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Heat loop project phase one funding underway

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The project to heat four downtown municipal buildings – the library/museum, city annex building, City Hall, and fire hall – from the waters of Resurrection Bay using closed-loop CO2 heat pumps, known as the Heat Loop Project, has officially begun the initial planning phases of advancing to a state of shovel-readiness. Funded by a \$315,000 U.S. Department of Energy (DOE) grant for community-led geothermal heating and cooling programs, phase one encompasses all planning, logistics and budgeting necessary to produce a final design, due by November 2024.

“We are actually just now going into contract with the DOE for phase one,” said project advocate Mary Tougas. “It’s taken quite a process for us to do, but we’re super excited. The funds are not large for phase one, but they will take us into a final design and bid package.”

One of 11 projects chosen for phase one DOE funding, the heat loop project began in 2015, with a total cost then estimated at \$4.1 million, of which \$725,000 has already been awarded in the form of an Alaska Energy Authority (AEA) grant. Announced in April, the phase one grant will update the 2015 estimated cost to a final 2023 total. Among the requirements for DOE funding is the involvement of a community-led coalition, which the heat loop project satisfied with the creation of the Port & Commerce Advisory Board (PACAB) ad hoc committee formed to seek funding sources for the project.

“We needed to show that there was community and a diversity in our community voice for the project,” said Tougas, who is the recorder for ad hoc committee. “In the Statement of Project Objectives (SOPO) for the project, there is a particular outline of what has to be accomplished with the phase one monies, and in there for our group, the community voice, there are several tasks which we are in charge of, and one of those is outreach to the community.”

With phase one DOE funds now dispensed, the committee has begun to fulfill this requirement, planning a display in the Seward Community Library and Museum (SCLC) educating the public

on the project and its current stage of development. The committee has also partnered with the National Renewable Energy Laboratory (NREL) for data collection and processing.

“They will be doing a site visit to Seward, and they will be re-collecting data from the test well that was put in in 2015,” Tougas said. “They will be taking that data and putting in different modules for data reporting to verify the temperatures in that well.”

NREL representatives will be dispatched to Seward at the end of the month, according to Tougas, to set up the data collection equipment that will verify the Resurrection Bay temperature readings that were initially taken in 2015.

“They’ll be capturing that data from afar,” she explained. “That’s also part of phase one requirements, so that will be done and set up pretty quickly.”

If the project meets all requirements by the November 2024 deadline, it will then become eligible for phase two: deployment, with a total of \$14 million in DOE awards split among all qualifying projects.

“We’ve been at 90 to 95 percent shovel-ready, and this year, with the data and the DOE verifying this prototype project, it will get us to having a package that is bid-ready and ready to roll,” Tougas said. “Phase two funds can be between \$3 and \$4 million, which are deployment funds to actually start construction.”

Though phase two funding is not guaranteed for any of the 11 phase one awardees, Tougas and other project advocates remain optimistic that further funding will be granted, citing several advantages the heat loop project has over its competition.

“Some of the projects, we don’t know where they are in their readiness,” Tougas said. “Some of them may not be as ready as we are. We have been able to show the DOE that our group is stable, which is very important, and not all of the projects have that. We’ve been together almost two years, and we’re the same people, moving forward.”

The U.S. DOE Geothermal Technologies Office held a virtual kickoff event last Thursday, Oct. 12, to congratulate all phase one awardees and outline the tasks each project will be charged with in the coming year. Watch the pages of future Seward Journal issues for project updates as the November 2024 deadline draws near.

“The DOE is very excited about this project,” Tougas said, “and it has had a lot of support from their side. Usually for federal grants, there is a match required of 50 percent, and there is very little to no match required in any of the funding coming through for renewable resources. It is as close to free money as you can get with the federal government, and that is super exciting.”