

Spokane Connected Communities – Customer Engagement Summary

April 2023

The Spokane Connected Community (CC) Project is part of a Department of Energy (DOE) funded initiative to assess how distributed energy resources (DERs) operating in both residential and commercial buildings might collectively improve the reliability, resiliency, efficiency, and flexibility of a community's electrical grid. The rapid development of new innovative technologies expands opportunities for learning across this nationwide initiative. Implementation of new technology is important as is customer input.

This customer engagement strategy summary describes the approach of the Spokane CC project to understand the perceptions, motivations and behaviors of customers affected by new distributed energy solutions. This common understanding will aid in determining how these solutions may be accepted and ultimately adopted on a wider scale. Ongoing and intentional feedback will help partners learn how the benefits and costs are shared with the underlying goal of ensuring that new technologies work across customer types and segments.

The summary document includes the following information regarding customer engagement: 1) Project Population, 2) Survey Approach, 3) Outreach and Recruitment Strategy

Project Population

The Spokane CC project service area includes locations served by a substation on Third Avenue and Hatch Street near the Hamilton Street overpass to Interstate-90 (star on Appendix map). This 6.5 square mile area is bounded by the downtown core to the West, light industrial and manufacturing to the East, the Spokane River and University District to the North, and a primary arterial (29th Ave) for residential households to the South. The project locale includes two hospitals, two universities, secondary schools, libraries, rehabilitation and senior care facilities, and dozens of commercial businesses.

There are approximately 4,900 residential parcels in the study area, with nearly 4,500 classified as single-family households. Duplexes or multiplexes represent 5% of residential parcels (255), and 161 residential parcels have an apartment classification (5 plus units). According to county assessor records, there are 981 commercial businesses located in the service territory. The majority (814) of businesses are concentrated in the retail, service and wholesale sectors.

The Spokane CC project service area consists primarily of five census tracts. These tracts (East Central, Perry, Hospitals/Corbin, Manito and Sprague/U-Dist) have distinct socio-economic characteristics. Median income, for example, is more than twice as high for residents in the Manito tract compared to those living in East Central and the Sprague tracts (\$49,052 vs \$16,688 and \$24,835). The percentage of persons living under the poverty level is also multiple times higher in these two tracts (24% and 42%). Percentage of persons of color ranges from 6% (Manito) to 28% (Sprague) and percentage of households renting ranges between 15% (Manito) and 74% (Hospitals/Corbin), according to the 2020 U.S. Census (American Community Survey).

Survey Approach

In collaboration with Spokane CC project partners, we will develop and deliver a **mixed-mode** survey (online and mailed paper booklet) to a sample of residential and small/medium business customers in this service area. The (15-minute) survey will include questions on perceptions and experiences related to comfort and convenience of energy options, knowledge and awareness of the benefits/costs for specific distributed energy solutions, sensitivity to energy bill and rate changes and more. While the survey will request anonymous feedback, respondents will also be asked for permission to match Avista customer records (e.g. service length, average billing, metering data). The survey protocol will be reviewed by the Pacific Northwest National Laboratory (PNNL) Institutional Review Board (IRB) and the research dataset will be properly de-identified and securely shared with project staff.

As noted above, there are roughly 5,700 site-based addresses within the project service area. Based on the estimated study population, at least **325 completed surveys** will be necessary to achieve a sample error of +/- 5%. (The sampling error indicates the reliability that survey estimates pulled from a sample reflect 'true' population-level statistics.) To reach the required number of completed surveys, we plan to request a random sample of **2,200 residential addresses and 500 business addresses**, stratified by census tract. With an anticipated 15%-40% response rate, we expect to receive between **375 and 825** completed surveys. Finally, we also plan to make the survey available to a wider audience in a convenience sample to boost overall sample size and help meet the equity goals related to customer engagement.

The survey protocol starts with a 'push to web' methodology where the initial contact letter includes a [survey link](#) (Qualtrics) and unique invitation code. Responses are tracked via the invitation code, and after two weeks, a second cover letter with a paper questionnaire booklet, a postage-paid return envelope and the web survey URL is sent to nonrespondents. Finally, a postcard reminder (or thank you note) is sent to the entire sample by week three.

Outreach and Recruitment Strategy

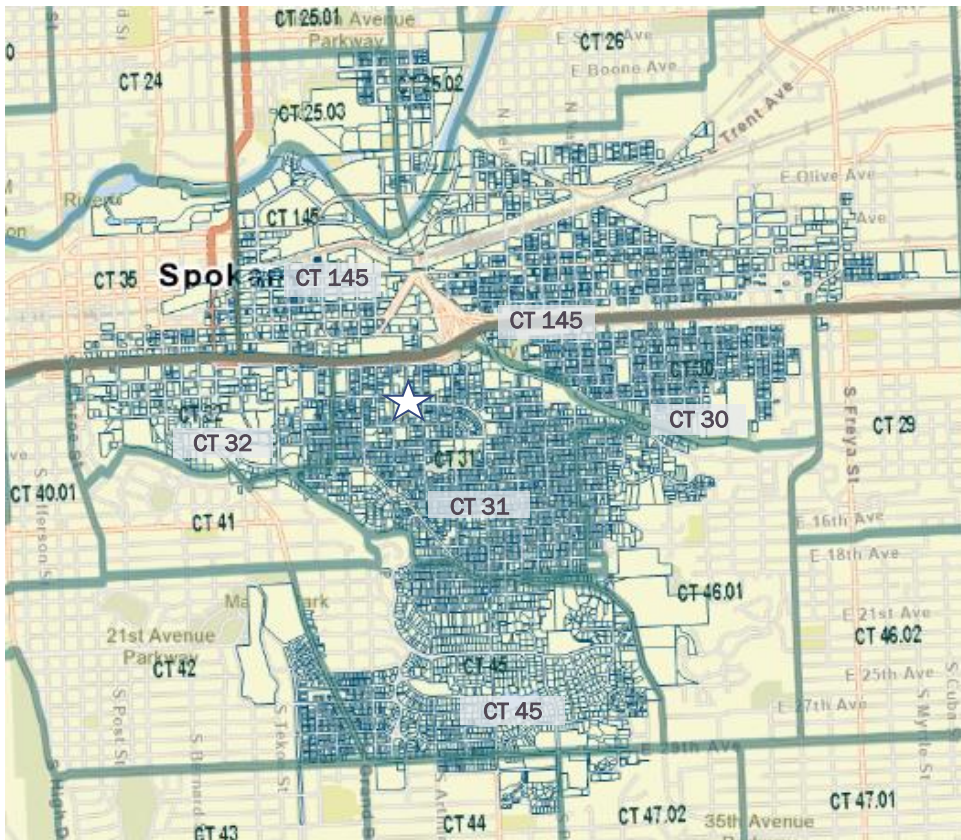
Following a completed survey, respondents receive a prompt that says, "We may wish to contact you in a few months to see if you would be interested in participating in a study to test new household energy/building technology solutions. Households that are invited will receive assistance with energy efficiency improvements or equipment at no cost." Respondents wishing to be recontacted will form the basis of the cohort for potential participants in the multi-year pilot study. In addition, a website will be created to inform survey respondents and potential participants of the program. We also plan to supplement recruitment efforts with direct outreach from Avista and in-person outreach conducted at community fairs or events.

From the subset of interested customers, we hope to recruit a minimum of 100 residential, 25 small commercial, and 10 large commercial pilot participants. The selected participants will live or work in a mix of buildings including single- & multi-family homes and small & large commercial buildings. In addition, we anticipate that 15% to 25% of the participants will be low- and medium-income customers. The PNNL IRB will approve recruitment and incentive procedure for this phase of the

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large commercial: focus groups, account exec contacts through McKinstry, Avista.
program website/landing page
call center (Edo CSC) contacts

Commented [MS2R1]: The statement, "direct outreach from Avista" covers the account exec approach for large commercial. We would like to keep this vague at this point since we don't know exactly what the outreach will be right now. The outreach will also be based on the research we are doing right now and we don't have that completed yet.
I added a sentence for the website, feel free to edit.

research and we anticipate additional surveys (both online and interviews) and interviews to assess feedback on distributed energy solutions that will be tested by customers.



Appendix: Spokane CC Study Area