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PLANNING AND BUILDING
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MEMORANDUM

To: Planning Commission

From: W. David Barnes, CSBA, LEED-AP, Senior Planner
Allison Zike, AICP, Deputy Planning & Building Director
Adam Weinstein, AICP, Planning & Building Director

Date: October 9, 2023

Subject: **K2044 Comprehensive Plan Update - Sustainability, Climate and Environment Element Briefing**

Recommendation

Receive a briefing and hold a study session to discuss the Sustainability, Climate, and Environment (SCE) Element, as part of the K2044 Comprehensive Plan (K2044) update. Provide staff with direction to continue preparing the draft K2044 SCE Element code amendments.

Background

The City of Kirkland is in the process of conducting a State-mandated update of the Kirkland Comprehensive Plan with a target completion date of mid-2024 (the State deadline for City Council adoption is December 31, 2024). The Comprehensive Plan is the primary citywide guide for how we, as a community, manage growth over the next 20 years (with a horizon year of 2044) in terms of land use, transportation, and the public facilities and services necessary to support that growth. The Comprehensive Plan also includes goals and policies for how the City addresses housing, sustainability and climate change, economic development, parks and open space, shoreline management, and other topics.

SCE Element: Connection to Sustainability Master Plan

The Sustainability Master Plan (SMP) is a functional plan that was adopted in 2020, and is the primary collection of action items that help implement the goals and policies adopted in the SCE element. Since the SCE element has not undergone an update since adoption of the SMP, this update cycle is intended to synchronize specific SMP action items with SCE Element goals and policies, as the SMP is the most contemporary compilation of the City's policy direction on sustainability and climate. The SMP has eight major focus areas which include:

- Energy Supply and Emissions
- Buildings and Infrastructure
- Land Use and Transportation
- Natural Environment and Ecosystems
- Sustainable Materials Management
- Sustainable Business
- Heathy Community
- Sustainable Governance

There are goals for each focus area and over 200 actions that will be worked on as part of the SMP's implementation strategy over the coming years.

As mentioned above, staff is currently reviewing the adopted SMP to identify goals and/or action items that should be reflected in policies in the SCE Element. There are several SMP focus areas that provide goals and complementary actions that move our community towards electrification, energy efficiency and the reduction in the usage of pipeline gas (also known as natural gas). One in particular is the Energy Supply and Emissions Focus Area which states specific goals and policies below (see Attachment 1):

Goal ES-2: Ensure that purchased energy is 100% carbon-free by 2030

- Action ES-2.1: Establish a plan to have 100% renewable energy for the community by 2030

Goal ES-4: Reduce Greenhouse Gas (GHG) emissions from Vehicles by 25% by 2030

- Actions ES-4.1 - 4.6 are six actions that would help transition the transportation system towards electric vehicles and related charging infrastructure

Goal ES-5: Reduce emissions of pipeline gas and other fossil fuels in all buildings by 20% by 2025 and 50% by 2030

- Actions ES-5.1 - 5.3 would provide education and programs to reduce gas usage and promote electric systems in new construction

State Requirements for SCE Element Update

In addition to the SMP, there are also several requirements related to electrification and reducing GHG emissions contained in approved State legislation such as Second Engrossed Substitute House Bill (E2SHB) 1181[1], which requires jurisdictions to adopt a Climate Change and Resiliency element, and GHG Emissions and Resilience subelements in their Comprehensive Plans. For Kirkland, the legislation sets forth that these new required element and subelements do not need to be adopted until 2029; however, the City intends to incorporate these upcoming requirements into the draft SCE Element. Staff from the Planning & Building and Public Works Departments will work together to implement requirements to update goals and policies in the Transportation Element for emissions and Vehicle Miles Traveled (VMT).

Washington State's Clean Buildings Performance Standard[2] requires buildings to reduce energy use intensity with timelines and stiff financial penalties, starting with buildings larger than 50,000 square feet and ratcheting down from there to smaller multi-family buildings over the next 4-5 years. Many building owners in Kirkland will need to work on reducing their building emissions, including through electrifying their energy systems or otherwise reducing fossil fuel consumption.

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[1] [1]https://lawfilesext.leg.wa.gov/biennium/2023-24/Pdf/Bill%20Reports/House/1181-S2.E%20HBR%20FBR%2023.pdf?q=20231017151451

[2] [2]https://www.commerce.wa.gov/growing-the-economy/energy/buildings/clean-buildings-standards/

When we consider our City's direction on updated or new policies to address electrification, energy efficiency, and reduction in gas and fossil fuel usage, it is helpful to keep in mind the SMP's implementation actions and current legislative requirements.

Study Issues

Throughout 2023, the City Council and Planning Commission (PC) have provided feedback on study issues identified for each of the Comprehensive Plan elements, for consideration as staff goes through the update process. The following list identifies the SCE Element study issues, and the status of work addressing each issue.

1. Analyze impacts on the electrical grid of policies moving the entire community towards electrification and elimination of the use of fossil fuels in homes, businesses, and vehicles, including through the use of public transit (electric buses).

   Staff Update: Staff is currently working to schedule a Council briefing from Puget Sound Energy to address this study issue and understand how the Energy Smart Eastside Heat Pump Program and other PSE programs such as GoElectric, and may impact the electric grid resiliency. The PC will be invited to this Council briefing when it is scheduled.

   Staff has recently met with PSE's Intergovernmental Relationship Manager, Matt Larson, to discuss municipal electrification programs, and how those relate to zoning regulations. We are establishing a staff-level contact so that we are in more frequent contact with PSE and can learn and support each other's programs.

2. Encourage more intense water conservation measures that reduce the impact on our potable water supply and promote the transition to black, grey and reclaimed water supplies for non–drinking water uses.

   Staff Update: Staff has met with Mike Brent, from Cascade Water Alliance (CWA), to discuss their 6-year water supply plan and several existing programs that can enhance our water conservation measures as we explore both Comprehensive Plan policies and program solutions to preserve our long-term water supply.

3. Update policies related to installing charging stations for electric vehicles and bicycles at public facilities, parks, public rights-of-way (adjacent to sidewalks), along major transportation corridors, and near freeway entrances/exits.

   Staff Update: The adopted 2023-2025 Planning Work Program includes a project to consider implementing KZC amendments for this study issue in 2025, but it is noted that stronger policy will need to be incorporated into the SCE, Parks, Transportation, and Land Use Elements. Supportive Comprehensive Plan policies will ensure that we develop KZC amendments that best help us implement additional charging facilities and reduce barriers for station locations that can support a more accessible charging station network.

4. Update climate policies that promote mitigating impacts related to climate change (for example: higher temperatures and more heat days and wildfire smoke days) – required by current legislation.

   Staff Update: This is being worked on now and will be included in the forthcoming draft SCE Element for PC review. The Washington State Department of Commerce will be providing specific guidance on implementing this legislation in December 2023.

5. Update climate policies that make the community more resilient to climate change (for example, this could include more dense tree plantings and promoting the planting of species that can adapt and survive higher temperatures, more cooling centers for vulnerable populations, including providing food, water, and shelter) – required by current legislation.

   Staff Update: This is being worked on now and will be included in the forthcoming draft SCE Element for PC review. The Washington State Department of Commerce will be providing specific guidance on implementing this legislation in December 2023.

6. Incorporate many of the sustainability and environment requirements adopted in the NE 85th St Station Area in the rest of the city (such as minimum thresholds for high-performance buildings, development standards such as the green factor, and environment policies).

   Staff Update: While this study issue can be addressed with stronger citywide policy language in the Comprehensive Plan, staff would like to get feedback from the PC on how to best pursue this with future zoning code amendments.

7. Preserve and enhance the tree canopy and other open spaces to reduce carbon emissions. This is included as a Parks Element study issue but should be addressed in the SCE Element too.

   Staff Update: Staff has updated the draft policies to include several new policies that address this study issue.

Fossil Fuel Policy

Staff provided an overview of community comments regarding the consideration of a natural gas ban for new hookups at the May 11, 2023[3] Planning Commission meeting[3]. Some members of the PC did not support a ban on new gas hookups in Kirkland due to concerns about cost, impacts to businesses, and the ability of the electric grid to handle increased demand. However, several eastside cities intend to incorporate policies into their Comprehensive Plans about transitioning away from fossil fuels:

The City of Redmond has created this draft policy:

[3] https://www.kirklandwa.gov/files/sharedassets/public/v/1/planning-amp-building/planning-commission/k2044-sce-and-parks-briefing_pc-packet_web_reduced.pdf

Move away from fossil fuels as an energy source while ensuring that natural gas facilities are maintained and improved for safety and efficiency.

The City of Issaquah has created this draft policy:

Transition away from fossil fuels to clean, renewable energy sources by expanding local renewable energy generation, consumption, and storage.

We have an opportunity now to update our policies in several elements such as SCE, Utilities, Capital Facilities, Land Use, and Transportation to address our fossil fuel use policy. Staff would like to explore this in a discussion on fossil fuel policy and guidance around study issue #6 regarding incorporating sustainability measures from the NE 85th Station Area on a citywide basis.

Discussion

Staff has proposed language for a fossil fuel policy that aligns with our adopted SMP goals and action items, current State legislation, and Countywide and regional policies. Staff wishes to have clear input before the draft element is created and brought back to the PC for a public hearing. In addition, staff would like to know the PC's thoughts on how we can bring more of the sustainability requirements from the NE 85th Station Area to land use zones citywide to help with future consideration for this study issue. Below, staff has provided directional options around these two major study issues for the PC to review and discuss at their October 25, 2023 meeting.

Fossil Fuel Policy Options:

a. The City in its operations and on a community-wide basis, will significantly reduce its reliance on natural gas and other fossil fuels to meet its greenhouse gas emission targets and create a cleaner, renewable energy future.

b. The City in its operations and on a community-wide basis, will curtail its use of fossil fuels to the greatest extent possible, and evaluate progress annually, with the purpose of meeting stringent emission reduction targets of 50% by 2030, 75% by 2040 and 95% by 2050.

c. The City will prioritize making changes to its operations, retrofit facilities to significantly reduce the use of fossil fuels, and quickly help the community electrify and transition to the creation and use of 100% clean, renewable energy.

In 2023, the City adopted sustainability/green requirements for new projects in the NE 85th Street Station Area (SAP). In the SAP, the City adopted increases to development capacity in exchange for establishing new baseline requirements such as certifying development as high performing and incorporating "green factors". The City also has designated areas (e.g., Bridle Trails shopping center) that also require High Performing Buildings (described in KZC 115.62) and environmental performance standards, and allows additional building height for doing so. In addition, the City has a voluntary High Performing Building Program that expedites the review of building permits in exchange for the development meeting this standard.

Since we have these requirements and voluntary programs in place now, the PC should consider how they would like to see some of these environmental requirements incorporated into the KZC in the future.

High Performing Policy element options:

Below is a menu of policy elements for the PC to consider and opine on. Selected policy elements can be combined together into one or two policies in the Comprehensive Plan that would then provide the foundation for future KZC amendments.

- *SAP programs*. Which SAP green/sustainability programs should be considered City-wide (Green Factor, High Performing Buildings, others)?
- *Speed of implementation*. How aggressive should the City be in requiring these new standards (should we study the issue further or incorporate the standards immediately)?
- *Qualifying projects*. Should all development projects be subject to these new requirements or should only large projects (e.g., projects over 20,000 square feet in gross floor area) be required to meet the new standards? How about major renovation projects?

Next Steps
Staff will incorporate PC feedback and use it to create new policies that will be presented as a draft for review, anticipated in January 2024.

Attachments

1. Energy Supply and Electricity Focus Area (Adopted SMP Excerpt)

ENERGY SUPPLY + EMISSIONS

Goal ES-1 Prioritize community GHG emissions reduction to achieve City Comprehensive Plan and K4C Goals

- **Action ES-1.1** Factor emissions reduction into budget processes and decision making.
- **Action ES 1.2** Work with community members to create public/private partnerships to reduce emissions.
- **Action ES 1.3** Work with King County-Cities Climate Collaboration (K4C) and lobby State Legislature to enact laws to further reduce GHG emissions.
- **Action ES 1.4** Update Kirkland comprehensive plan climate goals regularly to be consistent with updated state and regional goals.
- **Action ES 1.5** Support state or regional clean fuel standard.

2. Purchased Electricity

What is it? The electricity that is supplied for purchase by the local contracted utility, currently Puget Sound Energy (PSE).

Where are we now? Purchased electricity offered throughout the city is 40% **carbon-free** as of 2019 but still contributes 29% of community GHG emissions. Most carbon-free electricity offered by PSE comes from hydroelectric and wind power facilities. The City has secured renewable electricity for City operations via PSE's Green Direct Program.

Existing Policy Support: Kirkland Comprehensive Plan

Policy E-5.7: Pursue 100 percent renewable energy use by 2050 through regional collaboration

Why Carbon-Free?

Carbon-free **electricity sources bring more stable prices and are a cheaper alternative to fossil fuels in the long run because fossil fuels are heavily subsidized. Carbon-free energy is better for air quality and public health as it does not rely on combustion to create energy and helps lower emissions for the entire community.**

Goal ES-2 Ensure that purchased energy is 100% carbon-free by 2030

- **Actions ES-2.1** Establish a plan to have 100% renewable energy for the community, and work with utility provider (currently PSE) and other stakeholders to establish plan.
- **Actions ES-2.2** In conjunction with K4C, ensure that PSE fulfills the State requirements in the Clean Energy Transformation Act. Through engagement with PSE's Clean Energy Implementation process, support projects that enable PSE's ability to meet CETA goals faster.

4. Electrification of Vehicles

What is it? Reduce use of fossil fuels and reduce GHG emissions from mobile combustion by providing the required infrastructure, and expanding use of electric vehicles and charging stations across the City, including at major activity centers.

Where are we now? Mobile combustion makes up 50% of Kirkland's annual Community GHG emissions with a total output of 329,000 MTCO2e as of 2017. There is no policy or code that requires public or private electric charging stations to be built with new private development, although the City has installed several electric vehicle chargers in the Central Business District.

Washington State Code requires certain new construction to be built with electric charging station capability at a ratio of 10% of all required parking stalls.

Electric vehicle charging stations at the Marina Parking Lot in downtown Kirkland.

City of Seattle requires all new homes with off-street parking to be "charger-ready" – wired to support a Level 2 EV charger. Twenty percent of multifamily development parking spaces must be "EV-ready."

Goal ES-4 Reduce GHG emissions from vehicles 25% by 2030

- **Action ES-4.1** Support engagement and partnerships with utilities and organizations to develop regional pilots to incentivize the transition to electric vehicle ownership for all sectors, through development of infrastructure, education, grants and incentives.
- **Action ES-4.2** Enact local code and programs to create incentives or require electric vehicle charging station retrofits in existing buildings or on development sites.
- **Action ES-4.3** Require EV charging stations with all new developments or redevelopment projects at a minimum ratio of one EV charger for 10% of all required parking stalls, and require 20% of required parking stalls to be charger-ready for more EV chargers in the future.
- **Action ES-4.4** Require all new residential (single-family, duplex and townhomes) with offstreet parking to provide one EV-ready electrical outlet per unit and require all multi-family developments to provide EV-ready electrical outlets for 20% of required parking spaces. The electrical outlets shall provide at least one 208/240 volt branched circuit that is ready to connect to an electric vehicle.
- **Action ES-4.5** Support state and regional requirements for electric delivery vehicles and Transportation Network Corporations (TNC's).
- **Action ES-4.6** Develop a policy to establish a revenue source to support electrification of transportation, such as building additional charging stations at city facilities and parks.

ENERGY SUPPLY + EMISSIONS

5. Purchased Pipeline Gas

What is it? Pipeline gas (also known as natural gas) that is supplied for purchase by the local contracted utility, currently Puget Sound Energy (PSE). Many communities are targeting the reduction of pipeline gas to both reduce GHG emissions and to address safety concerns for human health from indoor exposure to pipeline gas, pipeline leaks and explosions, and environmental impacts associated with pipeline gas extraction.

Where are we now? Pipeline gas makes up 21% of Community GHG Emissions and contributes 138,000 MTCO2e annually. There are 23,000 individual gas customers within the City of Kirkland, and 95% of these customers are residential homes which use almost 75% of all pipeline gas in the city.

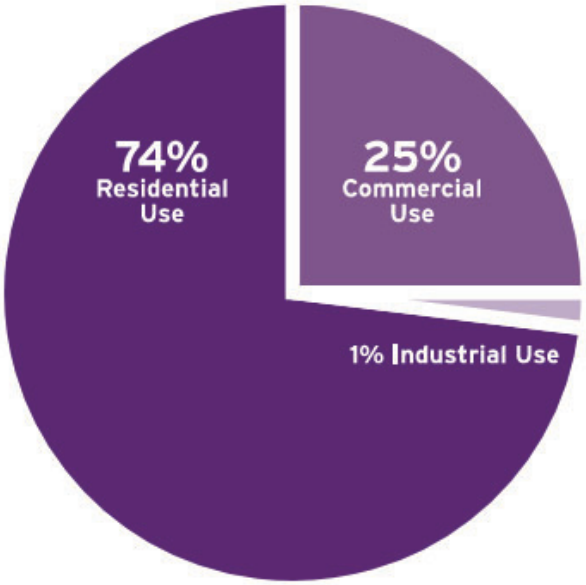

Figure 3. Kirkland pipeline gas usage by user type

Goal ES-5 Reduce emissions of pipeline gas and other fossil fuels from all buildings by 20% by 2025 and 50% by 2030, as compared to a 2017 baseline

- **Action ES-5.1** Establish a public/private partnership to educate gas account users about how to reduce gas usage.
- **Action ES-5.2** Establish a public/private partnership or incentive program to convert existing gas heating systems and other appliances to energy-efficient electric systems.
- **Action ES-5.3** Explore requiring or incentivizing all new construction to be built with only electric systems.