City of Boulder – Xcel Energy Partnership

Renewable Energy Working Group Meeting #1

Date	February 24, 2022
Location	Zoom Virtual Workshop
Participants	Renewable Energy Working Group

- Pat Hillmeyer
- Julie Zahniser
- George Craft
- Wayne Seltzer
- Stephanie Hsiung
- Peter Lilienthal
- Jack Vultaggio
- Ramesh Bhatt

Project Oversight Team

- Iffie Jennings, Xcel Energy
- Neil Cowan, Xcel Energy
- Leslie Baer, Xcel Energy
- Carolyn Elam, City of Boulder
- Emily Sandoval, City of Boulder
- Matt Lerhman, Department of Climate Initiatives

Institute for the Built Environment

- Josie Plaut, Facilitator
- Tom Hootman, Consultant
- Monica O'Reilly, Recorder

Meeting Overview

The primary focus of the working group meeting centered on increasing capacity for local generation by at least 30MW in the next 8 years to meet or exceed the City's goal of 100MW of new renewable energy by 2035. The conversation centered on barriers and strategies around realizing more local generation.

Meeting Summary

Topic	Notes

Welcome + Introductory Remarks	*After brief introductions, Josie provided an overview of the meeting's agenda and the focus on increasing local generation. Tom Hootman provided an overview presentation and background to set the stage for the conversation. Clarifying questions and points covered in conversation are summarized below.*
	
	• Do the estimates for residential solar potential consider potential regulations?
	   ◦ *Residential estimates are based on what is theoretically possible with not regulations.*
	• Are lands owned by the BVSD included in the study?
	   ◦ *BVSD land/property shows up in the overall study as does land owned by the City that is not designated as open space.*
	• How were City owned sites evaluated?
	   ◦ *Potential for solar sites on property owned by the City were evaluated based on available developable land, excluding designated open spaces and parks, and had to be enough land to have be of strategic value.*
	• Was the property off of 36 between Jay road and the shooting range considered?
	   ◦ *Yes, this property was part of the study with other smaller potential systems due to the available footprint*

IdeaBoardz Summary	*During the conversation, ideas were captured using the IdeaBoardz digital sticky note tool. Below is a high-level overview of the IdeaBoardz content:* **Benefits and Goals** • Bill stabilization and savings • Resilience and reliability • Internalizing costs **Barriers** • Issues with incentives in both commercial, municipal, and residential sectors • Early adopter issue • How much of the $2.50-$4/W is soft costs and able to be lowered by the city/Xcel? • Workforce capacity • Hosting capacity • Cost across sectors **Opportunities and Strategies**

	• Creative financing and rebates across sectors • Interconnection maps • Rooftop solar throughout City, solar gardens, regulations requiring solar • Employment • Multi-family housing • Public-private partnerships • Larger land assets **Other** • Storage implications • Quantifying and monetizing distributed storage • Projections for 2022 residential solar projects, promoting 26% residential rebate • would it be better if as many commercial customers as possible just self consumed their solar production on-site?
Detailed discussion of Ideaboardz summary	*Josie moves forward to discuss how to close the approximately 30MW within the next 8 years. Below are comments and sentiments expressed by the group:* • Need to accelerate progress. 30MW is not enough and eight years is too long • Workforce in not a barrier, but an opportunity. Would like to see more data related to the workforce shortages. • Maximize the remaining solar potential for City owned land and facilities • Federal tax credits are dropping – make a big push in 2022 and 2023. By 2024 the tax credits will be down to 10%. • Of the 23% potential from residential, does that include all of the rentals that are in Boulder? Yes. • Focus on the landlord-tenet split incentive issue, which is a problem everywhere, especially since rentals are 50% of our residential buildings • Cost can be recouped in 8-10 years – would it be possible for the City to borrow money based on payback? • Multifamily housing offers a great opportunity, including changing regulations on virtual net metering. • Has the City tried to quantify the cost of outages? This is relevant for reliability and resilience. • Quantifying distributed generation into a monetary value will help reduce the cost barrier • A lot of people who do not understand that their solar panels give them zero resiliency if the grid goes out. • Our biggest challenge is cost and incentives. Incentives help overcome cost barriers for larger companies.

	• How much are we limited by capacity on the grid? Are we even capable of installing 60 MW? Is there a partnership opportunity for grid enhancements? Who's responsibility to expand grid capacity for local generation? 　○ *Neil answers that traditionally the cost has fallen on the customer or the developer* 　○ *Carolyn adds that this is referred to as the "next person issue" where the entity that runs into grid capacity issues is burdened with additional cost to upgrade that local infrastructure (e.g., a transformer). The partnership is identifying areas that have capacity available and which locations have the ability to more cost effectively add renewables..* • Other municipalities have interconnection maps that showcase where there is potential in the system. Does the City have something like this or is there discussion around implementing a tool like this? 　○ *Neil answers that Xcel does have some hosting capacity maps available that started in 2017 and are progressively becoming more sophisticated*
What are the barriers	*Josie asked participants vote on which topics they would like to focus moving forward using the IdeaBoardz tool.* • Top ideas included: 　○ Financing Opportunities 　○ City rooftop solar 　○ Hosting Capacity 　○ Declining tax incentives 　○ Storage • Re: tax credits - it is important to note the declining availability over the coming years and to recognize that tax credits are not available to everyone (e.g., municipalities, nonprofits, and school districts). How might we help these organizations? • Is it $2.50 per kW installed or per kW/hour? 　○ *$2.50/kW installed, but the City of Boulder is seeing numbers closer to $4/kW average is dropping* 　○ *A correction was made that the correct figure is actually $2.50/kW, not kWh*
What are the opportunities and strategies?	*Based on the voting, the group focused on the financial incentives for commercial buildings.* • We are not using all of our capacity in the commercial incentive program. National players tend to purchase energy in other markets, which does not translate into local generation. Local businesses of the same size tend to add solar locally.

	• Would like to figure out split incentives challenge, where owners pay the capital cost, but renters pay the utility bills. Green leasing, virtual net metering, other options? • On the commercial financing side, there is C-PACE which is a financing tool that is not really taken advantage of. Companies are adverse to taking on anything that appears like debt. Thus, financing tools have not been useful in making much progress in the commercial sector. Financing solutions mean different things to commercial and residential spaces. *Josie asks that if participants had a magic wand, where would they like to see an energy shift?* • Carolyn identifies opportunity in multifamily housing. Overall, more effort could be directed here. There is also opportunity to think about how to put larger solar installations in place on larger land assets. Exploring different models for non-taxed entities like BVSD. • With the recent legislation, does that allow for an opportunity for a public-private partnership? For example, could the City put a solar garden on top of commercial storage buildings?
Closing Remarks, Next Steps & Action Items	**Next Steps** • Framing initiatives • Dig deeper into specific issues and opportunities • Moving forward in local generation and additional opportunities • Next meeting: March 31st *Carolyn invites participants to continue to add to the IdeaBoardz and to send any relevant resources or models in the interim.*
Resources	• Xcel hosting capacity map: https://www.xcelenergy.com/hosting_capacity_map • IdeaBoardz: https://ideaboardz.com/for/Local%20Generation%20BXP%20/4357508