HILLCREST REDEVELOPMENT SUSTAINABILITY WORKGROUP

Meeting Minutes | Friday, February 25, 2022

Attendees

- John Metza
- Rebecca Nelson
- Chelsea DeArmond
- Ian Houmas
- Mike Hirabayashi
- Matt Doll

Keeli Siyaka

- Monte Hilleman
- Andrea Novak
- Becky Alexander
- Tiffani Navatril

Meeting Summary ACTION ITEMS

	DESCRIPTION	ASSIGNEE
1.	Email images and descriptions of inspirational sustainability measures to Tiffani, Becky, and	Work Group Members
	Monte	

MEETING SUMMARY

- 1. Welcome (Monte)
 - a. Focusing on path to LEED for Communities Platinum certification today
 - b. Monte hit record!
- 2. Icebreaker
 - a. Bookending sustainable design code minimum versus aspirational project concepts
 - b. What's the coolest sustainable/resilient thing you've ever seen?
 - i. Amager Bakke in Copenhagen waste processing, ski hill, public parking, mountain biking hiking trails
 - Smart streetlights (Keeli) light pollution is unconsidered in urban areas, don't realize how much of the night sky you're missing until you're in rural areas; the solutions are relatively easy to implement; efficient bulbs with targeted light, motion sensors,
 - 1. Neil DeGrasses Tyson was the keynote speaker at a conference shared images from a plane over Chicago, New York, etc., noted how bright the streetlights were
 - iii. Sensible mix of technologies (John) wood is beautiful, it is the ultimate carbon sink; it's crazy to capture carbon with machines, when trees already do it and are a material that can be turned into literally anything; Back to the future! from concrete and steel construction; John is even considering wood floors for his forklift areas (less embodied carbon); we're in a wood renaissance!
 - iv. Wind and solar power (Rebecca) alternative fuel sources are necessary; we need 12-14 MW of power on this site; we are anticipating that all buildings will be required to have rooftop solar; large scale wind turbines are hard in urban areas, but there are smaller options for urban areas
 - v. Bikes! (Russ & Matt) casual bike culture needs to be cultivated (like in Holland and Denmark); they have much denser communities, but this has been a 45-year project to facilitate the support needed to get people on their bikes; safety improvements are notable when there is adequate bike infrastructure; the Hillcrest neighborhood doesn't have a great bike trail to get to the west
 - vi. Bikes plus car share plus neighborhood cohesion (Chelsea) makes it so you don't have to own a car!
 - vii. Geothermal snow melt system (lanni) don't need to move snow (less gas), don't need to melt snow (no salt), protect water quality, ROI is higher here than for solar or wind; most beneficial in high-traffic areas; since no salt, concrete and asphalt last a LOT longer



- viii. Rapid bus system would help facilitate transit usage; we should consider re-doing the transit patterns right around Larpenteur/McKnight
- ix. Buried electrical service
- x. Cooperative Energy Futures coop to help pay the upfront costs to get solar panels on rooftops; need to make sure the buildings they are installed on have long design lifespans; St Paul Public Schools initiative to get solar panels on school roofs; not all community solar gardens are owned by members of the community, and the community just subscribes to them
- xi. Bioregionalism
- xii. Energy democracy
- xiii. Multi-functionality
- 3. Port Announcement
 - a. Next Friday, 8:30-11:30 am, public hearing during which the Master Plan will be presented it's a good time to show support
 - i. Other groups have proposed alternate plans, so if anyone has questions, please feel free to reach out
- 4. Path to LEED for Communities Platinum certification!
 - a. Integrative Process you must have an integrated design team and regulatory review; this is fully underway
 - b. Natural Systems & Energy ecosystem assessment, pollution prevention, green spaces, light pollution reduction; all well addressed
 - Natural Resources Conservation and Restoration this project is much more about restoration, due to the mercury contamination that needs to be remediated; ecosystem services are currently degraded
 - ii. Resilience Planning
 - 1. Vulnerability and capacity assessment address natural and human-made hazards
 - 2. Resilience Plan adaptation and mitigation strategies
 - a. Resilience hub for the community
 - b. Building strategies that prevent weather damage
 - c. Green infrastructure
 - 3. Question about wetlands and tree preservation tree inventory, trying to relocate trees onsite or off-site if they are not contaminated with mercury; the Pollution Control agency will dictate how much we need to excavate around trees
 - 4. Question about wetland mitigation we are required to do a 1:1 restoration
 - 5. Question about urban heat island increases, to make sure we are not making it worse
 - 6. Question about the timeline about mercury mitigation and grading it's all going to be done in one process, starting this August
 - c. Water Efficiency clean water for all, stormwater management; district stormwater scheme will improve flood risk relative to current conditions
 - d. Materials and Resources divert waste and recycle it instead, use recycled materials, organics and recycling infrastructure
 - e. Quality of Life social infrastructure, economic growth (we are bringing jobs to the site near affordable housing), public health, emergency management and response
 - f. Energy & Greenhouse Gas Emissions
 - i. Carbon Free Community each year, after the community is fully developed, it offsets as much greenhouse gas as is emitted due to activities taking place within the community's geographic boundary
 - ii. Business-as-usual totals are based on improved methods (building codes, Xcel's grid mix, etc.); our proposed design eliminates electricity and natural gas emissions (via solar and district geothermal energy, respectively), and massively reduces transportation and waste related emissions
 - iii. District geothermal energy ATES is being evaluated for the site; uses aquifers as a thermal battery



- 1. Electric heat pumps for heating and cooling
- 2. Towerside Innovation District in Minneapolis will be the first ATES system in Minnesota
- Question about likelihood of this getting built Evergreen Energy has been consulting on system implementation for the last year and a half; this is a good option because it can be modular-ized and takes up very little space on the surface



- 4. Question about whether the surrounding neighborhood loop-into this system? maybe! As re-development occurs, the system could be extended; Russ Stark looked at this system at the Highland Bridge site, which didn't get approved; it's easier to implement for larger energy-demand areas
- 5. Question about the implementation of the geothermal system and financing ATES systems are deeper than typical geothermal; trying to achieve an economy of scale; Port is trying to make it accessible to everyone at Hillcrest; there are advantages to making this a public utility
- 6. Question about how the heat energy gets from building to building biggest pumps are in Light Industrial buildings that have a lot of rooftops and solar production potential
- iv. Energy production on Light Industrial vs. Residential sites
 - 1. Light Industrial buildings can make more solar energy than they need and can supply it the residential buildings
- v. On-site Solar
 - 1. Energy balance we can make just about the needed 14MW with all rooftops providing solar production space and some smaller parking and site installations
 - 2. Ownership models it's important to own the renewable energy credit
 - a. We are working to get a work force training program for on-site solar; including EV, district energy
 - b. It is more resilient to have on-site production, no loss over giant power lines
 - c. More democratic to have local production
 - d. More local control over a community's energy future



- e. Question about how people will be notified about possible training programs energy partners are excited to help with the recruitment and training process
- f. It's too easy to take advantage of people when they don't have control over their energy generation
- g. Question about who's going to own the solar arrays on the buildings potential owner/users will have access to PACE financing to build the solar arrays and then own them long-term, to be net-metered; ground-mount solar would have a different ownership structure
- h. Question about who to ask about the solar arrays Pete Klein or IPS
- i. Comment about how current systems are too disconnected from people's lives, so it will help if it's a visible part of their neighborhood; this will improve resilience systems as natural disasters become more unpredictable; will impact how people choose to use energy

Comments from Chat:

[2:09 PM]

John Andrew Metza - A1X (Guest) has temporarily joined the chat. [2:09 PM] Chelsea DeArmond (Guest) Is that real? [2:10 PM] Ianni (Guest) <u>https://nea.is/geothermal/direct-utilization/snow-melting/</u> [2:10 PM] Matt Doll (Guest)

Apologies for not sending mine by email, here's one that sticks with me. Large scale, but with some

cool lessons. <u>https://www.vox.com/science-and-health/2018/8/28/17789510/bike-cycling-netherlands-dutch-infrastructure</u> [2:13 PM] Mike Hirabayashi (he/him) (Guest)

I wasn't sure if this first was is considered an initiative or not so I prepared two. This is a link to Cooperative Energy Futures, which is a group that builds community solar gardens on rooftops that are large enough to sustain them. What I love about them is that they provide the upfront costs to make solar power a reality for buildings that wouldn't otherwise be able to get it done, and they prioritize low income subscribers that often get overlooked with solar

gardens. https://www.cooperativeenergyfutures.com/

[2:14 PM] Mike Hirabayashi (he/him) (Guest)

My second is an initiative that's building in St. Paul to get solar power panels and solar gardens on the rooftops of our public schools. This is a link to an open letter that people can sign on

to. https://docs.google.com/document/d/1Bgk4e8IHOuhe9JRQz9zOBdtXEgj5-alXNbNQwhA-VTs/edit

[2:15 PM] Stark, Russ (CI-StPaul)





[2:21 PM] Chelsea DeArmond (Guest) no longer has access to the chat. [2:29 PM] Chelsea DeArmond (Guest) has temporarily joined the chat. [2:44 PM] Tiffani Navratil 1:1 [2:45 PM] Tiffani Navratil email me [2:45 PM] Tiffani Navratil tiffani.navratil@lhbcorp.com [2:47 PM] Tiffani Navratil from chelsea: [2:47 PM] Tiffani Navratil What is the timeline for mercury mitigation? And how would this mitigation relate to grading for the site? Is this a separate--later process? [2:50 PM] Tiffani Navratil 40% [2:52 PM] Tiffani Navratil this is rendering of a possible gathering space by the neighborhood node [3:06 PM] Mike Hirabayashi (he/him) (Guest) Awesome. [3:12 PM] Ianni (Guest) For LEED credits as well? [3:13 PM] Tiffani Navratil



traditional geothermal would also qualify for LEED credit if the ATES system ends up not working out [3:14 PM] Ianni (Guest) I see. ATES will not qualify for credits? [3:14 PM] Tiffani Navratil yes it will [3:15 PM] Tiffani Navratil both types of geothermal systems qualify [3:15 PM] lanni (Guest) ΤY like 1 [3:19 PM] Stark, Russ (CI-StPaul) 14 MW of solar is equal to or possibly even greater than all of the existing solar in Saint Paul. [3:23 PM] Mike Hirabayashi (he/him) (Guest) It's worth noting that people are getting heavily screwed right now by not having control or power on their energy generation. [3:23 PM] Mike Hirabayashi (he/him) (Guest) It's worth noting that people are getting heavily screwed right now by not having control or power on their energy generation. [3:24 PM] Matt Doll (Guest) We know from regional energy analysis that we need a lot more transmission lines, and some of them can be pretty contentious and uncertain. If we generate the power in the community that uses it, that reduces the uncertainty. [3:27 PM] Stark, Russ (CI-StPaul) I have thoughts about the workforce training opportunity that I can share off-line. like 1 [3:27 PM] Monte M. Hilleman Thanks Russ! [3:29 PM] Matt Doll (Guest) Really good point Keeli, people are a lot more inclined to think about how they use power when they can see exactly where it comes from [3:29 PM] Mike Hirabayashi (he/him) (Guest) Indeed [3:30 PM] Matt Doll (Guest) I will be at the public hearing for sure like 1 [3:30 PM] Monte M. Hilleman Thanks Matt!!

This constitutes my understanding of items discussed and decisions reached. If there are any omissions or discrepancies, please notify the author in writing.

