

CITY OF SHORELINE

SHORELINE PLANNING COMMISSION MINUTES OF REGULAR MEETING

March 2, 2017
7:00 P.M.

Shoreline City Hall
Council Chamber

Commissioners Present

Vice Chair Montero
Commissioner Chang
Commissioner Maul
Commissioner Malek
Commissioner Mork

Commissioners Absent

Chair Craft
Commissioner Thomas

Staff Present

Rachael Markle, Director, Planning and Community Development
Steve Szafran, Senior Planner, Planning and Community Development
Miranda Redinger, Senior Planner, Planning and Community Development
Carla Hoekzema, Planning Commission Clerk

Others Present

Alicia Daniels Uhlig Uhlig, International Living Future Institute
Ellen Southard, Salmon Safe
Leah Missik, Built Green

CALL TO ORDER

Vice Chair Montero called the regular meeting of the Shoreline Planning Commission to order at 7:00 p.m.

ROLL CALL

Upon roll call by the Commission Clerk the following Commissioners were present: Vice Chair Montero, and Commissioners Chang, Maul, Malek and Mork. Chair Craft and Commissioner Thomas were absent.

APPROVAL OF AGENDA

The agenda was accepted as presented.

APPROVAL OF MINUTES

The minutes of February 16, 2017 were adopted as presented.

GENERAL PUBLIC COMMENT

There were no general public comments.

STUDY ITEM: CERTIFICATION PROGRAMS FOR DEEP GREEN INCENTIVE PROGRAM

Staff Presentation

Ms. Redinger reviewed that the Commission forwarded its recommendation to the City Council regarding the Deep Green Incentive Program in January, and the City Council will hold a study session on March 27th. Following its recommendation, the Commission requested specific presentations about the Living Community Challenge, Leadership in Energy and Environmental Design (LEED) Platinum, Built Green 5 or Emerald Star, and Salmon Safe Programs to provide more information to the Commission, the City Council and the public. She advised that tonight's presentations are from representatives of the International Living Future Institute (ILFI)/Cascadia Green Building Council (CGBC), Built Green and Salmon Safe.

Living Community Challenge (LCC) International Living Future Institute (ILFI)/Cascadia Green Building Council (CGBC)

Alicia Daniels Uhlig Uhlig, ILFI/CGBC introduced herself as the current Director of the Living Community Challenge. She explained that the Cascadia Green Building Council (CGBC) is a local chapter of the United States Green Building Council. She explained that LEED is a green building rating system that has significant roots in Washington State; and this year, Washington was ranked 9th in the nation for number of projects pursuing LEED. In fact, public projects in Washington State are mandated to pursue LEED Silver or better. She said the beauty of the LEED Certification Program is in its concise framework; it is both practical and measurable. It deals with building design and construction, as well as an element of operations and maintenance.

Ms. Daniels Uhlig said the reason project teams choose to pursue LEED Certification is that it can save money, consume less energy, and be more water and materials efficient. There are also benefits to indoor environmental quality (light and air). Green buildings, in general, use less energy, produce carbon emission reductions (to help with climate goals), use less water, and significantly less solid waste goes into the landfills.

Ms. Daniels Uhlig explained that LEED started with Version 1.0, but as the aspirational targets became very normal within the marketplace, they were reviewed and increased for efficiency. LEED is now embarking on Version 4. The system goals focus on reducing global climate change, improving human health, protecting and restoring water sources, looking at biodiversity and ecosystem services, promoting sustainable and regenerative materials, looking at the green economy and enhancing community and quality of life. The intent is that 35% of the program should address climate change and 20% should address human health. The LEED programs address design based on the following categories: location and transportation, sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, and innovation. The elements of the program are then weighted based on regional priorities. For example, stormwater goals in the Pacific Northwest are given additional weight.

Ms. Daniels Uhlig advised that LEED is generally looking towards a variety of research to show the positive benefits of its programs. For example, studies have found a positive correlation between

improved indoor environmental quality and human health, productivity and attendance. This scientific information can be found on the United States Green Building Council's website.

Ms. Daniels Uhlig reviewed the LEED rating systems (certified, silver, gold and platinum), which are based on a certain number of points. She referred to the checklist that is used to evaluate each project, noting that there are a variety of mandatory items, as well as options that a developer can choose from. Project review is based on 3rd party verification.

Ms. Daniels Uhlig advised that there are a variety of different rating systems within the LEED family. For example, LEED for Building Design and Construction is for residential and commercial office building development, as well as tenant improvements, and operations and maintenance. LEED for Neighborhood Development addresses a variety of neighborhoods (commercial, residential, mixed-use) and is based on the idea of people who are looking for neighborhoods with abundant sidewalks and other pedestrian friendly features. She said LEED addresses all types of buildings, and is intended to market a variety of different healthy, inclusive and smart buildings. She pointed out that LEED has certified over 34,000 projects (5 billion square feet), and platinum projects represent about 10% of that total number. She shared examples of LEED Platinum projects that have been done in the Pacific Northwest, including the Shoreline Recycling and Transfer Station and Salishan Area 7 (a Tacoma Housing Authority project). She also provided examples of Living Building Challenge (LBC) projects, including the Bullitt Center in Seattle, Phipps Conservatory in Pittsburg, Desert Rain House (a single-family residence) in Bend, Oregon, the Birch Tree Academy (a science addition) in Seattle, the Eco-Sense Residence in Victoria, B.C., and Painters Hall in Salem, Oregon. She also referred to the Titan Office Building in Seattle, which is currently pursuing the Living Building Pilot and Salmon Safe Programs.

Ms. Daniels Uhlig explained that the main programs the ILFI oversees are the Living Building Challenge (LBC), Living Community Challenge and the Living Product Challenge (LPC). The ILFI's core mission is to create socially just, culturally rich, and ecologically restorative communities. In addition to providing a certification program, implementing the ILFI's mission requires a lot of advocacy about how to incentivize projects to come to communities. Ms. Daniels Uhlig reviewed that the LBC Program looks at regenerative or restorative type projects. While cities typically have codes that mitigate negative impacts, the intent of green building programs is to aim for a positive contribution. The challenge is about inspiring catalytic projects and rewarding early adopters.

Ms. Daniels Uhlig advised that the Living Community Challenge (LCC) is about a new model for community building. The intent is to reinvent neighborhood urban design to create the type of neighborhoods that are desired. When talking about the LCC, the ILFI uses the metaphors "nature" and "forest." The program requires that projects are rooted in place and very unique to the culture. It needs to be adapted to the climate and site. It must harvest all of its own energy from renewal sources and manage all of its own water on site. It also needs to be beautiful. The LCC can work well at the neighborhood scale, with a variety of engagement, process, and protocol. Like the LBC, the LCC also has 7 environmental petals (place, water, energy, health/happiness, materials, equity, and beauty) and 20 imperatives. Some of the petals have just one imperative, and others have a number of imperatives. For example, the Place Petal looks at whether the project is on a previously developed site and if there is an urban agriculture component. The Human-Powered Living Petal looks at multi-modal transportation and choices for people and the Water Petal requires that a community harvest all of its own rainwater for

potable water and manage all of its stormwater 100% on site. The Energy Petal deals with net positive energy, which means the community generates from renewable resources, without combustion, 105% of its annual energy use. She summarized that four imperatives are completely unique to the LCC, and the others are the same as in the LBC, but they have been tailored to the larger community scale.

Ms. Daniels Uhlig said LCC certification is very similar to the LBC. There is a net-zero certification pathway for a community that is focused just on supplying 100% of its renewable energy resources on site. The petal certification requires three or more petals, one of which must be water, energy and materials. Living Building certification requires a project to meet all 20 of the imperatives. The LCC addresses new master-planned, urban-infill projects, as well as existing neighborhoods. The types of communities that are using the LCC framework includes teams who want to use it for their comprehensive planning, various neighborhood planning efforts, major grey field redevelopment, university campuses, eco-villages, etc. It addresses all types of density and all types of scale.

Ms. Daniels Uhlig summarized that a LCC project must include at least two buildings, some public open space, and a multi-modal street. The LBC focuses on one particular site, and the LCC is used when more than two sites are aggregated together. She said the LCC started in mid 2014, and there are now six registered communities and 40 more that are currently exploring the program. For example, the North Rainier/Mt. Baker Hub is a community group that got together to crowd source their registration fee. They are currently pursuing the LCC in their neighborhood planning effort.

Commissioner Mork asked how much money is involved with registering or obtaining LCC certification. Ms. Daniels Uhlig said the LCC has a basic registration fee of \$1,200, and it also requires a LBC membership. With that fee comes access to staff for questions about how to implement a particular imperative. The fees are broken out on the ILFI's website. Because community-scale development typically requires a much longer timeframe, the process is tiered. Once a community comes together to set goals and explore strategies, review for vision plan compliance is required with an associated fee. There is also a review fee for master plan compliance. Certification is based on 12 months of actual performance, and there is also a final certification fee.

Commissioner Mork said she is trying to understand how much more an LCC community costs versus a traditional community, and if incentives are needed. Ms. Daniel answered that the LCC is similar to the LBC. Communities are essentially their own water and electric utility, and they use the best-in-class non-toxic materials. As there are more LCC and LBC projects, there will be an uptake in the market. While the initial, upfront costs will be more, it is important to consider the long-term payout for buildings that will last 100 years, without the typical operation and maintenance costs. She agreed to provide the findings from a study that was done to compare the dollar value of an LBC project to the market rate. Commissioner Mork agreed that would be helpful for people to understand the need to incentivize LCC and LBC projects. Currently, the upfront costs are a hurdle.

Commissioner Malek said he recently talked to a few builders who are engaged in green building. He learned that, at this point, it is so early on that it is hard to characterize the costs and benefits. A lot of time is required to design green projects before construction can even start, and many of these start-up costs are missing from the numbers. Currently, developers are doing the projects more for a cause. Ms. Daniels Uhlig explained that, as green building has become more popular, the design process has

become less time-consuming. For example, there is now a label for building materials to declare whether or not they contain chemicals that are on the “red list” and banned from use in LBC and LCC projects. What used to take 100s of hours for vetting products, a developer can now use a free on-line data base.

Commissioner Chang asked how often LEED changes its versions. Is it based on a regular schedule or when it is determined there have been enough technical changes to warrant an update? Ms. Daniels Uhlig said it varies, but it is generally on a three-year cycle.

Vice Chair Montero referred to the positive correlation between green building and productivity/attendance. He asked about the drivers of this correlation in the LBC and LCC. Ms. Daniels Uhlig said two major factors are daylight and views. There are school studies that identify the benefits of daylight, and hospital studies that talk about how views of nature decrease the length of hospital stays. There are also cognition studies that indicate the impact of indoor air quality on productivity.

Commissioner Malek asked where the ILFI stands on nuclear energy. The concept is there for a completely enclosed reactor that can be scaled to run a city block or a community, and studies show it is the greenest type of energy. Ms. Daniels Uhlig said nuclear energy does not have issues relative to carbon, but it does have a negative impact from the residual fuel that is left over. None of the ILFI challenges allow combustion of either fossil or nuclear fuels.

Commissioner Chang clarified that net-zero energy does not mean that a building is not connected to the grid at all. Ms. Daniels Uhlig explained that utilities are looked at over an annual basis. She recognized that a project would produce more energy in the summer and less in the winter. However, the net annual basis must be at least 105%. Commissioner Chang asked how the ILFI deals with shadowing when buildings are at different heights. Ms. Daniels Uhlig said that is definitely something the design team must look at to maximize solar exposure. If a building is completely in the shade of a taller building, there is a mechanism called scale-jumping that allows a project, under certain circumstances, to go beyond the project site. When dealing with the LCC, you are looking at an average of all buildings with the neighborhood boundary. Various communities are also looking at adding provisions to their code to deal with solar rights and access issues. Ms. Redinger recalled that the City recently conducted a Solarize campaign, which provided some anecdotal information about shading. That is one reason for a height bonus potential in zones that allow 45 feet or more in height.

Commissioner Mork asked what is meant by the term “biophilic environment.” Ms. Daniels Uhlig said it has to do with nature and space. Biophilia is the love of nature, and there are positive health benefits (both mental and physical). A biophilic environment is about bringing the patterns of nature into the built environment.

Director Markle asked how large a reservoir would be required to supply all of the water that is needed. Ms. Daniels Uhlig answered that with the LBC, it would depend on the density and occupancy of the project. The beauty of the LBC is that it allows buildings in the community that have both high and low-water needs to share cisterns. Working within a water budget is important. You must maximize your efficiency first, and then collect as much as you can.

Salmon Safe

Ms. Redinger emphasized that Salmon Safe is required as a partner certification with the Net Zero Energy Program, which is an ILFI Program that deals with energy.

Ellen Southard, Salmon Safe, said the Salmon Safe certification program focuses on site performance. Salmon Safe is a biology-based, third-party certification program, and its assessors are mostly scientists. It was founded by the Pacific Rivers and American Rivers Foundations initially to support and reward farmers and vineyards for stewardship of the land. Over time, it moved into developing a standard for entire park systems and municipalities. Salmon Safe also does urban sites and university campuses, residential development, golf courses, etc. It has a contractor accreditation program, a new pilot program for developers, and a new standard for green communities and infrastructure.

Ms. Southard explained that Salmon Safe's standards are based on 10 principles, and the impetus is to get urban and rural sites as close as possible to pre-development standards and how nature intended the sites to be. She said Salmon Safe works closely with King County in terms of flood plains management, and it was part of the Flood Plains by Design Program with Puget Sound Partnership.

Ms. Southard said the Salmon Safe assessment process is fairly simple. A pre-assessment meeting is conducted in preparation for support of a larger scale site assessment. It does a lot of comprehensive work in terms of reviewing benchmarks for existing sites and sites that are being retrofitted. A comprehensive review of documentation is done for new site development. After a site assessment with a group of scientists, Salmon Safe creates a report of findings and recommendations, and the landowner agrees to meeting a series of conditions that are based on the recommendations. The program is a 5-year certification, which identifies closely with the fiscal planning of Salmon Safe clients. They know that, where stormwater is concerned, there is an investment in terms of infrastructure and potentially bio-engineering. In particular, Salmon Safe looks for un-engineered projects such as bioswales, rain gardens, etc.

Ms. Southard continued by explaining that, once a landowner accepts the conditions and recommendations, the program moves to a publicity and recognition campaign. This includes an annual review of project activity and reporting, and Salmon Safe's science team is on call for the entire 5-year period. There is a 1-time fee for the program, including support for publicity and recognition.

Ms. Southard provided an example of an assessment that was done for the REI Distribution Center and Headquarters in Kent, and described the makeup of Salmon Safe's assessment team. She said the intent is to fill the gap in terms of urban ecology and site performance. Whereas green building programs have made incredible strides over the past 20 years to bring in energy and materials and a higher level of understanding, there still seems to be a lot of gaps in terms of site ecology. Salmon Safe helps to fill that gap. She provided a copy of a gap study that was funded by the King County Flood District, which compares all of the standards that have site components, including LEED, LBC and Built Green. The document shows how Salmon Safe complements the other standards.

Ms. Southard said the Salmon Safe program applies to both rural and urban habitats. It considers the receiving bodies and identifies protections that are needed for in-stream habitats. It addresses riparian and wetland protection, stormwater design, water conservation, erosion and sediment control, integrated

pest management (IPM) and nutrient containment. She explained that IPM is a requirement of every Salmon Safe project. Although organic pesticides and fertilizers can be used at times, Salmon Safe will review landscape maintenance plan and work with the contractor to create a mini IPM plan for urban projects. Salmon Safe should be thought of as an added long-term consultant to a project.

Ms. Southard said Salmon Safe works with a number of clients who are leaders in the northwest, including Nike, Vulcan, REI, Children's Hospital, Google, University of Washington, King County and the Port of Seattle. She briefly described how Salmon Safe works specifically with the University of Washington on a number of projects. She shared examples of projects in the region that are Salmon Safe certified, including the Port of Seattle, REI, Department of Ecology, PCC markets, and a number of low-income housing programs. She particularly noted the Olympic Sculpture Park beach restoration project, which has been a huge success. Other projects that Salmon Safe is involved in include the Children's Hospital master plan, golf courses, SeaTac airport, new trail systems in King County, and Seattle Public Utilities new headquarters at the Cedar River Watershed.

Ms. Southard said Salmon Safe is different than other certification projects because it offers an accredited training program for contractors. Contractors commit to zero sediment runoff wherever they work. This includes all sites, whether an NPDES permit is required or not. A number of institutions have committed to only working with Salmon Safe contractors, including Vulcan, Nike and REI. They are also working with public institutions where there would be a reduced NPDES permit fee for contractors who have gone through the accreditation process. Although the private sector has rebounded from the recession fairly well, governments have not. Some are looking at Salmon Safe to provide the monitoring process where they don't have full-time employees. During the recession, standards for stormwater compliance were elevated at a national and state level, and there is not enough compliance monitoring on the part of these agencies. They are looking to Salmon Safe for monitoring systems and annual reports to help fill that gap.

Ms. Southard said Salmon Safe has had a lot of success working with Vulcan, which has committed to doing all of its sites Salmon Safe certified. Vulcan has also decided to become the first Salmon Safe developer in the world, and Salmon Safe is going through a very rigorous process to train a development corporation how to make the kinds of decisions that will get to zero impact on a watershed and how they can manage their contractual obligations for long-term management and operation of sites that they may not own.

Ms. Southard reviewed specific elements of several Salmon Safe Certified projects, including a Habitat for Humanity Project called the Woods at Golden Given, which is a great example of how infrastructure can go beyond site performance; the Google Campus where food is grown on site; a project at 34th and Troll Avenue, which voluntarily takes the stormwater off of the Aurora Bridge; and redevelopment of an old gravel pit in Issaquah Highlands, which is a great example of how a master plan can be transformed to better address stormwater runoff by using rain gardens, green roofs, cisterns, bioswales, etc. Salmon Safe is also working with SeaTac Airport, which has now become Salmon Safe Certified. All of the land between the runways are bioswales, and they have established some very high performance benchmarks for water conservation.

Ms. Southard said Salmon Safe is a regional program, and it has done over 1,000 sites with the City of Portland. It has a new incentive with Thurston County PUD that offers Salmon Safe Certified sites 20%

off utility bills for the first two years. It is working with Thurston County and the City of Olympia to develop a new program that is specific for small-scale contractors and home builders. The City of Redmond has adopted Salmon Safe for an extra floor area ratio, and it is now an identified tool for the Portland Eco-districts, as well as the Seattle 2030 District. It has been recognized as a tool by the Regional Code Collaboration, and the Department of Ecology and Puget Sound Partnership have built Salmon Safe into their new near-term action plans. Salmon Safe is also partners with King County's recycled water utility.

Ms. Southard said Salmon Safe provides some level of educational campaign to every client. For example, the City of Portland is doing bus-side advertising, and Vulcan has an extensive public information campaign. Some of the benefits of Salmon Safe Certification include independent validation of an environmental performance standard, operational efficiencies, LEED innovation credit, on-call help for an entire 5 years, communicating with regulators on behalf of the clients, and positioning clients as environmental leaders. She shared examples of several different advertisements Salmon Safe has done in conjunction with its clients.

Commissioner Chang asked how the Salmon Safe Program would be applied to single-family residential homes. Ms. Southard answered that it would not likely apply to single-family homes, as it would not be cost efficient. However, they have recently heard from the Department of Ecology about a cluster of homes in Woodinville that would like to work towards a Salmon Safe Community.

Vice Chair Montero asked if the certification fee varies between projects. Ms. Southard answered affirmatively. She said the fee also varies depending on funding. For the past few years, a private foundation has provided incentives for first time developers. The costs can be offset based on whether or not that funding is available.

Commissioner Chang asked what happens to Salmon Safe Projects after the 5-year period has ended. Ms. Southard answered that clients can renew after the 5-year period has expired, and the fee would be substantially smaller. She said Salmon Safe is constantly looking at benchmarks and working with clients to incorporate innovative concepts to solve problems.

Director Markle asked if Salmon Safe does outreach to golf courses and campuses to get them interested in their program, or do most of the clients come to them? Ms. Southard answered that it is a little of both. Salmon Safe is not a membership organization, so outreach is important.

Director Markle asked what the Red Hook Brewery does with the "purple pipe water." Ms. Southard explained that, currently, King County Recycled Water is doing a study on how to reuse some existing lines. The idea is that Red Hook would use the recycled water for cleaning and irrigation. In addition, Salmon Safe is working with Red Hook on restoration work, an IPM Plan, and water conservation goals. They are creating a partnership with Chateau St. Michelle. Getting the utility going at the same time would result in a cost savings for private land owners, as well as King County.

Built Green 5 Star or Emerald Star

Leah Missik, Seattle, Built Green, Program Manager, explained that Built Green is a regional home certification program. It operates in Washington State, certifying residential buildings only. The program is housed within the Master Builders Association so it can utilize them for events and help with marketing.

Ms. Missik reviewed that the program started in 1999 and has grown tremendously since that time. Currently, the program has captured 50% of the new single-family home market in Seattle. Over 17,000 projects have been serviced, with just over 1,000 in 2016. The program is holistic and looks at a number of environmental factors. It is also a tiered program (3-Star, 4-Star, 5-Star and Emerald Star). Built Green's philosophy is to get builders on board and then ramp them up in terms of rigor. The lower levels require 15% energy efficiency above code, as opposed to Emerald Star, which requires net-zero energy. She emphasized that all of the star levels require a 3rd party verification, and verifiers are adept in building science and energy modeling. They inspect the sites multiple times and provide an extra level of rigor. She provided a graph to illustrate how the Built Green Program has grown over time, as well as the shift in the star level dynamics. Early on, the 3-Star certification was the most common. But after the City of Seattle introduced its floor area ratio bonus incentive and its priority green permitting programs for 4-Star Certification, 4-Star became the most common certification level.

Ms. Missik referred to the checklist that is used for certification, noting that the categories include site, water, energy efficiency, health and indoor air quality, materials efficiency, operations and maintenance, and homeowner education. The certification types include single-family buildings, multi-family buildings, remodels, retrofits and communities. She explained that a community certification is when all projects in a development are Built Green certified individually, and then there are additional steps taken to enhance the community and neighborhood. The 5-Star Community Certification requires Salmon Safe Certification.

Ms. Missik provided a picture of the YWCA development in Issaquah, which was the first 4-Star multi-family certification for Built Green. It is also affordable housing. There was a real effort to integrate the two campuses together, including a lot of interpretive signs and a flow of water between the two sites. Salmon safe was involved in the project, as well.

Ms. Missik explained that Built Green is a membership program, and membership is separate from the Master Builders Association. Builders must be members in order to enroll a project in the program. Builders are required to pay a project fee, which covers Built Green's administrative costs. The fee depends on the building type and whether or not the builder is a member of the Master Builders Association. The average cost is between \$50 and \$150 per unit. A builder must also hire a 3rd-party verifier to verify the project. The verifiers have their own expenses and Built Green does not set these costs. The verification costs depend on the builder's experience with the program, project type, location, and how many additional services the builder wants. A good estimate for a single-family home ranges from \$100 to \$1,200. While a project is being built, the verifier makes multiple site visits at different points of time. They also help builders gather all the documentation Built Green will need to certify the building. In addition, the verifier does the energy model for Built Green.

Ms. Missik advised that after a project is built and the builder has signed the checklist, the verifier will submit a package to Built Green. Built Green will then review the package as another check to make sure everything the builder claimed he/she did has some element of proof attached. Then the project becomes

certified. In order to check the green box, you must provide a certificate to ensure that a builder is not just saying that a project is green when it is not true.

Ms. Missik said that, to date, there are 56 Built Green Certifications in Shoreline, and they include all project types, including 5-Star Certification. Most of the projects are single-family homes, but there are also a few large, multi-family projects. She highlighted the Fish Singer Place Development, which was built by Martha Rose Construction. The four single-family homes achieved both 5-Star and Community Certification. Martha Rose Construction also built the Queen City Eco-Village, which has three, 5-Star homes and a 5-Star remodel of the existing carriage house. It also received 3-Star Community Certification.

Ms. Missik explained that the Built Green Checklist is similar to the LEED Checklist, in that there are some base level requirements. In order to hit 5-Star, you must do a handful of requirements. On top of that, you have a menu of items you can choose from. The items get points based on their environmental impact, and the points are totaled up to get a score. The 5-Star checklist requires that projects be modeled at a minimum of 30% better than energy code and prewired for solar photovoltaic (PV) installation. The combination of these two requirements means that the projects will be net-zero energy ready. The checklist also requires a builder to use a minimum of 10 recycled-content materials, one-third or more of the hardscape area has to be pervious, and you have to use low volatile organic compound (VOC) and low toxic paints. In addition, a builder must achieve 100 points in each individual section (site, water, energy, air quality and materials) and 600 points total. The program allows for flexibility, depending on the project's context, while still maintaining a high level of rigor.

Ms. Missik said Built Green is almost ready to publish a study it did comparing the energy consumption of Built Green homes that were constructed in 2014 to non-certified homes. They were pleased to find that all-electric 5-Star homes were 41% more efficient than non-certified homes that were built to code. This is 11% better than the minimum 30% that Built Green would expect. This evidence supports the modeling protocol. She provided a picture of a Built Green 5-Star home that was recently built and described some of its features.

Ms. Missik advised that Emerald Star is Built Green's highest certification level and has its own checklist. The highlights of the requirements include: located within a half mile of five essential services, net zero energy, a signed waiver to share utility data with Built Green, a blower door test with a score of 2.4 or better, a 70% reduction in occupant water usage compared to the average Washington resident, 100% infiltration for single-family or 50% for multi-family, a minimum of 20 components with environmental attributes (recycled material, rapidly renewal, salvaged, etc.), 90% of wood must have environmental attributes, all non-toxic materials must be used, and an HRV system (heat recovery ventilator) must be provided. She reviewed the following examples of Emerald Star Homes:

- The zHome Project in Issaquah Highlands was done via a partnership between the City of Issaquah, King County, Built Green, Salmon Safe, Puget Sound Energy, and the builder. An innovative land deal was brokered whereby the builder received the land for free, but was required to build market-rate townhomes that were net zero energy, achieved a 70% reduction in water use, and other rigorous factors. Although the land was free, it was a struggle for the

builder to break even on some of the homes at market rate. This illustrates the kind of help builders need in order to develop groundbreaking projects.

- The builder behind the Ballard Emerald Star project has committed to doing all Built Green 5-Star homes throughout his many projects. The Ballard Emerald Star project will be his 100th project and the 1st Emerald Star project in Seattle. There was a significant learning curve to move from 5-Star to Emerald Star. For example, 90% of wood must be certified by the Forest Stewardship Council (FSC) or salvaged or recycled. This is a rigorous requirement since it even includes the framing package. The first quote was for twice the price of what their normal framing price would be. Built Green worked with them to find a supplier in Oregon that provided the framing package with just a 30% to 40% markup. She said she does not believe the builder made much money on the project. He did it because he is passionate about building green.

Ms. Missik reported that post-occupancy checkups on the two projects indicate they are performing as anticipated. She has done interviews with homeowners in the projects, and they are all very happy, as well.

Ms. Missik summarized that Built Green exists to improve environmental outcomes. Her master's degree is in environmental policy, and that is what she cares about. If the program does not provide an environmental benefit, there is no point in its existence. She provided infographics to illustrate the results of research done by the City of Seattle. Although it is outdated now, it shows that Built Green's portfolio saved over 20 million pounds of carbon emissions and the energy savings would amount to the same output as a 250-acre solar farm. The water savings would be enough to fill up the Columbia Tower each year. Based on newer research on homes built in Seattle in 2014, the carbon reduction of a 5-Star home is about 1,200 pounds per year compared to a non-certified home. This provides a big boost to governments that are trying to meet carbon emission reduction goals.

Ms. Missik said other benefits of Built Green Certification include healthier living and lower utility bills. On a neighborhood scale, Built Green gives credit for sites that foster community and are transit-oriented. She concluded her presentation by pointing out that Built Green is a combination of rigor and reward. When certifying projects, Built Green puts its logo on them to help the builders market themselves. They also provide education for builders and other people in the industry. She emphasized that 5-Star and Emerald Star Projects require a lot of additional cost and effort and builders need to be committed to their development. Because the homes have a positive impact on the community and their own residents and help municipalities meet their goals, development that meets the higher levels of certification deserve a reward. This approach offers a win/win for the community, the builder, and the government.

Vice Chair Montero asked if half of the homes that are currently being built in Seattle are Built Green. Ms. Missik answered that more than half of new residential construction is Built Green Certified. This is largely because of the incentives that Seattle has put in place. Commissioner Mork asked Ms. Missik to clarify the incentives offered by the City of Seattle. Ms. Missik answered that there are two main ones. The floor area ratio incentive offers a bonus that is based on zoning. It allows developers to build a bit bigger, higher, or closer to the lot edge than a non-certified building. This is a popular incentive in areas where Seattle is trying to increase density in the urban core. Priority permitting offers fast-track permitting for projects that are registered with Built Green. This is a big reward, given Seattle's permit

backlog. Once a project is certified, the builder must furnish proof of certification or a pretty hefty fine is imposed.

Commissioner Chang pointed out that the floor area ratio incentive simply allows homes to be larger. It does not allow a greater number of units on a lot. Ms. Missik said it can also allow additional units for multi-family development. Ms. Redinger clarified that this means there isn't a density bonus for single-family development, but it does equate to a density bonus for multi-family zones.

Director Markle asked if many jurisdictions have mandatory programs. She noted that the City's current program is mandatory to 4-Star in the Light Rail Station Subareas. Ms. Missik said there are some mandatory programs. For example, all of the projects in Issaquah Highlands must be Built Green. Other jurisdictions have taken a similar approach as Shoreline and required Built Green in transit corridors. However, she does not know of a City that has required Built Green for all new construction.

Director Markle reviewed that the City's Deep Green Incentive Program offers an incentive for development in single-family residential zones, and some citizens have voiced concern about what happens if the incentive is approved but the end product does not meet the certification requirements. As described by Ms. Missik, a 3rd-party verifier would inspect the project throughout the process. This would allow the City to have sufficient information to stop a project, if necessary, before development progresses too far. Ms. Missik said a key component is the 3rd-party verifier, who is involved with the developer from design. There are checks in place that could be utilized early on. She said she has never had a project fail that enrolled to achieve Emerald or 5-Star Certification.

Commissioner Chang asked how many projects the City might expect to see for 5-Star and Emerald Star single-family development given the density bonus. Ms. Missik said it is difficult to estimate. It would be awesome if there were a few Emerald Star projects; but given the incentives that are in place in other areas, that is not likely in Shoreline. The 5-Star Certification is more achievable, and there are already five in Shoreline. While the City's incentive program will be a boost, she does not anticipate a significant number of projects.

Commissioner Chang asked if Built Green updates its program requirements on a regular basis, and Ms. Missik answered that the programs are updated on a 3-year cycle to stay above energy codes.

Ms. Redinger announced the following workshops:

- Thursday, April 13th – “The Power of Zero.” Brad Liljequist, ILFI Net Zero Program Director, will present case studies and showcase examples from around the world.
- Thursday, May 11th – “Emerging Technologies and Concept Projects.” Walker Leiser, Living Technology Consultant will discuss earth harmony habitats, which is a concept design that is net positive with regard to energy, water, and food.
- Thursday, June 8th – “Salmon Safe Program.” Ellen Southard will be present to provide additional information.
- Tuesday, July 25th – “Feasibility Study for District Energy.” This will be a public participation component of the project. The intent is to time this with City Council discussions. Tom Puttman,

from Puttman Infrastructure will make a presentation about block neighborhood scale systems and various options for combined heat and power.

The events will be recorded, and Commissioners are invited to attend.

DIRECTOR'S REPORT

Director Markle did not have any items to report.

UNFINISHED BUSINESS

There was no unfinished business.

NEW BUSINESS

There was no new business.

REPORTS OF COMMITTEES AND COMMISSIONERS/ANNOUNCEMENTS

Vice Chair Montero reminded the Commissioners of the Strategic Planning Workshop with the City Council on Friday, March 3rd, from 12:15 to 2:45 p.m.

AGENDA FOR NEXT MEETING

Director Markle announced that at the next Planning Commission meeting on March 16 we are discussing the Park Impact fee proposal; the Parks, Recreation and Open Space Plan goals and policies, inventory, demand, and needs analysis. Comprehensive Plan amendments on the docket; and one more green building presentation from Passive House.

ADJOURNMENT

The meeting was adjourned at 8:51 p.m.



William Montero
Vice Chair, Planning Commission



Carla Hoekzema
Clerk, Planning Commission