



Keep Winter Park Beautiful & Sustainable Advisory Board and Utilities Advisory Board Joint Work Session Minutes

March 21, 2023 at 11:45 a.m.

City Hall, Commission Chambers
401 S. Park Avenue | Winter Park, Florida

Present

Kay Hudson, Rishona Teres, Carey Bond, Laura Gustafson-hullinger, Ben Ellis, Mark Yonker, Stephen Pategas, Michael Poole, Mary Dipboye, Leon Huffman; Virtually: Linda Lindsey.

Absent

Alison Yurko, Paul Conway, and Fred Guitton.

Staff Present

Natural Resources & Sustainability Director Gloria Eby; Director of Electric Utility Dan D' Alessandro; Director of Water and Wastewater Utility David Zusi; Sustainability Manager Sara Miller; Sustainability Specialist Mia Brady; Lakes Division Administrative Coordinator Victoria Tabor; Board Coordinator Tatia Ghviniashvili.

1) Call to Order

Chair Kay Hudson called the meeting to order at 11:45 a.m.

2) Discussion Item(s)

Michael Mount, Quanta Technology, gave a presentation on the feasibility and potential pathway to find clean and renewable energy for Winter Park. He provided an overview of Quanta Technology and its range of services, before presenting on the study and results.

The purpose of the study was to assess the feasibility of reaching 100% renewable, or 100% carbon-free, energy by the year 2050 as highlighted in the original proposal. Key terms were then defined and differences were highlighted between zero carbon, net-zero carbon, and carbon energy. Different scenarios were presented in which three base targets defined the study scope: 100% renewable with a target year of 2050, 100% net-zero carbon with a target year of 2050, and 80% renewable electric with a target year of 2035.

Mr. Mount explained that these three base targets were expanded into fifteen different scenarios, because a plan needs to be developed that is robust enough to function with various city conditions, and be flexible. Scenarios **1A**, **2A**, and **3A** (found in the agenda packet) are the most likely scenarios, and the ones being presented on today.

The current state of the electrical load of the city was highlighted, which included a breakdown of the residential, commercial, and streetlight loads which totaled 98 MW. Forecasts and assumptions were presented for the categories outlined above.

- Expected and high-energy forecasts for City of Winter Park annual energy needs based on 10-year plans from other utilities.
- Expected, low, and high forecast for City of Winter Park residential distributed solar and storage.
- Expected, low, and high forecasts for distributed solar on rooftops and vacant land owned by City of Winter Park.
- Forecasts of EV charging loads for City of Winter Park residential customers and employees of businesses within the city.

Mr. Mount continued by highlighting various energy sources available and specified that solar and green hydrogen energy are the best fit for Winter Park, coupled with battery storage. An extensive analysis of the City of Winter Park facilities was conducted in terms of solar power and its potential. The board asked clarifying questions and Mr. Mount answered appropriately.

A forecast chart was presented on resident and commuter EV-LDV charging which was developed from a 2022 average using data from major utilities in Florida. The board asked various questions and Mr. Mount clarified and provided explanations. A long discussion ensued about EV-LDV charging.

Key steps in the development of the PIRP (Probabilistic Integrated Resource Planning Tool) were highlighted.

- Define planning objectives and assumptions.
- Define initial load, DER, and EV forecasts.
- Modeling of future generation portfolios.
- Solution uncertainty analysis.

Mr. Mount gave a description and overview of scenario 1A, which focused on 100% renewable energy by 2050. This scenario includes generation additions such as substantial solar, battery, and a small quantity of biomass energy. Combustion Turbines (CT) fueled with Green Hydrogen are to be added only in the last five years of the plan. A discussion about solar energy capacity ensued and the board asked

clarifying questions. Short-term and long-term revenues were discussed, highlighting the revenue requirement needed to pay for all capital, operational and maintenance costs, as well as present value of revenue requirement, and the levelized cost of energy which presents the value of the stream of annual energy costs divided by the stream of annual MWh consumed. A discount rate was used to calculate the present value of revenue requirement, and it was based on CWP's cost of capital, at 3.5%. Various graphs for scenario 1A were presented, and explained in detail. Discussion followed about utility cost increases.

A graph of scenario 2A was presented, which focuses on net-zero carbon by 2050. Mr. Mount highlighted that after the project had begun, it was clear that this scenario is of less interest to the city. Although costs are lower, this is a carbon-producing option.

Scenario 3A which focuses on 80% renewable by 2035 is similar to 1A, with a shorter time-frame in which renewable energy is achieved. The resources are the same, just in different quantities. Mr. Mount discussed this scenario in further detail and presented its timeline, which shows for more solar and batteries that will need to be purchased in early years to achieve the goal of 80% renewable by 2035.

The board asked how the City Commission came up with the target point of 80% renewable by 2035, and Mayor Phil Anderson explained the reasoning behind these targets, and noted that the Sustainability Plan presented to the Commission was prepacked with two goal dates, and after much discussion, percentages were chosen. Commissioner Sullivan also spoke on the goal of 80% by 2035 and highlighted that a reassessment might be necessary to find a balance between a goal date and the availability of future technologies.

The board asked questions about the costs and financial results, and clarifications were made.

Mr. Mount briefly presented on future steps, which were broken down into categories: financial, studies, technology, and purchases. Each of these categories was broken down into subcategories and given time frames of a 3-month, 18 months, and 48-month horizon. A roadmap was presented with short-term, mid-term, and long-term actions and projects.

Following the presentation, discussion was held and questions were asked about the report and ways in which it can be translated for the understanding of the average resident. Mayor Anderson asked a few questions and highlighted the importance of including the percent renewables which correspond to each item on

the financial results page of the presentation. He also spoke on considering interruptible power in terms of hurricanes and other natural disasters when looking at the study.

The board asked a few closing questions to further clarify the material that was presented, and Mr. Mount made the appropriate clarifications. Mr. Poole asked for a representative for Quanta Technology to attend the upcoming Utilities Advisory Board meeting to answer questions. Staff will look into that and make the appropriate arrangements.

3) Adjournment

The meeting adjourned at 1:25 p.m.

/s/ Tatia Ghviniashvili, Board Coordinator