

CITY OF NEWARK
DELAWARE
CONSERVATION ADVISORY COMMISSION
MINUTES

June 11, 2019

MEETING CONVENED: 7:00 p.m. Council Chambers

MEMBERS PRESENT: George Irvine (presiding), Helga Huntley, Mary Clare Matsumoto, Bob McDowell, Sheila Smith, John Wessells

ABSENT: Beth Chajes, Kismet Hazelwood, John Hornor, Kass Sheedy

STAFF: Danielle S. Mapp-Purcell, Administrative Professional, Paralegal

Mr. Irvine called the meeting to order at 7:04 p.m.

1. APPROVAL OF MINUTES FROM MEETING HELD ON MAY 14, 2019

MOTION BY MR. WESSELLS, SECONDED BY MS. SMITH: THAT THE MINUTES FROM THE MAY 14, 2019 MEETING BE APPROVED AS RECEIVED.

MOTION PASSED. VOTE: 6 to 0.

AYE – HUNTLEY, IRVINE, MATSUMOTO, MCDOWELL, SMITH, WESSELLS

NAY– 0.

ABSENT– CHAJES, HAZELWOOD, HORNOR, SHEEDY

2. PUBLIC COMMENT

Andrew O'Donnell, District 3, thanked those members who were able to attend the last City Council meeting and the support for the electric city vehicle recommendation. Mr. O'Donnell had met with City Manager Tom Coleman and Public Works & Water Resources Director Tim Filasky to discuss a plan to purchase two electric vehicles and two charging stations within the next year. Mr. O'Donnell stated staff had been working on how to budget for the shortage from DEMAC to keep the project moving forward; as well as looking at options to be able to achieve 100% of renewable energy faster for residents who would want to purchase it. Ms. Huntley asked if staff was looking at going 100% renewable but not 100% renewable for the entire City, just for people who chose to go that route. Mr. O'Donnell stated as he understood it, it was a step in the direction to be 100% for the whole City to first opt-in residents and then comparing the prices between going 100% for the whole City.

Ms. Huntley stated one of the issues that has come up around this topic was that there was not a clear way show how those who chose to be 100% renewable energy affected the 25% versus those who did not opt-in. Basically, individuals going 100% renewable would not be improving anything. It would just mean that the rest of the people would get away with using a little less renewable. To not avoid this, the plan would need to make sure to set it up so that the 25% could not be met by a resident going 100%. It would have to be an

addition to the 25% baseline. Mr. O'Donnell offered to present a 20-minute presentation at a future agenda.

Mr. O'Donnell said he would like to know if there any additional opportunities for residents who live in shady areas to participate in the benefits of solar and referenced the City's program for McKees Park.

Mr. Irvine thanked Mr. O'Donnell for his assistance with making the recommendation reader friendly for Council through his research pertaining to the purchase of electric vehicles. Mr. Irvine added that Newark would now be listed as part of the Mayors Climate. Mayors Climate is a bipartisan, peer-to-peer network of U.S mayors working together to demonstrate leadership on climate change through meaningful actions in their communities, and to express and build political will for effective federal and global policy action. Mr. O'Donnell stated it was Climate Mayors which also had a sub organization and since the City had agreed to purchase one vehicle within the next year, the City would become part of an announcement the following month. Newark would be one of forty cities involved. Mr. Irvine added that it was important considering the thousands of cities within the country. Mr. Irvine stated the City became part of the movement after the recommendation to purchase electric vehicles. O'Donnell had connected the organizer of Climate Mayors and Mr. Coleman. Mr. Irvine believed that there was a plan to purchase two electric vehicles with a plan to come out later to purchase more.

Ms. Huntley said that her understanding of the Climate Mayors was that it was a much broader initiative than just electric vehicles and that the Mayor would have to sign on to the plan. Mr. Irvine stated it would be larger commitment to have the Mayor sign on but there was also a sub list of cities which have committed to purchase electric vehicles. Ms. Huntley asked for clarification as to if the current Mayor for the City of Newark had signed on because former Mayor Polly Sierer did have knowledge through several board members who had made suggestions. Mr. Irvine stated not yet. Mr. O'Donnell stated it was a very simply process for the Mayor to signup online. Ms. Huntley clarified that the City was in a sub-category because of the commitment to purchase electric vehicles and there should be a discussion with Mayor Clifton.

Mr. Irvine added that City Council agreed to instruct the Lobbyist to support the Plastic Bag Ban HB130 at the CAC's recommendation. Single use plastic bags used at a square footage sized store would be in effect by January 2020 or 2021. The key part would give the municipalities in the State the option to set a fee to require smaller stores to charge. The bill still requires the Governor's signature.

Ms. Huntley requested to schedule a conversation about fees for bags to include plastic bags for a smaller retailer as well as paper bags for the large retailers.

Stu Markham, District 6, suggested the Board follow up on the item and suggested the Board could check the meeting minutes. Electricity and electric vehicles were discussed at the City Council meeting.

3. STEERING COMMITTEE/ SUSTAINABILITY PLAN UPDATE

Ms. Smith stated the committee had not met since its last meeting and it is the same report. They will meet in a couple weeks and they will continue to go through it in great detail.

4. REVIEW AND APPROVE THE ANNUAL REPORT

(Secretary's note: The draft of the CAC's Annual Report is attached to this document and referred to as Exhibit A)

Mr. Irvine updated the report with everyone's edits. The final draft was not dispersed to the Committee.

It will be sent to Ms. Purcell to be dispersed for review. It will be placed on the next agenda to be finalized.

5. ELECTION FOR CO-CHAIR

Ms. Matsumoto questioned the responsibilities of the Co-Chair. Mr. Irvine listed the responsibilities as:

- To chair meetings when the Chair is not available
- Present recommendations to Council
- Next point of contact if Mayor or Council have specific questions
- Co-Chair would work with the secretary to set the agenda in absence of the Chair

Ms. Matsumoto suggested Ms. Smith as co-chair because of her last presentation and experience on the Committee. Ms. Matsumoto stated she was still too new to the role and did not believe she had the qualifications needed. Mr. Irvine stated per their bi-laws someone does have to co-chair. Ms. Smith nominated Mr. McDowell as he has been on the commission for the longest. Mr. McDowell said he would co-chair.

MOTION BY MS. MATSUMOTO, SECONDED BY MS. SMITH: FOR MR. MCDOWELL BE MADE CO-CHAIR.

MOTION PASSED. VOTE 6 TO 0.

AYE – HUNTLEY, IRVINE, MATSUMOTO, MCDOWELL, SMITH, WESSELLS

Nay – 0

ABSENT – CHAJES, HAZELWOOD, SHEEDY

6. OLD/NEW BUSINESS

(Secretary's note: Mr. Irvine moved the discussion before Item 3.)

- Discussion and potential recommendation regarding solar rooftop capacity for the City and University buildings

Mr. Irvine introduced Dr. John Byrne and Dr. Joseph Nyangon to present the results of their completed study.

Dr. Byrne represents the University of Delaware Center for Environmental Policy. Dr. Nyangon was the project lead and they had a third colleague who works with the foundation for Renewable Energy and Environment.

Dr. Byrne explained that the presentation was organized to walk the Board through what they thought would be a leadership opportunity for the City and the intention was to look at the idea to explain what they know regarding the City's situation regarding solar energy.

Dr. Byrne stated work was presented on a joint partnership between the University of Delaware's rooftops and the City. It was presented to University officials, but Mr. Byrne did not have a response yet from the University that they were ready to move forward. He was hopeful to encourage the Board to think about helping the City to take the step. Dr. Byrne added that he has been a long time resident of the City and this was important to him. He believed there has been a lot of activity happening around the country at

state, county and city levels where new ideas have been taken place. He believed there was a problem at the national level to obtain national legislation.

Dr. Byrne stated that this plan would involve the use of the City's own public buildings as the host for what would be a community solar system. There could be a variety of ways in which the energy created by the system could be credited. The City would need to think about how that credit system would work. In the presentation, they showed how the credit would make the City meet several standards for what would significantly reduce the requirement for fossil fuel based electrical generation. There was a plan to do more community solar for residential and other parts of the community. A report was done with the City of Wilmington with a report publicly available. The presentation would outline a clear practical case which could move quickly to put the City into a leadership position.

The last two slides of the presentation explained how the numbers were generated, where the data was drawn from and what methodologies were used. However, those slides would not be discussed in detail. Dr. Byrne said he would explain briefly what was discovered about the City and what would be the opportunity to host the solar plan through rooftops.

The City has over 8,000 buildings which includes the University's buildings. Roughly 418 GWh (Gigawatt hours – a unit of energy representing one billion-watt hours and is equivalent to one million kilowatt hours) is used. It would not be difficult to cover all of the 418 GWh with the City currently. Out of the 418 GWh, roughly 4 GWh are used to operate the governmental operations of the City of Newark which includes public safety.

There was a specific methodology used which exclude any shaded rooftops and North facing angled roofs out of the projections. The suitable roof area was only about 35% to 40% of the City's roof area. The City as a whole has the ability or the capacity for solar generation at roughly 138 MW (Megawatt – a unit of power and is equivalent to one thousandth of a watt) it would be less than 40% of the City's rooftop area.

The residential areas had mainly sloped rooftops and there are a number of residents who have already added solar to their roofs with 37.8 MW would be generated by those rooftops. This number excludes the shaded rooftops and those with existing solar. Public areas such as schools and government buildings are mostly flat. Commercial buildings and a small number of industrial plants also make up a number of flat roofs. Currently the City could provide about 30% of the 418 GWh from solar. If a storage system was to be implemented, the City could provide 60%-65% of the electricity from solar. During certain hours of the day, certain months of the year the City would generate more electricity than it needs which could be sold to other customers.

Ms. Huntley asked for clarification on how to get from 138 MW to that being 30%-40% of the 418 GWh and what those numbers were based on. Dr. Byrne explained that they have the ability to situate the solar plant on a roof and could estimate what it would generate from year to year for 20 years. 138 MW would generate approximately in terms of total GWh roughly 178 GWh from the rooftop.

Ms. Huntley asked how much would be generated and what kind of assumptions go into the calculation from the 138 MW to the 178 GWh. Dr. Byrne stated electricity from a power plant which has a rating (normally in MW) to show what it could generate if it was fully operational. The KW hours used measure how many KW used on average per hour for all 24 hours for a billing cycle. The 178 GWh would be the annual generation from the solar plant for the City with only about 30% of the roof area used.

The proposed pilot project would use 8 out of 11 buildings owned by the City. Those 8 were picked because they have either a flat or low angled roof which could be easily used to place solar panels. The other 3 buildings could also have solar panels, but the 8 buildings carry about 73% of the City's overall potential.

The State of Delaware has a Renewable Portfolio Standard and is the percentage of electricity consumed mainly by residential and small commercial consumers. It is a target that moves year after year. It has a set standard of 26% by the year 2025 and Delaware Solar Carveout, which means a certain percentage has to come from solar electricity. Municipalities that can generate their own electricity or purchase from DEMEC do not have an obligation to meet that standard as it is voluntary. Delmarva Power customers have the obligation. Delaware Electric Coop does not have an obligation. The cities have made it clear to DEMEC that the standard should be observed.

This project would create for the City the opportunity to meet the Delaware solar carveout obligation by using the City's buildings. Dr. Byrne felt that the target would go up before the current session of the General Assembly is done. The presentation now shows what currently exists in the law to meet the obligation. If the City's requirement was allocated into the City governments requirement as a share to meet the 2020-2025 goal, the City would be 60% of the way to goal with the 8 buildings. This would be a very important opportunity for the City because it could climb up the ladder quickly with a small first step.

The capital cost for the plan would be \$1.2 million but they do not propose the City to pay the full cost. Later in the presentation Dr. Byrne would discuss a way to finance the plan. It would create about .7 MW out of 138 MW it would be a relatively small number, but it would be a way to get started.

The plan looked at the Municipal Building, City Warehouse Complex and the George Wilson Community Center. They used "bankable" software which would be necessary to submit with drawings, when requesting a loan from a bank for a solar project. This software provides a highly accurate picture of what the project would look like and what it would cost. The software also identifies oversized trees in the diagrams.

Ms. Huntley asked for the location of the 3 City owned buildings not taken into consideration for the plan. Dr. Byrne explained that the buildings were smaller buildings and he did not believe that the City would be able to find an interested developer to develop them at this time. The potential would be so small for a developer at this stage.

73% of the generation potential of all 11 buildings could be found in the 8 buildings as described. Dr. Byrne added that it would not increase the generation by 27% to include the other 3 buildings. The other 3 buildings could be added later. Dr. Byrne added that this was a modest take on the project. They would have liked to be in front of the Board with a larger project to include the University of Delaware, but they have not reached that point. Dr. Byrne added that there was valid basis for the City to move forward with or without the University.

Dr. Byrne stated that he wanted to encourage the Board to focus on the table created by the National Renewable Energy Laboratory. The lab is a Federal institute devoted only to renewable energy to look at the economics. By utilizing a tool created at the laboratory, Dr. Byrne and his colleagues, ran the 8 building scenario being proposed.

Most of the benefit to solar is captured through the tax laws. There is a 30% investment tax credit

available to tax paying private citizens and governments. The City has the authority to create a “for profit” subsidiary to get the tax benefit. The investment tax credit would decrease the capital cost of \$1.2 million down by 30%. In addition, solar is entitled to “accelerated depreciation”. The entire project could be depreciated within 5 years as a tax paying entity. That entity would receive another 10% to 15% of the capital cost. A \$1.2 million project could end up costing roughly \$500,000 to \$700,000 in capital cost.

Many cities have for-profit subsidiary such as parking authorities. The parking authorities charge a set fee, those funds are then used to pay everything for the parking property. DEMEC is a non-profit entity that does have a for-profit subsidiary.

Dr. Byrne then referred to the table on slide 4 and noted if those steps were taken, it shows the Developer NPV (Net Present Value – total project, all in cost to the developer), the developer earnings which show the typical earnings that a tax paying entity would seek, and the impact of the ITC (Investment Tax Credit). Dr. Byrne believed this to be a very important element of community solar. The equipment should last 20 to 25 years or more. Some concerns raised revolve around the front-end encouragement with a developer who may build it. Dr. Byrne suggested for the City to step in because the City has the compacity where the developer cost could be placed into a third-party contract that reports to the City. If the third-party contractor fails to perform properly the City could act for a remedy.

Mr. McDowell questioned what entity-maintained McKee’s Park. Mr. Markham stated that he was not sure if the City had in-house expertise. A contractor was hired to replace some damaged panels. However, proceeds from McKee’s were used to pay for the work. Mr. McDowell stated that this would be something that the Board would have to look into, whether the City would want another entity to do the maintenance. Mr. Markham stated he understood the concern and he would be interested in hearing any maintenance problems since that has been the only issue he has heard about McKee’s in the last 5 years. The maintenance was required because of vandalism. Mr. Markham has had solar for 8.5 years and it has not required any maintenance.

Dr. Byrne clarified that he did not propose for the City’s Electric Department to take care of the maintenance. This project would be slightly larger than McKee’s Park. It could be done in-house or through a third party. This technology does not need a lot of maintenance but one thing that would be needed would be the replacement of inverters in 10 to 12 years. The panels could operate for 20 to 25 years. If a maintenance contract does not have oversight, the value of the project could be lost because not operating properly.

Dr. Byrne explained the compacity factor of 15% is the market average. This means that out of the 8,760 hours each year, only about 15% of those hours would be solar collection hours. That is the standard in the solar market, however one is a commercial customer, it would be working off of a 20% panel rather than a 15% panel. If the compacity factor were to be increased there would be more electricity per square foot and a lower cost. The cost would be under \$0.10 per KWh. The retail customers within the City pay between \$0.13 to \$0.15 per KWh. If this solar plan is incorporated into this “mix” that is being sold to City customers with DEMEC purchasing power and it is sent it to its customers and charges a rate necessary to pay DEMEC; and to pay the operating and administrative expenses needed, that total cost is somewhere between \$0.13 to \$0.15 KWh depending on which rate class is used. This will generate electricity that the City could use to pay off. In that sense this would be an opportunity for the City to share solar electricity with its customers in a variety of ways. Any of the possible ways would reduce the charges for that portion of electricity the City currently bills to customers.

Ms. Huntley believed the better comparison would be with the wholesale rate the City pays to DEMEC rather than the rate charged. Ms. Huntley felt that the City charged more than what it needs to cover cost. Dr. Byrne explained that he was taking it from the perspective of a resident who pays \$0.14 per KWh to the City. Ms. Huntley said that if the City purchases electricity for \$0.07, then charges the residents \$0.14 to make a profit, then the plan would not be decreasing the cost. She stated it was important to know the wholesale price rather than the price the customer pays. Dr. Byrne said that as a retail user he believed the electricity would be better for the himself and the City. If he was requiring new distribution lines as a condition to put the power into the City, it could change the calculation. DEMEC purchases electric for a price cheaper than what they sell to the City as it too has to cover costs which go beyond just the procurement of the electricity. However, what the City receives from DEMEC in the vicinity of \$0.06 to \$0.07 per KWh that is above the \$0.10 KWh.

Ms. Huntley explained that she used \$0.07 as an example, she did not know the actual cost. Mr. Markham believed the current rate was lower but the last time he did know for sure it was \$8.765 but he believed it has gone down. Dr. Byrne added that it was difficult because the actual purchase price by and aggregator like DEMAC would be different from the price charged to the customer. Ms. Huntley stated that the plan would have the City paying \$9.97 for the KWh where currently it pays \$8.765 per KWh. Dr. Byrne stated only if the City was measuring at the point of procurement of the generation. If DEMEC was asked to provide additional electricity, it would charge that amount and then the City would put its additional charges for what it needs to pay its bills and get it to \$0.14 KWh. Dr. Byrne explained that he was taking the view of buying from the City not from the generator. As an example, if he were to place a solar panel on his rooftop and the City gave a credit to his bill, the bill would be reduced by \$0.14 per KWh or for every KWh he generated.

Ms. Huntley stated this point has come up in past conversations and that the explanation just would be problematic. The City would buy electricity in some sense from the residential solar producers at a higher rate than what it would be buying electricity from others. Dr. Byrne said it was simply offsetting as it does not need the additional electricity it purchases from DEMEC. Ms. Huntley continued to state that if more electricity was produced by using solar panels than used, it would go back into the grid. The City buys it because it would give a \$0.14 credit then turns around to sell it back to another resident for \$0.14 which means that the City provides the infrastructure with no reimbursement. Dr. Byrne stated the City would get the difference between \$0.10 and \$0.14 as a reimbursement. Ms. Huntley agreed to move on. Dr. Byrne added that he agreed with Ms. Huntley's point as he understood it. He understood it as the City was not in a situation where a resident could over generate its own load. Ms. Huntley stated having solar panels on a roof could run the meter run backwards. Dr. Byrne said that he knew that the State of Delaware has a net metering rule to say a residence cannot generate more than 10% above their individual negative flow. If a residence generates above that, the residence would get the wholesale rate.

Ms. Huntley said the cost of electricity would increase by an estimated 12% regardless if it would be a worthwhile price to pay for renewable energy. Dr. Byrne stated it would depend on an individual perspective. Ms. Huntley stated that if the City produced electricity and then sold it, the price the City pays to either have the electricity come from its own solar panels or to have the electricity to come from DEMEC would be the price to do the comparison. Dr. Byrne stated it would cover all of its costs if it charges \$0.10 per KWh for the 8 buildings. Mr. Irvine added that the key point is that only a portion of DEMEC's power is "green" which is a big difference. It is not just about the price but the full cost accounting plus the negative effects of fuel being burned versus solar energy. Ms. Huntley explained that she just wanted it to be acknowledged that it would be more expensive and not say that there would be a savings versus the retail price charged to the customer and getting green electricity. She felt that would be misleading

to do that comparison. Mr. Irvine reiterated that as Dr. Byrne stated it was a matter of perspective. From a customer perspective it could be argued that it would be cheaper to pay \$0.10 plus a market up which would be less than \$0.14 for green energy. Ms. Huntley stated that if the City charges for electricity to cover its costs to provide the electric rate plus to cover other costs; if the City wanted to continue to do that then there would need to be charge on top of the \$0.10 that it would cost to generate the electricity. If another \$0.06 is added, then it would be more expensive. Ms. Huntley believed a comparison needed to be at the same level. Mr. Irvine understood Ms. Huntley's point, however, this would raise questions with the Finance Department.

Dr. Byrne suggested to focus on the prospective. In this particular case the City would be charging in the \$0.14 its own electric bill. For the City to pay for public safety and other services it provides, it uses the rate charged to pay for those expenses including its own electric bill. The electricity bill for the City of Newark is already in the \$0.14 and the City is not the generator in this particular situation. It is buying electricity from another to set a price necessary for the City to cover its cost of operating electricity utility for its citizens including paying for its own bill. If this was to be a larger project, then Ms. Huntley's point would be one he would focus on. However, since he has offered to do the project on City buildings, it would be written against the City load to those buildings. It would be the same as the retail customer putting electricity on their property and selling it back into the grid. Ms. Huntley did not believe that to be true because she believed that the City does not pay retail rates for its electricity. She believed the electric bill for the City is based on the wholesale rate from DEMEC. Dr. Byrne stated he did not know and has asked for several years from Newark and Wilmington to deliver the accounting that would answer Ms. Huntley's questions. Municipalities have a different issue as they are governments they collect a fee for their electricity. The fee is used to pay for its own bills as well as to pay for the electricity department to operate. However, if the City uses its own rooftop real estate to generate the electricity after 20 years it could be paid for at \$9.97 per KWh as long as the City does not expect to add to its own bill an additional amount of money to pay for City services it would be less expensive.

Ms. Huntley stated that she felt this was a really important point and insisted that it would not be cheaper. Unlike the previous analysis given which showed actual dollars that would be saved. In this case, Ms. Huntley did not believe the City would be saving money. She felt the City currently was able to provide for its electric needs at a cheaper rate than \$9.97 per KWh. Dr. Byrne stated that it may be true but he did not and thought that it would be hard to find in the accounting system. Ms. Huntley stated it was in the City Council meeting minutes when Council discussed the supplemental rate, the RSA. She stated the Finance Department always presents to City Council the negotiated rate with DEMEC. Mr. Markham stated there is how much the City collected, how much it costs for that electricity, what the budgeted amount was to go to the General Budget and whatever would be left Council votes on where to return the funds. Ms. Huntley asked if part of the presentation of that part of the accounting how much the City pays DEMEC for its electricity. Mr. Markham stated it should be part of that calculation. Mr. Markham added that the City's rate was \$6.942 which has come down significantly. To be paid out of that rate is the cost of electricity, maintenance, new transformers, distribution, and an estimated 25% used as a subvention because the City does not get funding from the University of Delaware. Mr. Markham added that McKees was funded through Green Energy funds and currently there is a savings of purchase of electricity that gets credited to the project. Mr. Markham suggested to review at McKees and Green Energy Funds there is an estimated \$322,000 as of March which could pay for two projects without any special funding. Ms. Huntley stated the way McKees was financed was through the Green Energy Funds and the City in some ways is paying the funds back to the savings. Mr. Markham explained that there was more involved. He said the CAC had a couple hundred thousand plus Green Energy Funds which works like a grant. The Green Energy Fund is a mandatory State fund. McKees had added its solar energy credit

that DEMEC purchased from McKees going into a fund. There is an estimated \$139,000 available for another Green Energy project. Mr. Markham clarified that the \$139,000 was in a different fund from the Green Energy Funds. Ms. Huntley asked if the City would have access to \$322,000 in the Green Energy Fund. Mr. Markham stated yes but was not sure if the City could use all the fund. Ms. Huntley stated it might have to save some funds to go to other projects. Mr. Irvine stated yes.

Dr. Byrne asked where the funds from the Green Energy Fund or the McKees Fund come from. Mr. Irvine stated from a charge. Dr. Byrne said then part of the \$0.14 that goes into the Green Energy Fund and McKees Park. Mr. Markham clarified that McKees Park was completely separate as to what it saves and what it generates. Dr. Byrne wanted to make the point that money for the two funds comes from the rate charged to the customer. Mr. Markham did not believe that the customers pay for the SREC's. Mr. Markham excused himself as he just wanted to make them aware that there may be \$322,000 available to use for the proposed project.

Dr. Byrne reiterated again the funding path and opportunities built into the charge of \$0.14 to complete the project presented. For the City to use its own property to lower its own load, it would need to charge \$0.10 KWh to clear the debit over a 20 year period. Ms. Huntley asked if the debit referred to would be the cost to install the panels. Dr. Byrne clarified it would be installation and maintenance. Ms. Huntley requested the definition of NPV. Dr. Byrne explained it meant "Net Present Value" meaning the City would pay for the project over time and also shows what would have to be paid today to buy debit to pay for the project.

Ms. Smith wanted to know if they were to evaluate the project in the terms in what she felt were not a part of their assignment, they need to look at the environmental advantages of the project. She stated that it was not for the Committee to resolve the economics, it would be upon the City to figure out if it would be feasible. Ms. Smith understood why the financial portion was included in the presentation, however, she was more interested in the environmental impacts of such a project. She did not think the Committee could answer the questions for the City as the City has a Finance Department to deal with such issues. She asked for data on the reduction of greenhouse gases and if reducing greenhouse gases would clean up the air quality or reduce health issues in the City. She hoped those topics would be addressed in this presentation.

Dr. Byrne stated at the last presentation he was asked to come back with financials and the environmental impacts. Ms. Huntley stated it was also a responsibility of the Committee to consider the economic impact as well as the environmental impact. Ms. Smith said that they had spoken over an hour on the financial impact and hoped to get to the environmental impact.

Dr. Byrne added that the project would contribute to the reduction in CO2 admissions credited to the City by 255 metric tons of CO2 (for buildings only, this does not include transportation). It would have an impact on setting a record by city government as over complying against the standards for the State of Delaware. Because in a sense, the City would be at 60% of what the City would need to be for the RPS target and would be at 100% of the Solar carve out six to seven years before the obligation.

Ms. Smith wanted to know the amount of metric tons currently generated by the 11 buildings proposed for the project. Dr. Byrne stated it would be about four times that number. The City would cover about ¼ of all the electricity needs of the City.

Mr. Irvine asked how this proposed project could serve to be a pilot to grow it larger. Dr. Byrne stated

there were three ways. The first would be for the City to purchase a large volume of solar panels and allow private citizens to add on to the same purchase for them to get a lower price. This would make it less expensive to residents versus them going to a developer. The City could vet suppliers for a reasonable price for the product and then offer the residents to add themselves to the list for the lower price.

A second practical way would be for the City to take on a leadership role among businesses. Dr. Byrne added that he believed that there were businesses on Main Street that would be interested in joining the City in this proposed project as they have rooftop real estate. Some businesses would be very interested in learning about and joining the proposed project if they could purchase their electricity at a lower rate with a 5 year contract. The businesses would allow their rooftops to host the project and in return it would be given a fixed price for its electricity.

The third way would be to have the proposed project build upon itself by utilizing the entity which employs Dr. Byrne to host the project. They would be able to speak to any questions as they have already completed and provided the work for the University of Delaware buildings. They know which buildings would be retiring over the next several years, shading and more. A practical way to approach the University would be in a similar way as suggested for the business community on Main Street.

Ms. Huntley requested the definition of PPA and Dr. Byrne said that it stood for "Purchase Power Agreement". Mr. Irvine added that a PPA is a for-profit subsidiary to a city or a DEMEC subsidiary that could take advantage of the text credit. They essentially pay for the project and then sell it to the city at a fixed cost. It is purchasing power over a set price over a set amount of time. There are companies who provide such services to municipalities and they would be the for-profit company. Which then they invest, usually through a third party investor who gets the tax credit. So that company installs and maintains the solar and then sells it to the city. Dr. Byrne has presented that the City take on that role for itself or work with DEMEC who has a for-profit subsidiary to invest and be that entity to take advantage of the tax credit.

Dr. Byrne stated a practical example would be the curved roof solar plant near the University's Fieldhouse which was built by a for-profit entity called Standard Solar. They set a price to retire the debit for that electricity. The University separated itself from using City power because it was able to generate the amount of electricity it needed. It was done for a price similar to the one presented to the Committee.

Ms. Smith stated that originally the plan was a shared project with the University which was considered ideal as they are already an electric customer of the City. She wanted to know if there would be a negative impact on the City to proceed or would it be essential for the success of the project if the University were not to participate. Dr. Byrne believed for the City to meet its long term environmental obligations now it would need to have everyone involved.

Ms. Smith asked what would be the impact and success of the project if the City were to move forward alone. Dr. Byrne did not believe it would impact the environmental and economical part. But it would as a community impacts the community's ability to meet its obligation. He did believe the students, or the employees would be fond to stand out and away from this type of project.

Ms. Huntley added that the University was limited as to how much electricity it is allowed to get from sources other than the City which is the reason why they have not done more project similar to the one on the Fieldhouse.

Ms. Huntley knew that in municipalities such as Seattle, Washington, the cities rented roof space from

entities to put solar panels on them. She asked if that was different from what he suggested for the business or was it the same. Dr. Byrne stated that there were two ways to negotiate this project. One way would be to state that the City approach a business with an amount to pay to rent their rooftop in order for the City to own the electricity and sell it to the City's customers. The second way would be for the City to offer the business a fixed price contract for the electricity of the business were allow the City to use their rooftop for a period of time.

Ms. Huntley referred to the part of the presentation which showed the distribution of the solar potential between different categories of rooftops which showed a large portion was public rooftops. She asked of that number included the University of Delaware. Dr. Byrne stated he did not have the answer with him but would be able to provide it at a later date.

Dr. Byrne provided an additional handout to illustrate and provide information to show how the City's share and then the University's share. The City's share was part of the presentation. The total amount the University has approximately 200 buildings at compacity of about 15 MWp of flat rooftop real estate for this purpose.

Mr. Irvine recommended for the City to move ahead and to offer them to buy into the proposed project. He felt the timing was right to put in a recommendation to Council along the lines that have been presented.

Mr. McDowell agreed with Ms. Smith comment that the Committee cannot just count the finances. They need to consider the carbon reduction, the health of residents and the image of the City. He felt that even if it would cost marginally more for electricity in the end it could be justified because they have taken at least 255 metric tons of CO2 out of the air. He also wanted to add that if they did offer PPAs to businesses, they should push not only the electricity savings but also the carbon dioxide savings.

Ms. Matsumoto added that it was important to look towards the future and the world. She stated that she would be proud to be in city that has stepped forward and made a statement.

Ms. Smith asked when the solar panels were placed on the University Fieldhouse. Dr. Byrne believed the University placed them on in 2011. Dr. Byrne stated that there was a student gift in 2008 the graduates to have the University to get involved in a solar project. Dr. Byrne's employer was asked to help the University to identify the project. They put out a request for proposals under a PPA and a series of companies bid for the project. The winning bid was by Standard Solar which has also placed solar panels on the United States Department of Energy in the 1990's.

Mr. Wessells asked if they have thought about the next step which would be parking lots as the University has several large parking lots. Dr. Byrne stated yes and that for the City of Wilmington, they took the elevated parking and placed solar canopies. They have mapped in the City of Newark the City's parking lots, University owned parking lots, and private lots. They only did elevated parking garages because parking has a higher turnover rate as a property.

Ms. Huntley would like to explore alternatives to local solar because she felt that there was not enough potential for the City to meet its renewable energy with this proposed plan. She believed the City would have to go elsewhere and prioritize which direction they want to focus on first.

Mr. Irvine stated that this was not major when comparing the amount of energy the City uses versus the

amount that would be generated by the proposed project. However, that would be a drawl of the pilot program and it would help keep the momentum going for McKees Park. He knows of places that have purchased energy from off shore. He thought this proposed program was viable and reiterate Ms. Smith's comment about the pricing that this Committee's job is to push on the environmental component because there are departments within the City to work with the numbers. He added that they can only strongly encourage to explore the feasibility to put the project into place with the guidelines. They need to consider keeping the PPA inhouse or outsource it to DEMEC and getting businesses to buy in to the project idea. Mr. McDowell thought that other municipalities in Delaware follow the lead of Newark.

Dr. Byrne explained that they did propose to the University when the University built the Fieldhouse, to open it up to employees and residents to join in the procurement to get the price to go down. It was offered nine years ago and hoped that it would be something the Committee seriously considers.

- Update on research from the Plastic Bag Subcommittee

Ms. Smith stated that Council made a motion to make a recommendation to Mr. Coleman for the City to adopt a policy since there was no consensus to a ban, but to word it as straws by request only. Then Mr. Coleman would take on the responsibility for a public education program. She did not know how binding the motion and agreement are. She added that Councilman Markham wanted to go for ban and to add to the policy that there would be a baseline to measure the impact to know if it would be really making a difference to have it be by request only to begin to consider moving further. Also, the estimated amount of straws used daily of 91,000 in the City was questioned by several people. Students from the University of Delaware did tests to formulate the number. The discussion was around how people resent bans and the language recreates oppositional mindset. They were going to look at more details about exactly how those kinds of policies would work. Ms. Smith felt it made a difference to attend the City Council meeting as a representative of the Conservation Advisory Committee as well as a resident.

Ms. Huntley asked how the decrease in use would be measured. Ms. Smith stated it has not been figured out yet. A baseline must be established first. Many of the local businesses are on board and have been since the students did their public survey. However, some chains are not on board. Ms. Huntley asked if Council provided staff with direction to get a baseline. Ms. Smith state not yet but it was Councilman Markham's stipulation that if it would be by request only and not a ban it would go to Mr. Coleman. Ms. Huntley asked if staff was trying to develop a way to obtain a baseline and would it have to go back on front of Council. Ms. Smith state presumably based on what was said about the baseline, but she did not know if anything would have to be presented back to Council. Ms. Smith added that the question of enforceability was asked and there was doubt about the City's capability to enforce which led to Councilman Markham request to obtain baseline data and measure going forward.

Mr. Irvine asked Mr. Wessells the date of Newark Community Day. Ms. Huntley responded it was always in the middle of September. Ms. Smith stated the third Sunday in September. Mr. Irvine requested that Mr. Wessells obtain a quote to purchase reusable shopping bags and reusable straws by the next meeting. Mr. Irvine also requested, if possible, to have quotes from environmentally responsible producer and local if possible. The Committee needs to have approval before making the purchase.

Mr. Irvine explained in the long run it would be cheaper to purchase reusable bags because single use bags tend to clog the recycling machines. It costs money to take the time to shut the machines down to unclog them. Ms. Smith stated some of that issue had been resolved with the separation of bags not being allowed in single stream trash.

Ms. Smith suggested a “Tote” drive. People could drop off their extra tote bags. Mr. Irvine asked Ms. Smith to reach out to the Newark Post to see if they would be interested in having an article about the work the Committee has done regarding the plastic bags, plastic straws and reusable bags.

7. PLANNING & DEVELOPMENT REPORTS:

Ms. Matsumoto stated the Millcroft Nursing canceled the memory care unit development project on Possum Park Road. The land has been leveled and Ms. Matsumoto wanted to know if anything was discussed at the last City Council meeting. She believed the property belonged to the City of Newark. Ms. Matsumoto thought that Councilman Markham met with some residents of the neighborhood. Ms. Matsumoto was concerned that the City approved projects and then the developers back out.

Ms. Smith suggested to wait two months and then discuss the tree ordinance to work out the details. Ms. Smith stated they were also working on two separate sections of the ordinances. One section would address specifically forest. The other section pertains to trees in the developed parts of Newark. Mr. McDowell has conferred with Joe Spadafino and Mr. Coleman about Reforestation Day and they wanted to know if the CAC would be willing to pay for the proception supplies for the seedlings. He still needed to find out an amount and cost. Mr. Irvine asked to have it added to the next meetings agenda. Ms. Smith asked if Mr. McDowell would be interested to see how the trees were doing because some concerns were brought to her attention by someone who had surveyed the area. Ms. Huntley asked what the concerns were. Ms. Smith stated she has not been to the area and could not substantiate the concern. However, the concern was regarding the 300 seedlings that were planted. Ms. Matsumoto would go by the area to walk through and see the process. Ms. Smith added that an estimated 70% of seedling do not live which was why 600 trees were planted.

Ms. Matsumoto added that the trees planted were “bare rooted” and that the area has a lot of cover so it may have been difficult for water to reach the ground. Mr. McDowell stated that this was the first year and hoped to be able to do more this year. Ms. Huntley suggested to speak to people who have had experience with similar projects. Mr. Irvine explained the seedlings used were donated and that larger seedlings would cost money.

Mr. Irvine asked Ms. Huntley what it would take to join the Climate Mayors, she responded that it would just take for the Mayor to signup online.

Andrew O’Donnell, District 3, stated that the Mayor would need to sign up at www.climatemayors.org, on the right side would be a form to sign up as an individual or as the government entity itself. It is a non-binding, which means there would not be any consequences if there is no follow through. The City would then be marked on the online map on a national scale.

8. NEXT MEETING – JULY 9, 2019

Mr. Irvine stated everyone would have a chance to review the annual report, the meeting’s presentation in detail and hopefully a recommendation no how to move ahead for research prior to the meeting.

9. ADJOURNMENT

The meeting was adjourned at 9:28 p.m.

Danielle S. Mapp-Purcell
Administrative Professional I

/dmp