>70,575</td>
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<td>Westmont</td>
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<tr>
<td>West Compton</td>
<td>72,069</td>
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<tr>
<td>East Compton</td>
<td>76,947</td>
</tr>
</tbody>
</table>

Erik Porse, CCSC Research Scientist
Median number of buildings in lower-income (black) and higher income (red) neighborhoods by building vintage categorizations. Lower-income neighborhoods tend to have older buildings, while higher-income neighborhoods have more buildings built after 1950. The predominance of older buildings in lower-income areas may contribute to greater energy use per square foot. – (Erik Porse, CCSC Research Scientist)
The Importance of Collaboration

- University provides advanced technology and research
- County implements programs and responds to State legislation
- LARC serves local governments, environmental NGOs and others
- Stakeholders provided detailed and high level feedback on what they wanted out of the tool
- Building the project through collaboration was essential to its success.
Questions?
Benefits to LA County
(i.e. why the County participated)

- The Energy Atlas provides LA County benefits of disaggregated data available to research universities
- UCLA has the research and technology capacity to implement this solution in a way the County does not
- UCLA benefited from the County’s superior GIS department and solar map
- UCLA was committed to creating a useful tool and took feedback every step of the way
Uses for Local Governments

• Consistent and reliable greenhouse gas accounting
• Energy Efficiency program targeting
• Grant and proposal data requirements
• Energy disclosure ordinances
• Program and investment tracking overtime
• Grid planning (adaptation and future resiliency)
• Research and development
THANK YOU

Join us for our next Learning Session:

**Building Business Resiliency**
December 2\textsuperscript{nd} | 12:00-1:00pm
Meg Arnold, Valley Vision
Katy Maher, Center for Climate and Energy Solutions
Christopher Benjamin, Pacific Gas and Electric Company

Learn more about ARCCA:
www.arccacalifornia.org

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