



City of Kent
Wednesday, December 1, 2021
City Council Committee Meetings
320 S. Depeyster Street, Kent, OH 44240

MINUTES

At 06:56 PM, Mayor Jerry T. Fiala called the City Council Committee Meetings to order.

Committee of the Whole

Present: Jack Amrhein, Michael DeLeone, Garret Ferrara, John Kuhar, Gwen Rosenberg, Heidi Shaffer Bish, Roger Sidoti, Robin Turner, Tracy Wallach

Also Present: Mr. Jerry T. Fiala, Mayor and President of Council; Mr. Dave Ruller, City Manager; Ms. Bridget Susel, Community Development Director; Ms. Melanie Baker, Service Director; Mr. Jim Bowling, City Engineer; Ms. Joan Seidel, Health Commissioner; Ms. Rhonda Hall, Budget and Finance Director; Mr. Nick Shearer, Chief of Police; Mr. Bill Myers, Fire Chief; Ms. Angela Manley, Parks and Recreation Director; Ms. Patti Long, Assistant to the City Manager; Ms. Suzanne Stemnock, Human Resource Manager; Ms. Amy Wilkens, Clerk of Council

Boards and Commissions Interviews

Mayor Fiala announced the first item on the agenda were the Boards and Commissions interviews. Ms. Wilkens introduced the first applicant for the Architectural Review Board, Mr. Kevin Koogle.

Mr. Koogle approached the microphone, introducing himself and stating he would like to continue on the Architecture Review Board. He outlined his qualifications and asked City Council if they had any questions for him.

Mr. Sidoti asked Mr. Koogle about the ARB process and if there is a way to make it easier. Mr. Koogle said yes, there is. He referenced the current Design Guidelines and said if someone has a better way of writing about them, he would be willing to listen. In reference to those guidelines, he hopes they will make it easier for members in the community to understand.

Mr. Turner asked Mr. Koogle about the issue of education and outreach and asked how often he interacts with applicants that come before the board and how he explains what the rules are and how they are implemented. Mr. Koogle says they see this a lot when they have to adapt to who the applicant is. If the person is not in the field of architecture, they may have to simplify and explain things a bit more.

Mr. Turner asked about any proactive educational outreach that is provided. Mr. Koogle said in the seven years he has been on the board, they have had several workshops with City Council. They are required to follow the Ohio Sunshine Laws, so all interactions with applicants are conducted during Architecture Review Board Meetings. There is not an awareness or outreach campaign, per se. He added that he is proud of being on the board.

Mr. Turner said people will not come before the Architectural Review Board unless they have to and suggested having educational programs and asked if he thinks these would be valuable. Mr. Turner continued by saying he thinks they need to go out beforehand to make sure everyone knows what they are required to do. Mr. Koogle says he thinks it is the person's responsibility to do their due diligence knowing all of the hoops needing to be jumped through in order to get projects done in the city. He thinks they should start by reviewing the City of Kent's website and work through the process. He thinks more workshops should be done by the City Council when new members come to the board.

Ms. Shaffer Bish asked if he believes it is the role of the ARB to promote itself or the role of staff. Mr. Koogle replied "staff".

Mr. Sidoti said it is clear he has thought about this long and hard and he appreciates that he has done so. He said the reason we are here is that there are no bad guys in this situation and asked how he can help lead a situation where business owners operate with impunity and do whatever they want? He also asked about the appeal process with City Council and if there is a way to clean this up so it is clear to the applicant and if he could provide the leadership to change? Mr. Koogle said he used the term standards. Mr. Sidoti said not having a standard makes it a subjective decision by the ARB. Mr. Koogle referred to the Board of Zoning Appeals process and how that process becomes subjective.

Mayor Fiala interrupted the discussion by saying we are getting too deep into what the ARB does and not why they should appoint Mr. Koogle.

Mayor Fiala asked if he thinks his position is advisory or authority. Mr. Koogle said they are advisory. Mayor Fiala thanked Mr. Koogle and asked Clerk Wilkens to call the next applicant to the podium.

Clerk Wilkens called Ms. Valerie Landis to the microphone.

Ms. Landis started her presentation by saying they need to get back to basics.

She said she came to the board with a fresh set of ideas and she wants to be on this board. She wants City Council to consider that a fresh perspective may be what's needed. She said variety would bring an appeal to ordinary business owners where collaboration can occur. Her application would bring this to the ARB. She asked when the vote comes to talk to business owners and what they think of her candidacy. If they believe her vote would be complimentary to the board to vote for her.

Mr. Turner asked what advocacy meant to her. Ms. Landis said she believes in having a conversation, asking questions and finding out the reasoning behind the request. She said 90% of what comes before the board is signage. She added that it's important to have conversations with business owners to make Kent stand out on its own. She said advocacy starts with our neighbors and getting the community together to work with the Board and City Council. She said the meetings need to have empathy and a feeling of collaboration.

Mr. Turner asked about Ms. Landis' experience dealing with the ARB. She explained it was a strange time with the pandemic. She harbors no ill feelings and feels as if she has learned a lot and that it has set a fire in her. She has spent a lot of time thinking about how to make it better.

Ms. Shaffer Bish asked whose interest she would be representing if appointed. Ms. Landis said the City's long-term goals would guide her. Structure in the meeting is important and would make the meetings more efficient. Ms. Shaffer Bish asked who the customer would be. Ms. Landis said the customer would be the business owner who would need to have an appropriate discussion about the process with the ARB. Ms. Shaffer Bish said, as a City Council person, she has multiple customers and said it's imperative to balance the needs and really bare this in mind. Ms. Landis relayed an experience she had in dealing with Ms. Shaffer Bish when she had reached out to her and appreciated being heard.

Mayor Fiala asked whether she considers whether this is an advisory board or an authority board. Ms. Landis said it is absolutely an advisory position.

Mr. Doug Fuller, the next applicant, was called to the microphone. He said he is withdrawing his name and supports Kevin Koogler for the position. He said if we can build a new design guideline code that will help immensely. He hopes council members will come to the meetings when the guidelines are being redone. He referred to work being done downtown and what you do with contemporary buildings in a historic downtown area. He would like to be a part of the process of redoing the design guidelines. He said they are meant to reflect community standards.

Mr. Sidoti asked if he would be interested in the Planning Commission. He replied he is thinking of applying to the Preservation Committee.

Mayor Fiala asked if he thought they were advisors or authorities. Mr. Fuller said authorities due to giving approval of a project. He said they do so in a collaborative way.

The next candidate up for appointment was called before City Council. Mr. Andrew Scholl approached the microphone and introduced himself and said he had finished his first term on the Sustainability Commission. When he first joined, they were looking for someone with experience with greenhouse gases and data. He was the only member of the commission involved from the beginning of the climate action plan.

Mr. Sidoti thanked Mr. Scholl for applying.

Mayor Fiala said the vote will be on December 15, 2021 and everyone needs 5 votes.

Intergenerational Village Update

Dr. Dana Lawless Andrick from Kent State University addressed City Council and the topic of the Intergenerational Village. She said during the last Council meeting things were brought up regarding the Intergenerational Village and she wanted to clear up a few items. There is a community meeting planned for Monday December 13, 2021 at 6 pm at the Police Headquarters community training room and KSU is planning on having it widely published. She reiterated this project is in a complete exploratory phase and they are in no way going to take this before the Board in March. She said there is a good chance this project may never move forward at all, and it may, but is in the conceptual stage at this moment.

Mr. Kuhar asked what the Intergenerational Village was. She invited him to the Community Meeting for those answers. She explained that at the core, it brings many generations into a living space. Mr. Kuhar said he is trying to envision it. Dr. Lawless Andrick said this is something that would need to be explored together. She said they are not anywhere near having those details nailed down.

She continued by saying we have a lot to be proud of right now. She said they have had over 1300 waivers signed for the new Kent Skates Ice Rink in downtown Kent and is looking forward to the celebration being held on December 2, 2021 with guest speakers, give aways and a celebration of the accomplishment of bringing the ice rink to the Kent residents.

Dr. Lawless Andrick added there is a lot to celebrate with the KSU football team going to the M.A.C. Championship and said on Friday they are having a send off for them.

Mayor Fiala thanked Dr. Lawless Andrick for her continued work and collaboration with the City of Kent.

Community Development Committee Meeting

Present: Jack Amrhein, Michael DeLeone, Garret Ferrara, John Kuhar, Gwen Rosenberg, Heidi Shaffer Bish, Roger Sidoti, Robin Turner, Tracy Wallach

Also Present: Mr. Jerry T. Fiala, Mayor and President of Council; Mr. Dave Ruller, City Manager; Ms. Bridget Susel, Community Development Director; Ms. Melanie Baker, Service Director; Mr. Jim Bowling, City Engineer; Ms. Joan Seidel, Health Commissioner; Ms. Rhonda Hall, Budget and Finance Director; Mr. Nick Shearer, Chief of Police; Mr. Bill Myers, Fire Chief; Ms. Angela Manley, Parks and Recreation Director; Ms. Patti Long, Assistant to the City Manager; Ms. Suzanne Stemnock, Human Resource Manager; Ms. Amy Wilkens, Clerk of Council

Chair Kuhar opened the Community Development Committee meeting at 7:52 PM. He called the first speaker to the microphone.

Greenhouse Gas Inventory

Ms. Susel, Community Development Director and Ms. Long, Assistant to the City Manager began their powerpoint presentation to Council on their findings of the Greenhouse Gas Inventory (Attachment #1)

Ms. Susel reported:

"City Council passed Resolution 2017-18 in October 2017 formalizing the City's:

1. Recognition that GHG emissions from human activities has contributed to current climate change concerns;
2. Support for the international treaty known as the Paris Climate Agreement or Paris Accord, that committed parties to the treaty to working towards investments in technology and initiatives that can reduce global GHG emissions and improve resilience to climate change.

The 2017 resolution also identified the need for the City's Sustainability Commission to develop a "community based climate action plan" that Council can consider adopting for the City.

In early 2018, the Sustainability Commission established an Ad Hoc Committee to begin the work of identifying the various components that should be part of a community Climate Action Plan. The City became a member of the International Council for Local Environmental Initiatives (ICLEI).

ICLEI provided the City staff and Ad Hoc volunteers working on the development action plan with technical support on the various components, also known as milestones, that should be part of the community-based Climate Action Plan. The first such phase is the development of a GHG Emissions Inventory Report specific to the Kent community. With the technical support provided by ICLIE's staff and online training courses, the Ad Hoc Committee

volunteers identified the year 2016 as the base year for data and the volunteers worked separately in smaller groups on compiling actual and when that was not available, modeling data for six specific emission sectors, including:

1. Residential Energy
2. Commercial Energy
3. Transportation and Mobile Sources
4. Solid Waste
5. Water and Wastewater
6. Agriculture, Forestry and Land Use

The City paid for access to an ICLEI GHG inventory emissions estimation software program known as Clearpath Pro, and all of the data was entered into the program by Ad Hoc Committee volunteer Andrews Boateng. The Ad Hoc Committee, and the City were fortunate to have Andy as a volunteer member willing to share his expertise in the area of climate change and GHG inventory development. His guidance and work proved invaluable in getting the final GHG inventory completed. Andy is currently working on completing his dissertation at KSU in this field of study and is working at Davey Resource Group on community-based Climate Action Plans.

A big thank you also needs to be extended to Davey Resource Group for its support by allowing Andy, as a volunteer member of the Ad Hoc Committee, to commit work hours and its technological support to completing the GHG inventory that is being presented this evening.

Before I transition to the summary of the primary results that came out of the GHG inventory, I did want to mention that the GHG inventory is the first milestone of a community-based Climate Action Plan. It is necessary to first identify where the primary sources of carbon emissions are occurring in order to move to the subsequent milestones, which include:

- Milestone 2: Adopt emission reduction targets;
- Milestone 3: Develop a local Climate Action Plan for reducing emissions in those target sectors;
- Milestone 4: Implement the Climate Action Plan
- Milestone 5: Monitor progress and report results.

The report itself is rather detailed and after some comments received from the draft sent out last week, some further clarification and narrative will be added and edits made to the "Scopes" section of the report. These edits will not change the data in anyway, but will add more context to enhance understanding of that section of the report.

As previously mentioned, there are 6 sectors typically evaluated when determining carbon emissions."

She reviewed in detail the summary of the primary results that came out of the GHG inventory from the Clear Path Pro System (Attachment #1)

Slide one of her presentation reviewed all of the data that was put into the

system and analyzed. Commercial energy creates the greatest carbon footprint in our community, generating 38% of the CO2 emissions. Second, is residential energy, followed by transportation, solid waste, waste water and closing with agriculture.

Slide two took a look at the aggregate usage of residential energy. 66% is generated from grid energy which includes transmission lines, transformers, etc., the delivery system for that electricity. These systems are established and cover large geographic areas. 34% comes from stationary fuel combustion which comes from homes.

Slide three is a review of carbon emissions which are categorized into three "scopes". Scope one is greenhouse gas emissions emitted within the city boundaries. Scope two is emissions that come from as a consequence of using grid supplied electricity, steam, heating and cooling within the city boundaries. Scope three are those that occur outside of the city boundary as a result of activities done within it. Scope two is the highest generated in the city.

Slide four reviewed projections from 2016 to 2046 looking at CO2 emissions longitudinally across the sector. It will be achieved if we meet milestones three and four to reduce levels. This would be in an ideal world.

Slide five reviewed the high impact information analysis from the report. It identifies science-based targets from the International Conservation Code to work towards. These are the overall standards needing to be incorporated.

They are asking City Council to make a motion tonight for a resolution to accept the Greenhouse Gas Inventory as milestone number one and the baseline of the Community Action Plan and then moving to the next milestone. She said the work and technical aspects of this were a challenge for staff and volunteers. The concept is easy to embrace, but the technology and specificity that needs to go into this to actually make an impact on our community was more than what staff and the volunteers had anticipated. She would like to come back to Council in February seeking appropriations to hire a consultant to advise and assist through the next milestones. Ms. Susel commended the Sustainability Commission as well as its Ad Hoc Committee on their work, time and effort, and said if we truly want to come up with an action plan that will help us come up with policies, initiatives and investments, we really need someone with expertise to guide the volunteers and staff.

Ms. Shaffer Bish said she noticed electrification was noted as a problem and then as a solution. She asked about gas and where it falls. Ms. Long said in the chart, the second item suggested 20% in vehicle reduction and that leaf blowers are actually very low in the sectors looked at. They were less than 3%. Ms. Shaffer Bish said she would like to see how individuals can reduce usage themselves. Ms. Susel said in the future we would want to target high impact areas. She said in the next phase they will be looking for professionals to help them with this.

Ms. Rosenberg thanked Ms. Susel and the commission on the work they've done. She asked if there would be opportunities to compare Kent with comparable cities. Ms. Long said in the report it does address this issue and will be available in the report. Ms. Susel is looking forward to having an expert that has done this in other communities and is in the implementation phase. She said there aren't a lot of communities in Ohio doing this and Kent should be proud. An audience member stated the Ad Hoc Committee heard from other people in other communities, which was very helpful.

Mr. Turner asked what the challenge of compliance is after you adopt a plan. Ms. Long said that will definitely be addressed in the next steps and they know a soft approach works best. Ms. Susel said they identifying where emissions are the worst. That is where they will be focusing their efforts. A lot of this will be promoting and educating the community and, over time, with targeting messaging and education.

Mr. Sidoti asked if other cities have shown measurable results and if they would consider using those as models. Ms. Susel said they are definitely fine with doing this and added it's important to have them guide us.

Ms. Shaffer Bish asked about the next phase of having an outside expert come in to do the work they charged the commission to do. Ms. Susel said this is going to be a collaborative effort with volunteers and requests the expert to collaborate and guide the commission. 90% of communities do not tackle this with volunteers. The volunteers are responsible for coming up with what needs to be done in the community and the expert can help guide them.

MOTION TO APPROVE the Greenhouse Gas Inventory made by Ms. Heidi Shaffer Bish, **SECONDED** by Ms. Gwen Rosenberg and **CARRIED** by a voice vote of 9-0-0.

Streets, Sidewalks and Utilities Committee Meeting

Present: Jack Amrhein, Michael DeLeone, Garret Ferrara, John Kuhar, Gwen Rosenberg, Heidi Shaffer Bish, Roger Sidoti, Robin Turner, Tracy Wallach

Also Present: Mr. Jerry T. Fiala, Mayor and President of Council; Mr. Dave Ruller, City Manager; Ms. Bridget Susel, Community Development Director; Ms. Melanie Baker, Service Director; Mr. Jim Bowling, City Engineer; Ms. Joan Seidel, Health Commissioner; Ms. Rhonda Hall, Budget and Finance Director; Mr. Nick Shearer, Chief of Police; Mr. Bill Myers, Fire Chief; Ms. Angela Manley, Parks and Recreation Director; Ms. Patti Long, Assistant to the City Manager; Ms. Suzanne Stemnock, Human Resource Manager; Ms. Amy Wilkens, Clerk of Council

Chair Sidoti opened the Streets, Sidewalks and Utilities Committee and called the first speaker to the microphone.

State ARPA Funding Application and Allocation

Mr. James Bowling, City Engineer, addressed City Council on the topic of State ARPA Funding Application and Allocation. His department received an email on August 10, 2021 that the application was due on August 16, 2021 for a new Ohio Water and Wastewater Infrastructure Grant Program and an application was quickly submitted. They were successful in getting awarded these grant funds and are looking for approval from Council to accept these funds and execute the grant agreement with the Ohio Department of Development.

Mr. DeLeone asked Mr. Bowling how much the grant is for. Mr. Bowling replied it was for \$1.4 million. Mr. DeLeone said he appreciates the efforts Mr. Bowling puts into grant applications.

There were no further questions from Council.

MOTION TO Authorize State ARPA Funding Application and Allocation made by John Kuhar, **SECONDED** by Gwen Rosenberg and **CARRIED** by a voice vote of 9-0-0.

Finance Committee Meeting

Present: Jack Amrhein, Michael DeLeone, Garret Ferrara, John Kuhar, Gwen Rosenberg, Heidi Shaffer Bish, Roger Sidoti, Robin Turner, Tracy Wallach

Also Present: Mr. Jerry T. Fiala, Mayor and President of Council; Mr. Dave Ruller, City Manager; Ms. Bridget Susel, Community Development Director; Ms. Melanie Baker, Service Director; Mr. Jim Bowling, City Engineer; Ms. Joan Seidel, Health Commissioner; Ms. Rhonda Hall, Budget and Finance Director; Mr. Nick Shearer, Chief of Police; Mr. Bill Myers, Fire Chief; Ms. Angela Manley, Parks and Recreation Director; Ms. Patti Long, Assistant to the City Manager; Ms. Suzanne Stemnock, Human Resource Manager; Ms. Amy Wilkens, Clerk of Council

Chair DeLeone opened the Finance Committee meeting at 8:30 p.m. He called the first speaker to the microphone.

City/Portage County Public Defender Contract Renewal

Mr. David Ruller said he was speaking tonight in place of Ms. Hope Jone, Law Director, who is out due to illness. He said this is a housekeeping item that is done every year to establish an agreement and pay the Portage County to provide public defender services for those who need it.

There were no questions from City Council or the audience.

MOTION TO APPROVE City/Portage County Public Defender Contract Renewal made by Mr. Roger Sidoti, SECONDED by Ms. Gwen Rosenberg and CARRIED by a voice vote of 9-0-0.

2022 City Operating Budget

Next on the agenda was the discussion of the City Operating Budget. Mr. Ruller said that due to Covid there were many changes in the budget and the City has done really well with grant funding, ARPA funding and leveraging outside funding in 2021.

Ms. Rhonda Hall, Budget and Finance Director, referenced the previously distributed budget book and page 1-1. They revised the 2021 budgeted revenues, increasing the income tax and included in the second section the CARES Act money and ARPA money. The second half will come in 2022. For 2022, we estimate \$48.2 million in revenues.

On page 1-3 she covered how they plan on spending the money. Page 1-5 shows the summary of the rest of the budget book for each of the funds and shows how each is broken down. The expenditures have increased slightly and \$2 million of ARPA is budgeted for this and that is part of the reason for the increase. Page 1-7 is another view on how expenditures are allocated.

Mr. Sidoti asked about expenditures and if there was something she would be watching. Ms. Hall said they monitor overtime, capital projects and try to be versatile with where the money comes from.

Ms. Hall referenced the budget book again, stating that the rest of the book is more detail by department. She opened the floor to questions from Council.

Ms. Shaffer Bish said she is looking at tables on 1-4 and that capital projects are going down and asked how this could be. Ms. Hall said the money that is using ARPA funds comes out of a different line item.

Mr. Kuhar said on page 1-8, transportation has increased and asked why this has happened. Ms. Hall replied that transportation is general maintenance. She said if you look at the details of that fund, you will see how it is allocated.

Ms. Shaffer Bish referred to the General Government and City Council charts. She said to look at 2-1 and 2-1 and the majority is salaries and benefits. Ms.

Hall said there are four individuals that will receive a raise and those would be increased as well. Ms. Shaffer Bish asked about funds for community events and asked about funding for conferences. That was reduced in the budget during the pandemic.

Mr. Ruller added that in the motion , Council will also need to authorize the planned water and sewer rate increases that were in both the Capital Plan and the Operating Budget.

MOTION TO APPROVE THE 2022 City Operating Budget made by Garret Ferrara, SECONDED by John Kuhar and CARRIED by a voice vote of 9-0-0.

2021 Budget Appropriation Amendments, Transfers, and Advances

Ms. Rhonda Hall continued her presentation by referring to the third item on the agenda for budget appropriation, amendments, transfers and advances. She said they are closing purchase orders and are trying to get the ordinance prepared by next week. She stated that this is an ask to enable the Budget and Finance department to make adjustments at the end of the year. She said they are going through to make sure there are no negative line items.

There were no further questions from Council.

MOTION TO AUTHORIZE the 2021 Budget Appropriation Amendments, Transfers and Advances made by Garret Ferrara, SECONDED by Gwen Rosenberg and CARRIED by a voice vote of 9-0-0.

Then and Now Purchase Orders

Ms. Rhonda Hall stated they are asking for Council approval for any then and now purchase orders. According to the Ohio Revised Code, anything over \$3000 will need approval. Sometimes, by the time it is entered into the system, it looks like it is dated after the purchase was made. It means that we had the money then, even though the purchase order is just now being entered.

Mr. Kuhar asked why this was not done at the time of purchase. Ms. Hall said it was due to the time of receiving the invoice. This is done to avoid any State Auditor comments in the audit report. Mr. Kuhar asked if they issued an open purchase order, and she said they did not.

MOTION TO AUTHORIZE Then and Now Purchase Orders made by Garret Ferrara, SECONDED by Roger Sidoti and CARRIED by a voice vote of 9-0-0.

City Surplus Property Trade In/Auction

Ms. Melanie Baker came before City Council to ask about the ability to dispose of equipment as they are looking to get rid of eleven vehicles and other large

pieces of equipment. The majority are being taken to auction.

There were no questions from the audience or city council.

MOTION TO AUTHORIZE City Surplus Property Trade In/Auction made by Gwen Rosenberg, SECONDED by John Kuhar and CARRIED by a voice vote of 9-0-0.

Seeing no further questions or agenda items, Mr. DeLeone adjourned the Finance Committee Meeting.

Executive Session

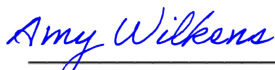
MOTION TO Enter Executive Session to discuss Board and Commission Appointments and the General Compensation and Position Allocation Plan made by Jack Amrhein, SECONDED by Garret Ferrara and CARRIED by a voice vote of 9-0-0.

Adjourn

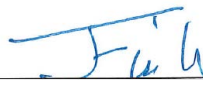
MOTION to return to the Committee Meetings made by Mr. Ferrara, SECONDED by Mr. Amrhein and CARRIED by a voice vote of 9-0-0.

MOTION TO AUTHORIZE THE GENERAL COMPENSATION AND POSITION ALLOCATION PLAN made by Garret Ferrara, SECONDED by Jack Amrhein and CARRIED by a voice vote of 9-0-0.

The meeting adjourned at 9:42 p.m.



Amy Wilkens
Clerk of Council



Jerry T. Fiala
Mayor & President of Council

Any person who requires an auxiliary aid or service for effective communication or a modification of policies and procedures to participate in any City or City Council public meeting or event should contact the Clerk of Council at 330-676-7555 or councilclerk@kent-ohio.org. Any request for auxiliary aid or other accommodation should be made as soon as possible, but no later than forty-eight hours prior to the event.



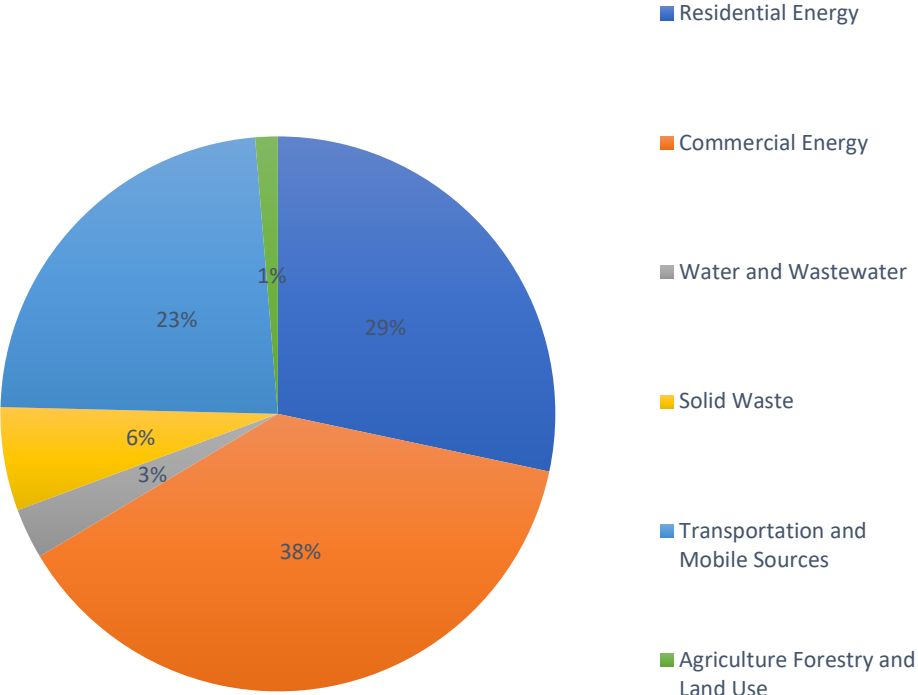
City of Kent, Ohio

DRAFT

Community Greenhouse Gas Emissions Inventory Report
Milestone One

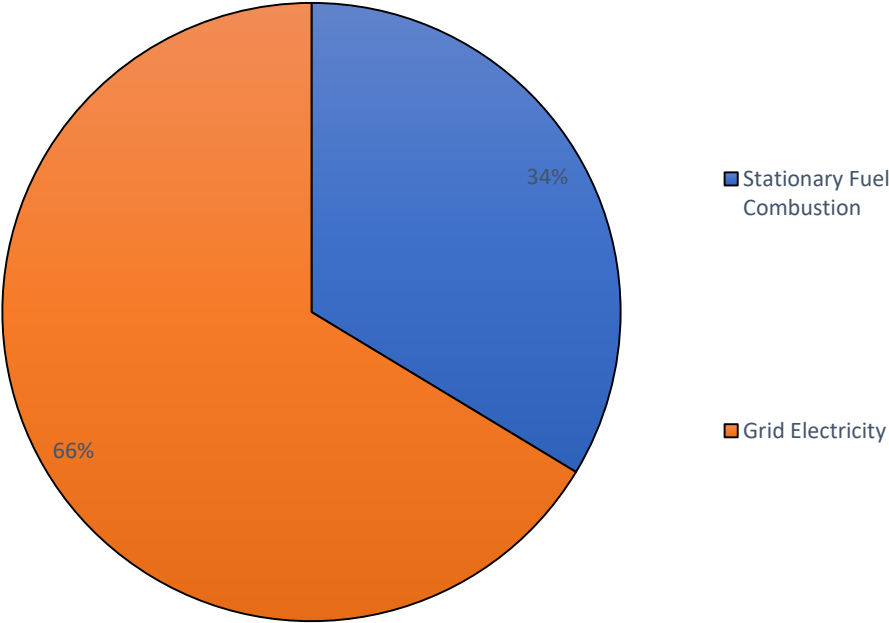
December 1, 2021

2016 Community-Wide Carbon Footprint



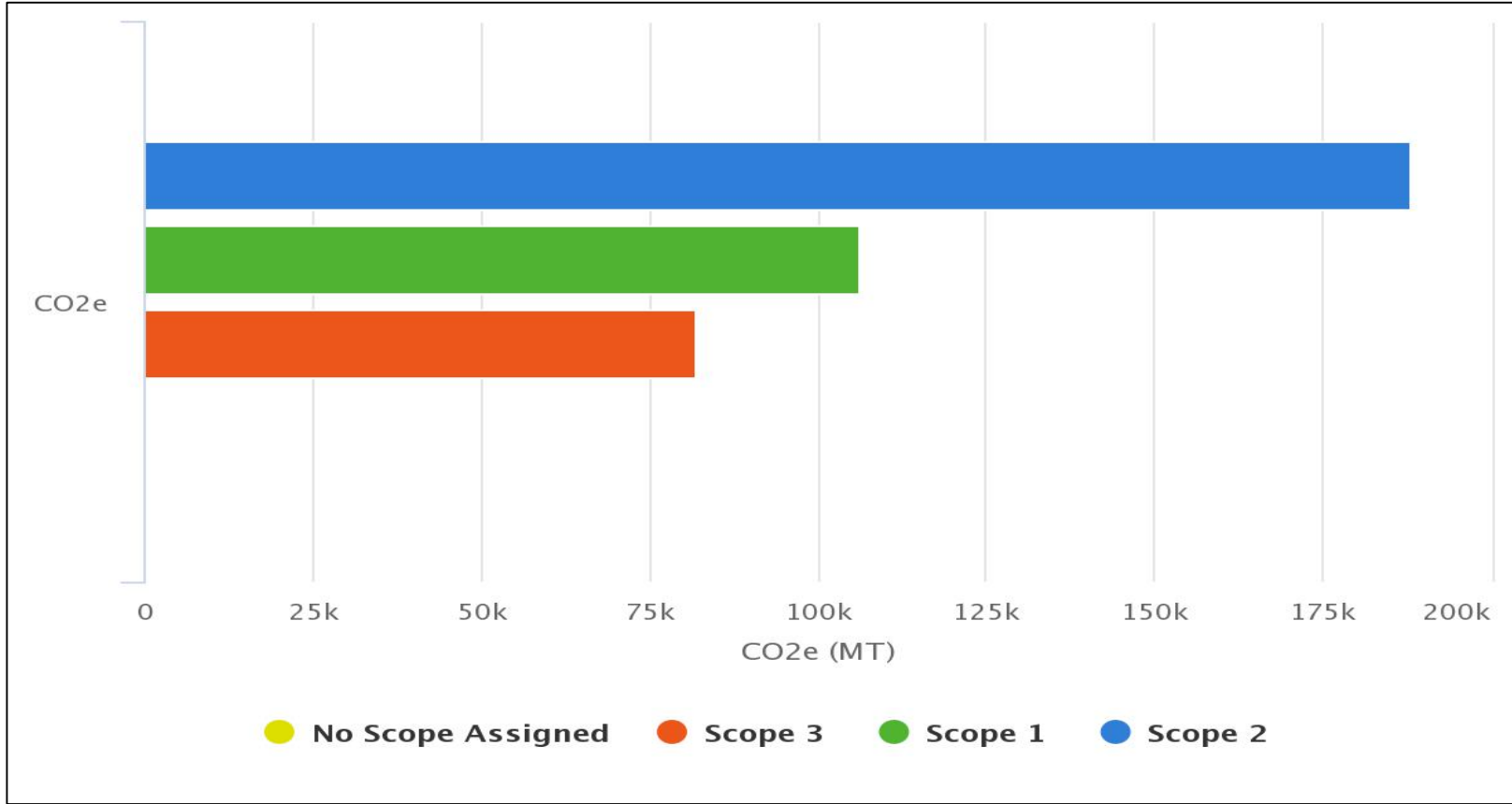
Sector	Metric Tons of CO2 Eq.	Percentage
Commercial Energy	143,240	38.08
Residential Energy	106,575	28.33
Transportation and Mobile Sources	87,636	23.0
Solid Waste	22,671	6.03
Water and Wastewater	11,090	2.95
Agriculture, Forestry and Land Use	4,936	1.31
TOTAL	376,148	

Residential Energy



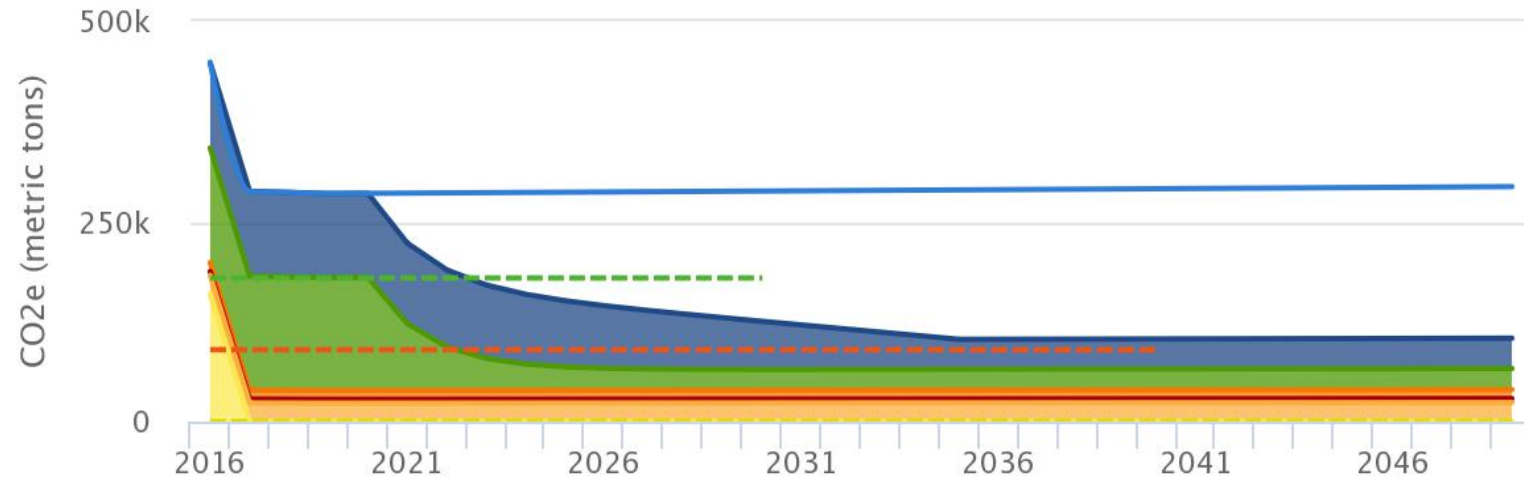
Residential Energy

There was a total of 106,575 MT CO₂ Eq. from the Residential Energy Sector. The Grid Electricity Sub-sector emitted 70,704 MT CO₂ Eq., representing 66.34% while the Stationary Fuel Combustion Sub-sector emitted 35,871 MT CO₂ Eq., representing 33.66%.



Scope	CO2e
Scope 2	187,973
Scope 1	106,169
Scope 3	82,005

Projected CO2e Values With Reductions Applied



- Residential Energy
- Commercial Energy
- Water & Wastewater
- AFOLU
- Solid Waste
- Transportation & Mobile Sources
- Original Forecast
- Short Term Reduction Goal
- Mid Term Reduction Goal
- Long Term Reduction Goal

HIA Overview				
Type	Name	Net Reduction (MT CO ₂ e)	Description	Explanation/Source
Grid Decarbonization	CES	151,604	Clean Energy Standard: 80% reduction in carbon intensity (kg CO ₂ /MWH) by 2030.	General Clean Energy Standard Goal Reduction from grid decarbonization occurs within the 2030 forecast, before other High-Impact Actions are modeled.
High Level VMT Reduction	Aggressive (20% VMT Reduction)	10,550	20% reduction in total VMT	Generic aggressive baseline
On-Road Electric vehicles Adoption	Moderate (4.5% Annual Growth)	8,271	22.5% of VMT is EV by 2030. This action influences an increase in Residential and Commercial buildings electricity emissions	Middleground of BAU and aggressive approaches, https://evadoption.com/ev-sales/ev-sales-forecast/
Commercial Building Efficiency	IECC New + 10% Existing	7,905	All new buildings and 1% of existing sq. ft. (renovations and turnover) will meet IECC 2018 (36.95% reduction in building EUI) & 10% existing sq. ft. (renovations and turnover) EUI is reduced by 20%.	https://www.pnnl.gov/main/publications/external/technical-reports/PNNI-2815.pdf https://www.eia.gov/consumption/commercial/data/2012/c&e/pdr/e2.pdf
Residential Building Efficiency	IECC New + 5% Existing	2,770	All new buildings and 1% of existing sq.ft. (renovations and turnover) will meet IECC 2018 (36.95% reduction in building EUI) & 5% existing sq. ft. (renovations and turnover) EUI is reduced by 20%.	https://www.pnnl.gov/main/publications/external/technical-reports/PNNI-2815.pdf https://www.eia.gov/consumption/commercial/data/2012/c&e/pdr/e2.pdf
Commercial Building Electrification	New Buildings, All Electric	3,650	All new buildings & 1% existing sq.ft. per year are electrified. This action influences an increase in Commercial buildings electricity emissions.	Based on % of building stock experiencing major retrofit or replacement each year. https://www.schroders.com/en/sysglovalassets/digital/real-estate-de/publications/2.-pages-from-property-chronicle-q6_online-2.pdf
Residential Building Electrification	New Buildings, All Electric	5,041	All new buildings & 1% existing sq. ft. per year are electrified. This action influences an increase in Residential buildings electricity emissions.	Based on % of building stock experiencing major retrofit or replacement each year. https://www.schroders.com/en/sysglovalassets/digital/real-estate-de/publications/2.-pages-from-property-chronicle-q6_online-2.pdf