Minutes of the
Somerset County Energy Council Meeting
Tuesday, October 15, 2019

Chairman William Amann called the meeting to order at approximately 6:10 PM, and the members pledged allegiance to the Flag of the United States of America.

The roll was taken and the following members were Present
William Amann, Chairman
Jeanne Perantoni, Vice Chair
Wayne DeFeo, Secretary
Susan Dorward
Paul Drake
Walter Lane
Jeffrey Foose
Jeffrey Grant
William Knox

Absent
Axel Breidenbruch

Also Present
Honorable Sara Sooy, Freeholder Liaison the Energy Council
Laurette Kratina, Somerset County Planning Division, Staff Liaison to the Energy Council

Approval of the July 18, 2019 Meeting Minutes
A motion to approve the July 18, 2019 meeting minutes without changes was submitted by Jeanne Perantoni and seconded by Mr. DeFeo. Mr. Drake, Mr. Foose, Mr. Knox and Mr. Lane abstained. All others approved and the motion carried.

Chairman’s Comments
Chairman Amann provided a recap of the Council’s recent accomplishments. The Energy Efficiency Video was released, the Board of Chosen Freeholders presented the Energy Efficiency Day Proclamation, Mr. DeFeo’s presentation at the County Planning Partners Forum was a great success, the Home Energy Self-assessment Tool was finalized, and the SCEC’s comments on the 2019 Draft State Energy Master Plan were finalized and submitted to the NJ Board of Public Utilities (BPU).

Chairman Amann reported that Paul McCall, Director of the County’s Public Works Dept. met with representatives from the NJ Board of Public Utilities (BPU) a few weeks ago. The Dept. is going to re-engage in applying for a LGEAP grant, for which the BPU agreed to provide assistance by working directly with the County’s utility billing management company - Energy Solve.

Chairman Amann noted that the County will be building a new warehouse. It is currently renting space, which is becoming cost-prohibitive. He e-mailed a recommendation to the County Administrator, Public Works Director and County Engineer that net-zero design standards be applied. This would be fairly easy to achieve because warehouse facilities typically do not use a lot of energy and water.
Chairman Amann noted that he submitted a recommendation to the Freeholder Board requesting the appointment of Mr. Burak Guler to the SCEC. Mr. Guler recently earned his PhD by developing an operational research model on how to make grid networks more resilient and cost effective. He agreed to present his work to the Council in the future. Clarification on how new members can be identified and recommended for appointment by the Freeholders was provided by Mr. Lane in response to a question by Mr. Foose. Mr. Foose indicated that he knows a Rutgers professor who is a resident of Branchburg Township that might be a good candidate to fill the remaining vacancy and will look into providing his resume to the Freeholders for consideration.

Freeholder Sooy provided a friendly reminder from the Freeholder Board that everyone treat each other with respect and to conduct themselves with decorum. She thanked everyone for the work they are doing for the greater good of Somerset County. She noted that any appointment recommendations will be reviewed and discussed by the Freeholders in Executive Session.

**Old Business**

Chairman Amann noted that the Energy Council has looked into energy aggregation programs (EAP) in the past. In a recent news article he learned that New Brunswick is participating in an EAP that purchases 100% renewable sources; and Hunterdon County is participating in an EAP that has an ambitious renewable energy component. Both are still saving money. Piscataway has a public question on it ballot concerning this matter. He reminded the group of the EAP proposed in Somerset County a few years ago that did not move forward; but suggested that the Council look into this again since much has changed. Mr. Lane noted that a BPU representative specializing in EAP attended the meeting with the Public Works Director described earlier. This person is going to provide an analysis that will determine the level of savings that can potentially be achieved if the County joins the State’s EAP. Previously, the County determined that because it is split between the JCP&L and PSE&G service areas and their rates are significantly different, the savings from EAP participation would have been minimal from the County’s perspective.

The group agreed to form a temporary ad-hoc committee to look into whether the County can benefit from participating in an EAP at this time. Ms. Dorward and Mr. Grant volunteered to work on this. They will gather information on the different models that can potentially be applied. Ms. Dorward indicated she will follow-up with Sustainable Jersey since there is an EAP certification action. Mr. Lane will follow-up with Director McCall to see if he received any information from the BPU subsequent to last month’s meeting. Mr. Grant noted that Montgomery Township established an EAP a few years ago that he will check up on. Chairman Amann and other members provided an EAP overview in response to Mr. Knox’s request.

Mr. Grant reminded everyone of the Consumer Guide for Energy Procurement that the Council drafted a number of years ago. Although it was not published at that time, Mr. Grant agreed to provide a copy to Mr. Knox.

Chairman Amann recapped the 5th annual Electric Vehicle (EV) Car Show event that took place on Sept. 12th in Bridgewater. There were over 60 exhibitors, and hundreds of people attended. Ms. Dorward and Mr. Foose also attended.

Mr. Lane reported on the September 13th “Creating Vibrant Neighborhoods” event sponsored by the Energy Council and the Planning Board. Freeholder Sooy provided welcoming remarks and Ms. Perantoni facilitated the implementation panel, which included Cathleen Lewis from the NJ
BPU's clean Energy Program and Nancy Quirk who leads the Sustainable Jersey Energy Task Force. It was a very successful event, with over 40 elected officials, municipal planners, local planning board members and representatives from the Business Partnership, County Workforce Development Board, RideWise and other groups in attendance. There was a high level of audience engagement during the Q & A as noted by Mr. Lane. Ms. Kratina told of the excellent presentation given by keynote speaker Matthew Kaplan who serves on the USGBC-NJ Board. He revealed a gap in energy code enforcement which stems back to the complexity and specialized knowledge this requires, which has become even more complicated due to the updated energy construction standards that became effective in September 2019. This is an opportunity for new specialized training in green building standards to be offered by RVCC in conjunction with the Workforce Development Board. Mr. Kaplan described green building standards that can be applied to new construction and redevelopment such as LEED and EnergyStar through local redevelopment plans, development agreements, zoning and master planning, to ensure the next generation of buildings and neighborhoods are efficient, resilient and sustainable. Cathleen Lewis from the NJ BPU highlighted how community energy plans adopted at the local level can be used by municipalities to support these goals as well. Based on feedback from the audience, Mr. Lane noted that it appears follow-up events, such as one with a water/green infrastructure focus and another with a green mobility and connectivity focus may be beneficial. The presentations given at this event are on the County website.

Ms. Dorward noted that it is her understanding that counties as well as municipalities are eligible for the NJ BPU's recently announced new Community Energy Plan Grant Program. She heard that up to $25,000 per municipality may be available for this. This is another area where specialized expertise is needed, and that represents another new training program opportunity. The group recommended that the County pursue this grant opportunity.

Mr. DeFeo described a town that included several pages included in its Mount Laurel Settlement Agreement detailing green building and sustainable development standards that must be applied to a 400+ unit 4-story inclusionary development, which was approved by the Court. He noted that towns need to know they can do this as part of their settlement agreement negotiations. LEED provides third-party verification, which is a significant advantage for municipalities that choose to require LEED certification.

Mr. Lane described the J & J property on Route 1 that received density bonuses for applying green building standards. Mr. Lane reminded everyone that the workshop was a response to the 83 inclusionary development projects that have been proposed in the County and the need to encourage municipalities to ensure they are built in a sustainable and resilient manner.

Mr. Drake pointed out that with affordable housing, developers must prove the green standards are cost-saving, not cost-generating in order to obtain project financing through the NJ Housing and Mortgage Finance Agency (HMFA). Freeholder Sooy noted that she works for the NJ Economic Development Authority (EDA), which is beginning to roll out new incentives for green building, energy efficiency, walkability and transit villages. It also offers a 3% interest brownfields loan program. Mr. DeFeo noted that the landlord must pay the heating/cooling bill for low-income rental units, so it is in their best interest to make sure the projects are energy efficient.

The group agreed that events of this type should be organized annually by the Council.

New Business
The electric grid issues in California were discussed at the request of Mr. Foose. Mr. Foose was on the west coast last week during blackouts associated with major forest fires. Power was out in Silicon Valley – a major economic hub. A lot of businesses dealt with this by using backup generators. Many of them have solar arrays. He noted that his business deals with battery storage, which can help facilities remain powered during a blackout in a renewable fashion. As a wholesale energy commodities trader, Mr. Foose is concerned about hedging against risk. He indicated that he believes New Jersey has a tremendous risk in terms of the electric transmission grid, which is operated by PJM. This area is served and traversed by the Roseland-Branchburg-Pleasant Valley Corridor Transmission System. In California, they de-energized the transmission line due to fire risk, resulting in the blackouts last week. The grid operator there was unable to re-energize the line and restore power due to the inability to reach the necessary critical mass due to their lack of diversity in their supply sources based on fuel mix, which is needed to have resiliency on the supply side. They ended up having to go to Bonneville Power and Light in Washington and Oregon States which activated its fossil fuel turbines that were not used in years to accomplish this.

Mr. Foose contacted PJM and obtained a copy of the required 7-15 5-year plan for the Roseland-Branchburg-Pleasant Valley facility. This facility is comprised of towers build between 1927 and 1930. It includes 162 Towers and associated 500 kV & 230 kV cables that extend 50 miles including through Somerset County. Of the 162 towers, 54% are now exceeding 100% of their load bearing capability. 84% of those towers are exceeding 95% of their capability. Thus, 144 of the 162 towers are out of compliance due to degradation associated with aging over 90 years, for which a Federal 7-15 order has been filed. The start date for undertaking improvements was 2018. The work is still in the engineering phase. The project service date is 2022.

Mr. Foose noted that, with regard to how the blackout was managed in California, it came down to the local police. No technology-based communication systems were operating. Communications from the grid operator to communities was insufficient. Their websites did not function. Based on his observations in California and his examination of the 7-15 documents, Mr. Foose concluded that PJM and our communities need to start thinking about energy resiliency in more than a causal way. He would like to know more about how communications would be handled in Somerset County during a prolonged outage. The group agreed that it would be valuable to obtain Information about the status of repairs and upgrades from PJM. Mr. Lane pointed out that this is a subject that should be addressed during the completion of the County’s Draft Energy Resiliency Framework Plan, which is part of the recently updated Hazard Mitigation Plan (HMP). Mr. Lane noted that the current HMP focuses on natural disasters, but consideration should be given to including some man-made hazards during the next HMP update cycle.

Mr. Foose noted a significant proportion of the vehicle fleet in California is electric. Mobility was affected because vehicles could not be recharged. Without operational communication systems, it came down to the ability of the local police to drive around giving information to the citizens. If the Roseland-Branchburg corridor fails, New York City, Long Island and the Del-Mar peninsula in addition to NJ will be affected. It would help for Somerset County and its municipalities to know how to handle a situation like this. PJM could have similar issues re-energizing this line, especially in the future if dependence on renewable supplies increases.

The December 9th “Game of Extremes” Workshop offered by the County OEM Office was mentioned by Chairman Amann, who noted that energy resilience has been a concern of the Council for a long time.
Mr. DeFeo pointed out the need for coupling battery storage with solar arrays, and restructuring these systems and associated regulations so that they can operate as microgrids during power outages. There are only 5 facilities in NJ that can do this: Bayonne High School, Hopewell High School, a facility in Caldwell, Cooper Hospital, and a facility in Pennington according to Mr. Drake. The technology is there, but greater utilization is needed.

Mr. DeFeo recommended that microgrid systems be provided for the County Complex, the jail and the hospital. Mr. Lane noted that this is recommended in the updated HMP, and the priority for implementing this could be raised based on information provided by the Council.

Mr. Drake noted that PSE&G had proposed to the NJ BPU a host of resiliency improvements to its system after Superstorm Sandy, some of which moved forward. Chairman Amann noted that it would be helpful to know what risk factors the Rate Council takes into consideration when it decides certain improvements are too expensive.

Mr. Foose opined that if the federal government is not enforcing the 7-15 order (FERC currently does not have a quorum), local entities need to be prepared to act in the event the transmission line fails in order to protect their residents. Energy resiliency would also make Somerset County more economically competitive.

Mr. Grant noted that deregulation affected both electric generation and transmission, which is controlled by PJM. PSE&G has in effect an open check-book when it comes to transmission upgrades, which is driving up the cost of energy. State and local governments do not have any control over this; it is between the utility companies and PJM.

Ms. Kratina described the FEMA workshop she attended last year that was hosted by the County OEM which provided training for local officials for dealing with prolonged widespread power outages which was very valuable. This program underscored the importance of keeping technology-based communications systems running through the use of microgrids, back-up generators, batteries and other solutions. Mr. Lane and Mr. Drake recalled the liquid fuel supply chain disruptions and loss of internet access following Superstorm Sandy.

The group agreed it is a good time to get an update on what PJM is doing. Mr. Grant noted Joe Bowering is the reliability consultant for PJM and that he agreed to reach out to him to see if he would be interested.

The importance of batteries for enabling communications systems to continue to operate, and to support renewable-generation dependent microgrids during power outages were reiterated by Mr. Foose. Chairman Amann noted the cellular communication facilities have batteries to keep them going for 3 to 4 hours. After that, they need to be hooked up to a portable generator to keep them going. Ms. Kratina noted that one of the comments the Council included in its review document submitted to the NJBPU regarding the draft State Energy Master Plan (EMP) recommends incorporating resiliency into the redesign and modernization of the electric grid, which is also needed if the transition an electrified transportation system and distributed clean energy are to be successful. The draft EMP as it is currently written does not adequately address energy resilience. Mr. Grant noted the EMP talks about private sector responsibility for make buildings more resilient, but it does not talk about making the infrastructure system resilient, which drives up the cost of private sector resiliency measures.

In addition to seeking a speaker from PJM, it was agreed the Council will pursue having someone from the County Office of Emergency Management to speak about its strategies for maintaining communications and managing other needs during prolonged power outages. It
was agreed that information about the 7-15 orders should also be provided to the Board of Chosen Freeholders and County OEM so they are aware.

**Committee Chair Reports**

**Education and Awareness:** Ms. Perantoni noted that the committee supports having a few more speakers come in during 2020, in addition to those mentioned earlier, including some university representatives to share information about energy research that is underway. She described the work in mathematical modeling underway by an undergraduate student intern with her firm who is going to India that involves optimizing microgrids for use in rural areas. Ms. Dorward suggested inviting someone from Rutgers Energy Institute or Princeton.

Depending on when the new State Energy Master Plan is adopted (possibly by the end of this year) the group agreed that it should most likely schedule the Council’s 2020 conference which will focus on the plan’s implementation in early spring - 2020.

**Renewable Energy & Technology:** Ms. Dorward noted that she attended the EV Car Show in Bridgewater, which was on the same night her committee was supposed to meet (9-12-19).

Chairman Amann noted that Orsted – the developer of offshore wind in NJ recently announced that it will be buying its turbines from GE. Each one covers 10 acres of air space. The blades are 500 feet, and the towers are 700 feet. A huge transmission line will be needed to bring the power to shore. A separate line will bring power individually to shore from each turbine according to the current Plan.

Mr. Grant described his work on the renewable energy overview he is preparing for the Council. He will address the cost and capacity of these facilities to the extent he is able to get the necessary data. Freeholder Sooy noted that the NJ EDA just launched a new center for the offshore wind industry and she will see what kind of information about that she can provide to the Council.

**Resilience and Sustainability:** No report.

**Public Policy:** No report.

**Upcoming Meetings and Events**

Rutgers Energy Institute - Energy Storage Seminar: October 18, 2019
Sustainable Jersey Task Force Meeting: November 1, 2019
Somerset County OEM- Game of Extremes: Dec. 9, 2019
USGBC- NJ Bus Tour to Millbourne, PA – LEED platinum corporate office structure: October 23, 2019
USGBC – LEED Training Programs in Edison, NJ: November 14 and 15, 2019

**Public Comment**

No members of the public were present.
Adjournment

A motion to adjourn was submitted by Wayne DeFeo and seconded by Walter Lane at approximately 7:15 pm.