

Moving toward 100% renewable energy—drivers behind city policies and pledges

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As the United States federal government retreats from energy innovation and environmental regulation, local and regional efforts across the U.S. are scaling up. Cities, in particular, are [intensifying their commitments](#) to fighting climate change and are playing an increasingly important role in the sustainability of the planet. One such commitment is the Sierra Club's 'Ready for 100' campaign, which recognizes cities in the U.S. that have formally committed to transition to 100 percent renewable energy.

This month, the Earth Institute's Hayley Martinez, Kelsie DeFrancia, and Alix Schroder presented their research on why and how cities have committed to this campaign at the 76th Annual Midwest Political Science Association Conference in Chicago.

Local-level actions are critical in addressing [climate change](#) and sustainability issues, and cities are uniquely positioned to advance initiatives in transportation, buildings, and [renewable energy](#). Energy is at the center of the sustainability challenge, as it is an indispensable ingredient of modern economic life. However, our long-term dependence on [fossil fuels](#) means a future of increased [energy](#) costs and greater environmental damage. To address the problem of climate change, we need to gradually [replace fossil fuels](#) with other forms of energy that are environmentally sustainable, such as wind and solar. Trends in the U.S. and around the world show that renewable energy capacity is growing and that renewable energy is [becoming more cost-](#)

[competitive](#).

It is for these reasons that the authors focused their review on cities that have formally committed to transitioning to 100 percent renewable energy. By January 2018, 56 U.S. cities had adopted formal goals to transition to 100 percent renewable energy by 2050 or sooner under the Sierra Club's Ready for 100 campaign. 2017 was a record year, with 30 cities making such a pledge. These pledges were mostly in the form of resolutions. To conduct their research, the authors reviewed texts of the resolution, statement, or ordinance that contained the pledge, examined [city](#) websites, press releases, and independent reports, and interviewed city government representatives where possible.

Motivations for 100 percent renewable energy pledges differed from locale to locale and were based on a combination of diverse factors, such as physical location, historical precedent, community values, and population size. There is no one reason for cities to pursue this goal. What is clear across all 56 cities, however, is that they view the transition from fossil fuels to renewable energy not as an obligation, but rather as an opportunity for socio-economic development. Cities committing to renewable energy goals not only want to reduce energy bills for residents and local economic players, and reduce their dependence on polluting energy sources, but also want to show that they are leaders at the forefront of making a transition that many see as inevitable. The following five major categories of key drivers emerged:

- Economic: local economic development, job creation, utility cost savings, and secure energy futures.
- Environmental: environmental consciousness, climate change concerns, natural disaster vulnerability, preservation of local environment and wildlife, and climate leadership.
- External: regional partnerships, existing state policies, existing or prior municipal policies and/or initiatives, and non-profit

partnerships.

- Public health: clean air and water, and pollution-related illness.
- Renewable resource supply: availability and proximity of [renewable energy resources](#) to draw from.

Like the myriad drivers for adopting renewable energy pledges, the cities in the Ready for 100 campaign are charting distinct paths to achieving the goal of 100 renewable energy. Every city has unique characteristics and is developing its own specialized implementation plan. Given that over half of the pledges have been made within the past year, many cities are still in the vision-setting and planning stages, but attempting to have transparent, inclusive planning processes, soliciting community buy-in and expertise. For cities with plans already underway, the most common modes of implementation were: energy efficiency measures; incorporating goals into sustainability or climate action plans; installing renewable energy; developing financing models; community choice aggregation; and cooperation with utilities.

Energy efficiency is a key first step for cities to meet their goals, especially for larger cities that simply use a lot of energy. Incorporating goals and monitoring/reporting mechanisms into sustainability and climate action plans has the benefit of having a dedicated body or group to oversee progress, and has the potential for greater transparency and follow-through. Cities are also looking to install [renewable energy systems](#) locally on or near city limits, putting solar panels on municipal buildings, building solar gardens, and helping residents and business install on their own properties.

Financial tools are also important for completing these goals, including power purchase agreements, PACE funding, and community solar. Community Choice Aggregation is one very specific tool that many cities are exploring, especially in California, which allows local governments to purchase or develop power on behalf of the community.

This gives cities more control over purchasing decisions, and cities can decide where the energy comes from, at what cost, and how much clean energy is in the mix. Cities are also coming up with unique ways to work with utilities, recognizing that utilities are important partners in achieving their goals.

Cities face a complex and varied array of challenges ranging from physical to political, administrative to financial. On a broad scale, the limited predictability of renewables like wind and solar, due to the inherent natural variations of its sources, can be a problem when matching supply and demand in the energy system. Other challenges include a lack of political support on the regional and federal levels and other political pressures from outside the cities. Even with public support, small cities often don't have the capacity to undertake large, expensive complex projects, lacking the technical or administrative expertise, and/or financial resources to even map out a plan toward reaching their goal. Perhaps the greatest challenge for cities trying to reach their renewable energy goals is the complex energy regulatory structure throughout the United States, which often leaves cities dependent on the fossil fuel-based energy portfolio of their major utility companies.

The path towards 100 percent renewable energy will ultimately depend on the resources available, community values, the priority given to [energy efficiency](#), and the input of key stakeholders and players. Energy efficiency is a key first step, but state and regional governments are crucial stakeholders in cities meeting their renewable energy goals, as they can enact policies that promote the creation and adoption of renewable energy. Community and stakeholder inclusion will also help cities succeed in meeting clean energy goals, as will a focus on advocacy and education through community engagement, stakeholder consultations and dialogue facilitation. Even though cities must chart their own path, cooperation and knowledge-sharing between neighboring

cities cannot be overstated, and cities should build on existing regional/state norms, regulations and policies, where possible.

These cities are showing that it is possible to make an impact at the local level and drive change across the U.S. in the absence of federal regulation. Since many of these pledges only happened in the last year, it will be interesting to see how cities build and modify their implementation plans, and if and how they will include transparent reporting processes. With the current U.S. presidential administration unwilling to wean off fossil fuel-sourced energy and also unwilling to participate in international climate accords, subnational actors will have to pave the way for strong sustainable action and innovative sustainable growth.

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