

**Climate Change Task Force Meeting
Thursday, May 18, 2016, 1:30 PM – 4:30 PM**

**Broward County Government Center
115 S. Andrews Avenue, Room 430
Fort Lauderdale, FL 33301**

SUMMARY MINUTES

Members Present

Adornato, John
Barmoha, Guy
Braun, Rod
Bush, Lois
Cavros, George
Cosio Carballo, Isabel
Faske, Barry
Fleischer, Randy
Furr, Commissioner Beam
Gottlieb, Lee
Heimlich, Barry
Kaltman, Adrienne
Kornahrens, Rob
Larson, Dylan
Miakisz, Joe
Pisula, John
Samario, Hector
Sifuentes, Dorothy
Sniezek, Henry
Welch, Sandra
Young, Doug

County Staff

Danchuk, Samantha
Kashar, Carrie
Lee, Albert
Liechty, Jason

Members Absent

Hutka, Tom
Lambert, Julie
Perrin, Scott

I. Welcome

Broward County Commissioner Beam Furr welcomed the Task Force members, and guests.

II. Roll Call

Roll was called. 18 members were present and 6 were absent during the roll call. A quorum was present. 3 members arrived shortly after the roll call.

III. Call to Order

Commissioner Beam Furr, Chair, called the meeting to order at 1:37 PM.

IV. Approval of Minutes of February 18, 2016*

Randy Fleischer asked for a clarification of the Community-wide Greenhouse Gas (GHG) Inventory emissions goals. Broward County's average per capita GHG emissions were 13.6 tonnes of carbon dioxide equivalent (CO₂e) during years 2011-2014. Broward County's community-wide GHG reduction goal is 80% by year 2050 (4.7 million tonnes of CO₂e), compared to 2007 levels (23.6 million tonnes of CO₂e). Broward County does not have a specific per capita GHG emissions reduction goal, only a community-wide goal.

Barry Faske motioned to accept the minutes of the February 18, 2016 meeting as published, and John Adornato seconded. Motion passed unanimously.

V. Presentations and Discussion

a. Reducing Climate Risk and Creating Economic Opportunity

Dr. Samantha Danchuk presented a summary of the April 28, 2016 Regional Climate Action Plan Workshop on Reducing Climate Risk and Creating Economic Opportunity. Panelists included lending, insurance, real estate, and government representatives. Climate change requires an informed public and a big picture long-term outlook when making future investments, to reduce risk exposure. FEMA disaster declarations have tripled since 1970 and uninsured natural catastrophe losses have similarly grown. Annual expected losses from storms are increasing due to economic and population growth.

Cost-benefit curves have been developed that indicate only 40% of expected losses can be avoided cost-effectively through traditional engineered solutions, pointing to the need for alternative adaptation strategies, such as nature-based green infrastructure. Risk mitigation efforts can reduce premiums on longer-term insurance policies and increase credit worthiness. EigenRisk provided insight into how the insurance industry measures risk. Catastrophe bonds can provide liquidity for short-term funding of resilience or recovery projects. Developers generally follow the minimum requirements and

a five to ten year risk mitigation horizon, with a strict focus on profitability. Property values are impacted by the finished floor elevation in comparison to base flood elevations, while flood insurance premiums generally double for each foot below the FEMA base flood elevation. Communication with the State government and cross-disciplinary stakeholders is necessary to consider the various scopes of influence and different risk timelines that are prioritized by each group. Commissioner Furr opened the floor for discussion. Questions were raised about when the effect of revised base flood elevations on residential flood insurance premiums will take effect and the effect on residential mortgage availability and social justice consequences.

b. Greenhouse Gas Reduction Strategies

Albert Lee presented an overview of the Broward County greenhouse gas (GHG) emissions forecast and reduction strategies and scenarios, based on results from the Community-wide GHG inventory. GHG emissions are forecast to increase 3% from 25.1 million tonnes of carbon dioxide equivalent (Mt CO_{2e}) in year 2015 to 25.9 Mt CO_{2e} in year 2040. This is primarily due to population and employment growth, resulting in increased energy use in the built environment. Moderate and aggressive GHG reduction scenarios were analyzed using six GHG reduction strategies:

- Rooftop solar photovoltaic and solar thermal systems
- Energy efficiency education
- Commercial building benchmarking and retro-commissioning
- Transition to electric vehicles
- Improved bicycle infrastructure
- Land-use and development changes

Life-cycle GHG emissions from the consumption of food, goods, and services were not directly included in the community-wide GHG inventory, but represent a large portion of household GHG emissions. The moderate GHG reduction scenario results in an 18% decrease in year 2040 (21.2 Mt CO_{2e}) and the aggressive GHG reduction scenario results in a 56% decrease in year 2040 (11.3 Mt CO_{2e}). Neither of these scenarios would achieve Broward County's 80% GHG reduction goal in year 2050 (4.7 Mt CO_{2e}). Significant additional energy conservation, efficiency, and renewable energy production would be needed to reach the County's year 2050 GHG emissions goal. This would require major societal shifts in consumer and cultural behavior. Discussion ensued on the need to correctly price carbon to change behavior, collaborating with FPL on energy efficiency programs, and the need to account for GHG refrigerants, such as hydrofluorocarbons (HFCs).

c. Review of Local Solutions: Eastern Regional Preparedness Conference

Dr. Samantha Danchuk presented highlights from the April 2016 Eastern Regional Preparedness Conference in Baltimore, MD. Topics related to resilient buildings included: passive survivability without electricity, mapping

buildings for risk plus emissions, expanding the definition of return on investment, post-disaster facility codes to ensure essential services, and a mandatory climate checklist for developers. Energy microgrids should group critical infrastructure with independent redundant power sources.

Living with Water case studies:

- Hoboken, NJ showed an innovative use of financing to fund upgrades to senior facilities and flood barriers to protect vulnerable populations, and numerous stormwater storage projects using a variety of green infrastructure systems.
- Atlanta, GA requires green infrastructure that infiltrates at least 1-inch of on-site stormwater runoff for all redevelopment projects, while providing resources that help residents complete their own project, with minimal expense and expertise. They are also developing bio-retention areas, using water-feature parks, permeable pavers, and street conversions.

The Solutions Project outlines a pathway that States can pursue to transition to 100% renewable energy by year 2050. A variety of community engagement efforts were highlighted as well as survey results of climate change attitudes. Commissioner Furr opened the floor for discussion. Dr. Danchuk gauged the interest from the task force on pursuing grants for microgrids and developing finance mechanisms for climate adaptation. Discussion ensued regarding:

- Regional carbon tax/rebate system (Massachusetts currently pursuing)
- More information on microgrids and discussions with FPL needed
- Examples of ordinances that require climate-friendly redevelopment

d. Climate Change Action Plan Progress Report

Carrie Kashar updated the task force on revisions to the [Broward County climate website](#) and the now ADA-compliant Climate Change Action Plan (CCAP). Carrie developed a method to track CCAP implementation, using quarterly performance measures, defining implementation steps and strategies for each action, and analyzing how far each action has been addressed. So far, 52% of actions have been partially addressed (i.e. at least two completed implementation steps) and 48% have not been addressed. The sections with the most partially addressed actions were: policy (13 of 15), natural systems (7 of 8), and water supply (7 of 11). The sections with the least partially addressed actions were: energy resources (1 of 23), built environment (10 of 20), and community outreach (11 of 17). A quarterly implementation tracking summary report is being created in Excel. Carrie announced that an implementation strategy survey will be sent to Task Force members and results will be presented at the next meeting. Next steps include the completion of the CCAP implementation strategies and marketing plan. Discussion ensued.

Henry Sniezek recommended the County to officially disseminate the CCAP to municipalities and ask for a resolution of support, to inform municipalities of possible projects related to the pending infrastructure surtax. Commissioner Furr agreed and suggested the CCAP be circulated as soon as possible, to inform elected officials of possible CCAP-related infrastructure projects.

VI. Status of Ongoing Programs

a. Southeast Florida Regional Climate Change Compact Update

Jason Liechty presented Compact updates including a highlights from recent events focusing on economic resilience and upcoming Compact events on sea-level rise, resilient redesign, municipal workshops, and the 8th annual summit in October. Work is continuing on municipal adoption of the Regional Unified Sea Level Rise Projection and creating a set of climate indicators that will inform the public on regional climate change impacts. Jason presented additional details of the collaborative resiliency study with the U.S. Army Corps of Engineers involving hydrologic and flood modeling of storm events and sea-level rise, standards for seawall heights and pump capacity, and risk analytics and economic modeling. Other programs include ongoing federal technical assistance with the Qualified Energy Conservation Bonds, the Cities-LEAP grant application with the U.S. Department of Energy, the continuing interlocal agreement with the Institute of Sustainable Communities, and proposals for property tax exemptions on renewable energy equipment.

b. Climate, Energy & Sustainability Program Updates

Dr. Samantha Danchuk introduced two visiting ICMA international fellows, Ki from Laos and Mujib from Indonesia. They expressed the importance of reducing greenhouse gas emissions to mitigate climate change impacts in their respective countries and expressed their gratitude for sharing how Broward County is adapting to climate change. Dr. Danchuk provided an update on the Energy and Sustainability Program, including ongoing agency-specific Climate Toolbox training for County employees, the first two events using the Plan it Green carbon offset program, the Sustainability Stewards green infrastructure workshop, and the second EPA DASEES resilience workshop. Dr. Danchuk also mentioned her interaction with the Miccosukee Tribe about community resilience, the solar demonstration site outside the Young at Art Museum, and various Earth Month events.

VII. Adjournment*

Next meeting: Thursday, August 18, 2016

A motion to adjourn was announced, and the motion was seconded by Barry Faske. Motion passed unanimously.

Meeting adjourned 4:38 PM.