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Grand Rapids Mayor Heartwell Outlines Needs for Local Leadership on Climate and Energy

by Don Knapp



Mayor George Heartwell of Grand Rapids, MI, is a nationally recognized leader on sustainability and climate action. Today at the National Press Club in Washington, DC, Mayor Heartwell spoke before an audience of federal decision makers and sustainability leaders about his City's actions and leadership in the face of climate and energy challenges.

The National Leadership Speaker Series on Resiliency and Security in the 21st Century, organized by ICLEI and the U.S. Green Building Council, brought three nationally known leaders on sustainability and resilience: Mayor Heartwell, Mayor Ralph Becker of Salt Lake City, UT, and Vice Mayor Kristin Jacobs of Broward County, FL.

Mayor Heartwell spoke in great detail about the climate and energy challenges faced by all local governments, and outlined the key steps being taken in Grand Rapids to become more prepared for climate impacts and more energy independent and efficient. Below are his key points and messages.

"Leaders must prepare for the impact of climate change and natural disasters and local leaders can incorporate policies and strategies to ensure their community will remain healthy and prosperous in the face of uncertain change," said Mayor Heartwell. "In Grand Rapids, we are addressing climate adaptation and reduction of greenhouse gas emissions directly in our City's Sustainability Plan through water conservation, energy efficiency, onsite renewable energy production, recycling, applying LEED practice and more."

Understanding Local Climate Trends

In his speech, Mayor Heartwell articulated the challenges of a changing climate and increasing extreme weather:

- As global temperatures have increased so to have the frequency of extreme and unstable weather events across the region. Extreme and dangerous conditions impact the most vulnerable population leading to excess hospital visits, emergency department visits, and deaths.
- Some communities in the region experienced similar stretches of heat and humidity this summer, while total days above 90 degrees and 90% humidity were estimated in the 30 to 40 day range in

certain areas. According to Great Lakes climate models, by the end of this century these trends will become the norm rather than the exception. "In economic terms, if communities are not prepared this could mean higher insurance costs, emergency management budgets, and greater property damage leading to clean-up and rebuilding costs, loss of tourism and recreation, and lower rates of businesses locating in the community," said Mayor Heartwell.

- High temperatures while prolonging throughout the summer are also expected to begin earlier in the season, as the Great Lakes no longer freeze to previous extents and allow for quicker warming. This spring there were +70 degree temperatures in March followed by usual spring like temperatures in May that brought frost. To many, ending the cold winter months earlier and earlier may seem like a positive trend. However, due to the high temperatures fruit crops, as well as other vegetation, began blossoming early and became susceptible to the frosts in May. The frost resulted in approximately 89% of all apple, peach, and cherry crops being destroyed; rendering most farms and orchards unable to produce a crop for revenue. The total economic impact of those crop losses are estimated above \$500 million.

Trends in Energy Demand

Mayor Heartwell also spoke to the challenges of a changing energy landscape:

- Increasing average temperatures, more frequent sudden and severe weather events, and economic as well as population shifts will test the current energy infrastructure and require new sustainable energy policies, sources, and technologies.
- Under current climate trends, if the average air temperature increases by 1.80 degrees F, demand for cooling would increase 5-20% while heating demands would increase 3-15%. Under similar assumptions total electrical generating capacity would increase 10-20%. This represents a significant increase in resource consumption and infrastructure needs that by 2100 could cost \$141 billion.
- Further, current power generating facilities can require up to 25 gallons of water to generate 1 kWh of electricity and withdraw a total of 3.3 billion gallons per day. In many areas of the U.S. there are already great demands on water sources and with increased demand for energy, the competition will only increase between communities and sectors within communities for this valuable resource. Water usage for energy generation under current scenarios could reach 7.3 billion gallons per day by 2030.
- To compensate for such growing energy demands it will be necessary to increase the number of generating facilities but also the number of fuel sources. In already preparing for this, across the country natural gas extraction has increased since 2007 by 71%. "However, local leaders should be cautious of relying solely on natural gas for future increases in energy demand," cautioned Mayor

Heartwell. "Relying on a narrow range of energy options represents a potential weakness for communities when considering resiliency planning. If prices increase, or sources diminish due to war or natural disasters, the community is at risk of power reductions that reduce the productivity and safety of citizens while also representing a major sink for already tightening funds."

Climate Resiliency Leadership and Actions

"[Climate impacts] should become a consideration and part of routine planning in order to create more viable and resilient communities," said Mayor Heartwell. "This includes updating emergency plans to consider vulnerable populations, lines of communication, and services provided during extreme events. Further, planners should consider areas of the community that can be altered to reduce heat island effect, increase air quality, reduce water usage intensity, as well as energy intensity. Municipalities and other local governments should take a leading role in making these changes within their organization while also promoting and encouraging business and citizen action."

"Climate change and the resulting impacts have already and will continue to affect all sectors of a community including economy, social well being, and environmental stability," added Mayor Heartwell. "Local governments must make strides to prepare their communities for new climatic trends that if unattended to, due to current resource and economic stress, will lead to further instability and ultimately the reduction in societal benefit that a communities efforts produce."

Grand Rapids' Accomplishments

- Created and adopted the Sustainability Plan, which replaced the city's Strategic Plan - City of Grand Rapids' Sustainability Plan for fiscal years 2011-2015. It created the Office of Energy and Sustainability charged with measuring and reporting sustainability efforts.
- In addition to this plan, the City has created additional strategies and plans that address other elements of sustainability; namely an Energy Efficiency and Conservation Strategy, which includes the Greenhouse Gas Emissions inventory, and Green Grand Rapids, a citywide green infrastructure master planning process.
- Grand Rapids has made significant progress on its extensive sustainability goals, including water conservation, recycling, and other programs, two stand out: energy management (renewable energy and energy efficiency) and LEED certification. In fact, Grand Rapids ranks No. 1 in LEED buildings per capita.
- The City set a goal of increasing renewable energy consumption to 20 percent by 2008. This target was reached in 2007, and the city revised the target upwards to 100 percent by 2020 for non-base load components of its energy demand. The original target was attained through reductions in energy consumption and increases in energy efficiency, as well as Green E certified renewable energy. The city is also evaluating a portfolio of renewable energy technologies and opportunities for on-site power generation such as wind turbines, large-scale solar projects on municipal buildings, and investment in geothermal energy for fire stations and water filtration plant. The City already installed

geothermal at two fire stations. The City also installed large scale solar panels at its LEED Certified Water Administration building, producing solar based energy.

- The City, through its sustainability plan addressed the climate adaptation and mitigation, and reduction of greenhouse gas emissions.
- In the City's Emergency Action Guidelines we incorporated the strategies to address climate change risks, namely to address heat waves to provide help to vulnerable and at risk population.
- The City has been named a Regional Centre of Expertise by the United Nations University and recognized for its work in sustainability by many other organizations; it was also recognized by the US Chamber of Commerce as the most sustainable mi size community in the US; and was recently recognized with the Climate Protection Award for its green house gas emission efforts by the US Conference of Mayors in the large cities category.

Key Partnerships on Resilience

"Grand Rapids enjoys partnerships with ICLEI-Local Governments for Sustainability; the International City/Country Manager Association, the Great Lakes Saint Lawrence Cities Initiatives, US Conference of Mayors, National League of Cities, members of the Grand Rapids Community Sustainability Partnership, Grand Valley State University, and others," explained Mayor Heartwell. "These partnerships spearhead leadership for local government and keep sustainability, climate change planning and resiliency at the forefront."

For more information on City of Grand Rapids' sustainability efforts, contact Haris Alibašić, Director of the Office of Energy and Sustainability at halibasi@grcity.us or visit www.sustainablegr.com.