
MEMORANDUM TO COUNCIL

To: Mayor and City Council Members
From: William Homka, City Manager
Date: February 27, 2024
Re: Makushin Geothermal Project Power Purchase Agreement (PPA)

SUMMARY: On August 20, 2020, via Resolution 2020-55, the City Council authorized a power purchase agreement (PPA) with Ounalashka Corporation/Chena Power, LLC (OCCP) to purchase energy from the renewable resource and discontinue use of diesel fuel for electric production. OCCP committed to a Commercial Operation Deadline (project go live date) of May 31, 2027. The City committed to buying 100 megawatts (MW) of power at \$0.16 per kilowatt hour (kWh) over a term of 30 years for a value of about ½ billion dollars (\$489,000,000).

The PPA was amended on three occasions for reasons that include: extending the Commercial Operation Deadline; extending the project financing due date; and for a mutual commitment to an interconnection/integration plan. The following PPA milestones, the deadlines for which having been previously extended, have **not** been achieved:

- A. Project Financing – December 10, 2023 (Amendment 3)
- B. Commercial Operations Deadline – May 31, 2027 (Amendment 3)
- C. Completion of Interconnection / Integration Plan – January 1, 2024 (Amendment 3)

The PPA may be terminated for failure to achieve any of these milestones.

On November 2, 2023, OCCP requested the PPA be terminated. Then on November 5, 2023, OCCP requested negotiation of a fourth amendment to the existing PPA. OCCP proposed new terms, including \$0.22 per kWh, a \$0.06 increase (37.5%) over the previous \$0.16 kWh cost agreed to in the PPA. Project costs, including increased financing costs, were cited as reasons for the proposed \$0.06 kWh increase

PREVIOUS COUNCIL ACTION:¹

1. Original PPA – August 31, 2020 (authorized by Resolution 2020-55)
2. Amendment 1 – April 22, 2021 (authorized by Resolution 2021-14): This amendment extended the Project Financing deadline from June 10, 2021 to June 10, 2022.
3. Amendment 2 – July 28, 2021 (authorized by Resolution 2021-55): This amendment extended the Commercial Operation Deadline from May 31, 2024 to May 31, 2025.
4. Amendment 3 – March 11, 2022 (authorized by Resolution 2022-07): This amendment further extended the Commercial Operation Deadline to May 31, 2027. The Project Financing deadline was extended to **December 10, 2023**. The Interconnection/Integration Plan deadline was extended to **January 1, 2024**.

¹ The PPA and subsequent amendments are the main working documents and are attached along with their adoptive resolutions and staff memos to City Council. Other documents can be provided upon request.

BACKGROUND: The Makushin Volcano was studied in the 1980s in relation to potential geothermal heat and electric production. The study included a field test that drilled ST1 and numerous reports indicating results, estimating project costs for the necessary improvements, integration with the existing system, etc. The resource was determined to be insufficient for geothermal production.

The City learned about new interest in Makushin's geothermal potential in late 2019. In January, 2020 the City met with representatives of OCCP in Anchorage. It was a working meeting to develop a concept plan that OCCP could use for marketing the project to prospective lenders. After that initial meeting, the City and OCCP spent the next 6 months working out project details that would need to happen for the Makushin Geothermal Project (MGP) to materialize. One of those details was a PPA, which City Council approved by Resolution 2020-55 in August 2020. The PPA committed the City to purchase power from OCCP "... for a Fixed Payment of sixteen million three hundred thousand dollars per year (\$16,300,000.00) ... for a period of thirty (30) years after the Commercial Operation Date (Term)." Other terms and conditions applied.

The City invested significant time working with OCCP to continue moving the project forward. Three amendments to the original PPA were negotiated and approved by City Council. The City adopted the MGP within its state and federal legislative priorities and included OCCP representatives in legislative fly-in visits with state and federal elected leaders. The City and OCCP have worked together to develop the electric integration/interconnection plan that would connect the new electric source to the City's existing distribution system.

DISCUSSION: The City has provided commitment and support in order for the Makushin Geothermal Project to come to a successful fruition. For many years, the City has needed to improve the electric distribution system to address power demand surges that happen when cranes are in operation. Aside from the environmental benefits of converting our electric production from fossil fuels to green energy, the City's commitment to a 30-year PPA meant it could begin retooling its distribution system based on the anticipated consistent power delivery. This is an island-wide issue, however it's of particular importance to several of our industrial customers.

The City's 10 Year Capital and Major Maintenance Plan (CMMP) included system improvements to address the distribution system's power surge problems. The improvements included a fly wheel and/or a Battery Energy Storage System (BESS). The projects were removed from the CMMP because the MGP integration/interconnection plan is expected address this system weakness.

The City and OCCP have been at work for more than four years. OCCP has spent at least \$20 million to support this project, but has been unable to meet milestone deadlines. The most concerning failure is that project financing has yet to be secured, despite the Third Amendment to the PPA extending the project finance deadline to December 10, 2023. There are several reasons for the lack of a financing commitment, but overall it can be summed up by saying lenders must not be comfortable with the project or aspects thereof.

The City has been patient and supportively waiting for the project to advance. But in waiting, the City has deferred on investing in electric generation and distribution system needs. We've spent significantly on maintenance of the gen sets in our powerhouse, but much of our equipment needs investment that we've put off as we believed the geothermal power solution would be imminent. The power surges are ongoing throughout this fishing season and have caused several lengthy power outages throughout our community. We now need to program and move quickly to address

challenges we expected to be solved with the integration/interconnection plan because there is nothing to connect to, nor anything on the horizon.

Since the PPA was signed, additional development opportunities and demands have arisen, including the introduction of Trident Seafoods Company at the end of Captains Bay Road. The City has been planning corridor improvements for the extension of electric, water and sewer lines throughout the corridor. In 2022 Trident announced plans to build a new processing facility and last July made a request to the City for 14MW of power annually. Trident recently announced a one-year project delay due to fishing sector market conditions. This delay provided the City only modest relief in the urgent need to provide additional power while awaiting the completion of the MGP.

However, in December 2023 OCCP informed the City it must revise its project schedule and delay the project completion to a date in 2028. AIDEA did not include OCCP's \$50 million loan request on its December agenda. This negates the additional time gained from Trident's one-year delay. Both Trident and OCCP aim to be operational in 2028. But OCCP still lacks project financing which can and will cause further delays for the project, making 2028 MGP power production questionable.

A BESS system is included in the integration/interconnection plan. The one-year delay for completing the MGP delays the BESS improvement schedule to 2027, three years from now. This means there will be seven more processing seasons with power fluctuations and potential outages that in turn create stress on our electric system and for our industries, businesses, and residents.

OCCP emailed the City on November 5, 2023 requesting changes to the PPA via a fourth amendment. The most important proposed changes include the cost per kWh and subsequent issues identified with the project's customer base and IRS issues. The cost would increase from \$0.16 to \$0.22 per kWh, representing an additional yearly cost of about \$6 million, increasing from \$16.3 million to about \$22 million. This change would increase the total City commitment for a 30-year PPA from \$480 million to \$660 million. Potential negotiations of a fourth PPA amendment will also affect project milestones, maybe concurrently with the AIDEA setback.

Another OCCP-proposed change to the PPA would reduce the life of the PPA from 30 years to 26 years, which might address a complicated tax issue recently identified by OCCP. The total PPA cost would instead be \$572 million over 26 years. Yet another OCCP-proposed change would allow OCCP to sell 20% of power to other customers to help avoid an IRS problem OCCP will encounter as a result of OCCP and the City being the only two entities involved in the sale and purchase of electric power. While it helps to avoid an OCCP tax problem, it opens the City to another problem of establishing sales competition with another entity on the island and would also likely require that OCCP obtain authorizations from the Regulatory Commission of Alaska.

The City is responsible to provide numerous utility services to the community including water, wastewater, solid waste, electric production and distribution. Part of this obligation is to provide those services at or above our customers' needs and expectations at a fair and equitable cost. OCCP was to be the vehicle to improve our electric service as well as gain stability in power prices for the next 30 years and solve the incremental surges we currently experience. However, the PPA is not providing that solution for our aging infrastructure. We have been waiting for the MGP to materialize instead of actively pursuing our own stability.

Since November, OCCP has sent many emails about what is needed for the project to progress. OCCP requested the PPA's cancellation and that a new PPA be negotiated. A few days later, OCCP changed course and wanted to negotiate a fourth amendment to the existing PPA. OCCP

proposed terms that do not consider the total cost to the City. For example, the City needs to keep the powerhouse available and staffed in a “warm and ready” condition in the event the MGP goes offline. The City’s costs to maintain the powerhouse and required staffing will be significant, yet this has not been addressed. Any new agreement or amendment would need to add these costs into the project.

Project delays and the absence of project funding commitments leave the City indefensible against accusations that it is not proactively addressing our own power issues and future needs. At this point, the MGP, regardless of further PPA amendments, cannot timely cure these power issues. While more time can be committed to continuing the PPA and the relationship with OCCP, the City must consider some of the challenges the project continues to face.

OCCP has been working with the DOE for a lengthy amount of time on gaining energy loans. Most recently, the Tribal Energy Loan program has been discussed and should be a good fit for the MGP. But in a meeting attended by the City with the DOE while in Washington DC confirmed that OCCP is having trouble complying with DOE’s requirements for financing. One formidable requirement is the resource needs to be tested to confirm the amount of energy that it’s capable of delivering. This is expected to be accomplished by drilling into the volcano and running tests, similar to the one conducted in the 1980s.

Testing the resource has been an issue since the beginning of the City’s discussions with OCCP. The City desired to test the resource at the beginning, and the City’s now-retired expert consultant, Mike Hubbard, expressed this to the City Council on several occasions. Testing is expensive; estimates put it in the \$25 million range. Without knowing if the resource can produce, any investment or loan would potentially be lost without any way to recover it. OCCP has resisted this resource testing in the past but now realizes it is necessary because it is proving necessary to progress with project financing.

Had the resource been tested three, even two years ago, the future of the project would be more certain. Favorable results would have helped secure project financing, and OCCP wouldn’t be seeking another delay. In October 2023 OCCP was awarded \$5 million from the Alaska Energy Authority, but that’s a small fraction of the original project cost and much less in the revised project cost. The 2020 PPA and three amendments expired on December 10, 2023 for a lack of project financing. Had testing been conducted at the beginning of the project, then the project costs wouldn’t have increased to the point they have now.

The well tests won’t begin until weather is suitable several months from now. It will take months, depending on the time to get a drill to the resource, drill the hole(s), and run the diagnostics. OCCP could conduct the well testing and find there is not enough resource. Either way, the City presently lacks a reliable solution for its power future.

Another concern is the road that needs to be constructed to the MGP site to get the large drill rig to the volcano to test the well. As it is now, there are no construction documents or cost estimates that could be used to solicit grant funding to build the road. Work commenced without any design or construction plans. If construction plans were available, the team could apply for grant funding, maybe even have done so several years ago, and built the road and bridges required to span large and deep caverns near the site. (The City has been advised that some of the bridges consist of using old rail road cars for the smaller spans.)

OCCP has considered flying the rig to the site via helicopter. The cost for a helicopter hasn’t been mentioned, however it does not seem feasible to expend significant project funds for a heavy-lift helicopter when the road could have been completed by now. This is another indication that the project has not followed methodical processes to achieve successful completion.

Projects require predevelopment and development budgets, with sources and uses clearly identified based on estimates and timelines. Changing timelines, an unproven resource, and a road of unknown design standards demonstrate the project is having trouble due to planning and implementation. The City owes our community a plan that is achievable.

The time and years spent avoiding the resource test have put OCCP in this situation. Our reliance on the timely success of the MGP project contributed to our own present challenges in providing power to the community.

FINANCIAL IMPLICATIONS: The Power Purchase Agreement committed OCCP to pay the City \$2 million pursuant to a payment schedule. OCCP paid \$150,000 on September 1, 2021. If the City does not extend or renegotiate the PPA, then the financial agreement is terminated and OCCP will not owe the City the remaining \$1,850,000, nor will the \$150,000 be returned to OCCP.

LEGAL: The City attorney has advised that the City may terminate the PPA without incurring further or additional liability due to several unsatisfied conditions precedent, including OCCP's failure to obtain a written commitment for Project Financing by December 10, 2023.

CITY MANAGER'S RECOMMENDATION: I recommend the City not enter into negotiations for 4th amendment, and allow the Power Purchase Agreement to expire for reasons stated in this memo, including the lack of project financing that was to happen by December 10, 2023.

PROPOSED MOTION: None

ATTACHMENTS:

1. [Resolution 2020-55 and Power Purchase Agreement](#)
2. [Resolution 2021-14 and PPA Amendment no. 1](#)
3. [Resolution 2021-55 and PPA Amendment no. 2](#)
4. [Resolution 2022-22 and PPA Amendment no. 3](#)

CITY OF UNALASKA
UNALASKA, ALASKA

RESOLUTION 2020-55

A RESOLUTION OF THE UNALASKA CITY COUNCIL APPROVING THE POWER PURCHASE AGREEMENT WITH OUNALASHKA/CHENA POWER, LLC AND AUTHORIZING THE CITY MANAGER TO ENTER INTO THE AGREEMENT

WHEREAS, City of Unalaska operates a public utility to provide for and distribute electricity to customers;

WHEREAS, City Council supports efforts and programs for reliable and cost effective alternative energy sources, including geothermal; and

WHEREAS, Ounalashka/Chena Power, LLC (OCCP) seeks to construct a geothermal plant and sell power to the City of Unalaska; and

WHEREAS, OCCP requires a signed Power Purchase Agreement (PPA) with the City of Unalaska in order to obtain project financing; and

WHEREAS, City representatives have negotiated a PPA with OCCP on behalf of the City of Unalaska in a manner that is consistent with City Council Directives.

NOW THEREFORE BE IT RESOLVED that the Unalaska City Council approves the PPA, and authorizes the City Manager to enter into the agreement.

PASSED AND ADOPTED by a duly constituted quorum of the Unalaska City Council on August 25, 2020.


Vincent M. Tutiakoff, Sr.
Mayor

ATTEST:


Marjie Veeder, CMC
City Clerk



MEMORANDUM TO COUNCIL

To: Mayor and City Council Members
From: Erin Reinders, City Manager
Date: August 25, 2020
Re: Resolution 2020-55: Approving the Power Purchase Agreement with Ounalashka/Chena Power, LLC and authorizing the City Manager to enter into the agreement

SUMMARY: Ounalashka/Chena Power, LLC (OCCP) requires a Power Purchase Agreement (PPA) with the City of Unalaska to obtain financing for a geothermal project. Negotiations have been underway since early January between the City and OCCP. This memo provides some context of the PPA. The PPA before you this evening has been developed in accordance with Council Directives and is supported by OCCP. Resolution 2020-55 approves the PPA and authorizes the City Manager to sign the agreement.

PREVIOUS COUNCIL ACTION: The City continues to support efforts and programs for reliable and cost effective alternate energy sources, including geothermal. City Council has identified this support as a federal priority. To this end, during the fall lobbying trip to Washington DC in 2019, City representatives sat alongside representatives from the Q-tribe and OC in a meeting with the Department of Energy demonstrating support for a geothermal project on our island.

November 26, 2019

- Work Session, Presentation from OCCP regarding their Geothermal Project

January 30, 2020

- Special Meeting Work Session, Update from OCCP on their geothermal project (standalone meeting)

February 25, 2020

- Work Session, Report from OCCP regarding their Makushin geothermal project

March 10, 2020

- Reports, City Attorney conflict of interest opinion related to OCCP
- Executive Session
 - Discussion regarding potential Power Purchase Agreement between City of Unalaska and OCCP
 - Discussion regarding potential Power Sales Agreements between City of Unalaska and local seafood processing facilities

May 26, 2020

- Directive to the Manager, *“Report back to the City Council by June 16, 2020 for possible action committing to a PPA with OCCP at the Council Meeting on June 23, 2020 a cos/benefit/risk analysis for a potential Power Purchase Agreement concept that commits Unalaska for the purchase of 100MkWhr/year, at \$0.16/kWh, for 30 years taking into account the probability of securing sufficient load sources by fall of 2023 within the Unalaska City Limits.”*

June 23, 2020

- Work Session, presentation and discussion of the financial feasibility and potential risks and rewards related to OCCP’s proposed Makushin Geothermal Power Project
- Directive to the Manager, *“Negotiate and work cooperatively with OCCP LLC to develop a Power Purchase Agreement that enables the City Council to act on such agreement at the Council Meeting on July 14, 2020. Initial loads to be negotiated should be between 80mkwhr and 100mkwhr. Costs and rates to be negotiated within the Power Purchase Agreement.”*

July 21, 2020

- Special Meeting Work Session & Executive Session, Discussion of Power Purchase Agreement with OCCP

August 11, 2020

- Executive Session, Discussion of Power Purchase Agreement with OCCP
- Directive to the Manager, *“I move to direct staff to accept both the OCCP proposal to share in the upside and daily liquidated damages in the amount of \$20,000.00 per day with a cap of \$5 million. The heat pump contribution is to remain at \$10 million cost to OCCP. The Annual cost is to be \$16,300,000.00. The meter on the upside sharing starts at 100,000,000kwh. A minimum of two transmission lines to the delivery point of the City is required.”*

BACKGROUND: City staff began working with the OCCP team in late 2019 to address project planning and development questions and to draft a PPA. City staff team consisted of City Manager, Assistant City Manager JR Pearson, Public Utilities Director Dan Winters and Deputy Director Steve Tompkins. We enlisted the support of Mike Hubbard, long time City Consultant with a strong background in public utilities project and analysis. Our attorney was brought on to our City team as well. Both Brooks and Mike have been involved with previous Makushin geothermal efforts. We have the right people engaged to help position this project for success and to develop an agreement that is in the best interests of the citizens of Unalaska.

On January 15 and 16, 2020, the City team met with OCCP representatives for a working meeting in Anchorage. The initial focus of the meeting was to develop a conceptual framework that OCCP could take to its potential lenders to determine if financing can be obtained.

Following this meeting, discussions and work continued. Focus shifted to the PPA, understanding the project, identifying challenges, mitigating risks, expanding opportunities, identifying what would need to be done should the project move forward, and refining displaced costs. OCCP communicated that they planned to proceed with their fieldwork and research, which would help reduce the number of uncertainties and assumptions. We reached out to processors to garner their interest in the project and encourage them to attend the February 25, 2020 Council meeting, where OCCP would be presenting on their project. The City team, including Brooks Chandler and Mike Hubbard, met with the OCCP team while they were in town that week. Given travel and weather challenges, this meeting was not as in-depth as planned.

City staff met and talked with processors throughout March and April. At that time, processors were unable to make a long term commitment. Mike Hubbard followed up and had a teleconference with processors to ensure they had an understanding of the overall concept of the project and potential agreements. The City team held a conference call with OCCP on April 24, 2020 and communicated the feedback we were getting from the processors. This was not done in person due to COVID related challenges. We all agreed that the next step was for OCCP, along with the City, to meet with the processors.

Those meetings were never held, but OCCP provided a detailed document outlining several concepts for consideration to the City on May 19, 2020. We responded with some initial thoughts and questions in a timely fashion.

On May 26, 2020, City Council issued a directive to provide a report and cost/benefit/risk analysis regarding a PPA at a particular commitment level. Our focus then shifted to the Council Directive issued on May 26, 2020 to provide. Mike Hubbard prepared the formal report and analysis that included both cost risk and benefits. Brooks Chandler provided a memo related to non-recourse financing as another component of the risk assessment. This material was presented to Council at the June 23, 2020 Council Meeting. At the end of that meeting Council issued a directive to negotiate and work cooperatively with OCCP to develop a PPA for loads between 80mkwhr and 100mkwhr.

Given the complex nature of this topic and the time required to discuss it, City Council participated in a stand-alone Special Meeting and Executive Session on July 21, 2020. This date was selected in coordination with OCCP. City Council provided direction to the City Team for further negotiations with OCCP.

City Council participated in a follow-up Executive Session on August 11, 2020. The City Team provided an update on the continued negotiations. City Council then issued a formal directive for the continued negotiation. Since that time, the City team has been working in accordance with that direction.

DISCUSSION: OC has united forces with Chena Power to create OCCP. OCCP requires a PPA with the City of Unalaska to obtain financing for the Geothermal Project. There is much excitement and interest in the potential for a geothermal project and what it might

mean for our community. It could result in growth and the expansion of our economic base. Indeed, this is a very exciting opportunity, but not an opportunity that can be taken lightly.

A PPA is a comprehensive document with a magnitude of impacts. Throughout this process, Mike Hubbard has provided Council with detailed analysis and findings. Additionally, Brooks Chandler has provided Council with informational memos and guidance. Related materials may be found in previous Council Packets or were reviewed in executive session.

For the past 7 plus months, your City team representing the City of Unalaska has been doing its job in working to reach a tentative agreement to share with Council that we believe would be in the best interest of the community and the rate payers. We have made every effort to provide relevant, unbiased, and objective information to help you in this deliberative process. As always, it is the City Council's responsibly to evaluate this information, weigh the potential risks and benefits, and to ultimately make the decision you feel is best for the community as a whole.

The PPA before you this evening has been drafted based on City Council Directives, and has been agreed to by OCCP.

ALTERNATIVES: Council has three primary options on how to proceed with the Resolution 2020-55 and the PPA. These include:

1. Approve Resolution 2020-55, thereby approving the PPA and authorizing the City Manager to sign the agreement.
2. Disapprove Resolution 2020-55, thereby disapproving the PPA.
3. Table the consideration of Resolution 2020-55, thereby not acting on the PPA at this time. This would allow for time to engage in negotiations with self-generating processors in efforts to obtain written agreements with them prior to entering into a PPA with OCCP.

FINANCIAL IMPLICATIONS: Financial implications related to the details of the PPA, including commitments by both sides for additional studies and infrastructure improvements as well as payments, will vary based on the finalized PPA details.

Primary financial implications of signing a PPA with OCCP at this point relate to the cost of purchasing power and the financial benefits with purchasing power from a City perspective. Ultimately, these costs are passed along to the rate payers. Mike Hubbard has provided the following tables to touch on these implications in 5 different scenarios:

1. The City does not increase its base load of about 40 million kWh.
2. The City increased sales by 30 Million kWh for a total of 70 Million kWh, and everyone pays proportionate share.

3. The City increased sales by 30 Million kWh for a total of 70 Million kWh, and all new purchasers, self – generators, pay only the Makushin power purchase price with the City paying the difference.
4. The City increases sales by 60 Million kWh for a total of 100 Million kWh, and everyone pays proportionate share.
5. The City increases sales by 85 Million kWh (60 Million kWh from self-generating processors and 25 Million kWh from heat) for a total of 125 Million kWh, and everyone pays proportionate share.

Cost. One question is about the net cost of purchasing Makushin power from the City’s perspective. This is important as Council considers entering into a 30-year agreement to purchase this power at a fixed rate. The top half of the table below is the estimated annual expenditures and the bottom half is the cumulative expenditures from the initial year.

Sales (Million kWh)			Year 1	Year 5	Year 10	Year 15	Year 20	Year 25	Year 30
City	Other	Total	Total Annual City Expenditure						
40	0	40	\$ 16,300,000	\$ 16,961,845	\$ 17,827,070	\$ 18,736,430	\$ 19,692,176	\$ 20,696,675	\$ 21,752,413
40	30	70							
	Full Rate*		9,314,286	9,692,483	10,186,897	10,706,531	11,252,672	11,826,671	12,429,950
	Reduced Rate*		11,410,000	11,873,292	12,478,949	13,115,501	13,784,523	14,487,672	15,226,689
40	60	100	6,520,000	6,784,738	7,130,828	7,494,572	7,876,870	8,278,670	8,700,965
65	60	125	9,535,500	9,922,680	10,428,836	10,960,811	11,519,923	12,107,555	12,725,162
			Total Cumulative (from Initial Year) City Expenditure						
40	0	40	\$ 16,300,000	\$ 83,146,382	\$ 170,534,064	\$ 262,379,397	\$ 358,909,765	\$ 460,364,152	\$ 566,993,732
40	30	70							
	Full Rate*		9,314,286	47,512,218	97,448,037	149,931,084	205,091,294	263,065,230	323,996,418
	Reduced Rate*		11,410,000	58,202,467	119,373,845	183,665,578	251,236,836	322,254,906	396,895,612
40	60	100	6,520,000	33,258,553	68,213,626	104,951,759	143,563,906	184,145,661	226,797,493
65	60	125	9,535,500	48,640,633	99,762,428	153,491,947	209,962,213	269,313,029	331,691,333

* Full Rate assumes that costs of Makushin are shared proportionately among all users. Reduced Rate assumes that all sales above the City loads pay for Makushin based on 100 million kWh of sales.

NOTE: Sales in excess of 100 million kWh/year may result in the need to expand the Facility, and costs would increase from that shown.

Savings. The other related question is about the net benefits as compared to providing power without Makushin from the City’s perspective. This accounts for financial benefits of reduced operating costs, minimal fuel costs, revenues from delivery charges from self-generating processors, and revenues from self-generating processors. The top half of the table below is the estimated annual savings (losses) and the bottom half of the cumulative savings (losses) from the initial year. These benefits are based on the oil price assumptions presented at the July 21 Council meeting.

Sales (Million kWh)			Year 1	Year 5	Year 10	Year 15	Year 20	Year 25	Year 30
City	Other	Total	Total Annual Savings (Loss)						
40	0	40	\$ (10,467,964)	\$ (10,254,317)	\$ (10,270,823)	\$ (10,517,688)	\$ (10,732,979)	\$ (10,909,887)	\$ (11,040,645)
40	30	70							
	Full Rate*		(3,332,250)	(2,834,955)	(2,030,650)	(1,864,950)	(1,646,925)	(1,368,722)	(1,021,472)
	Reduced Rate*		(5,427,964)	(5,015,764)	(4,322,702)	(4,273,919)	(4,178,776)	(4,029,723)	(3,818,211)
40	60	100	(387,964)	222,790	1,625,419	1,969,850	2,375,426	2,850,441	3,404,224
65	60	125	2,301,536	3,021,494	4,566,885	5,061,361	5,624,635	6,265,393	6,993,372
Total Cumulative (from Initial Year) City Savings									
40	0	40	\$ (10,467,964)	\$ (52,325,166)	\$ (103,143,473)	\$ (155,249,563)	\$ (208,497,801)	\$ (262,710,250)	\$ (317,672,104)
40	30	70							
	Full Rate*		(3,332,250)	(15,941,003)	(27,507,445)	(37,183,071)	(45,876,177)	(53,301,958)	(59,133,348)
	Reduced Rate*		(5,427,964)	(26,631,252)	(49,433,253)	(70,917,565)	(92,021,718)	(112,491,635)	(132,032,542)
40	60	100	(387,964)	(937,337)	4,276,966	13,414,433	24,454,365	37,726,980	53,607,019
65	60	125	2,301,536	12,781,816	32,415,087	56,707,033	83,674,476	113,687,065	147,160,985
* Full Rate assumes that costs of Makushin are shared proportionately among all users. Reduced Rate assumes that all sales above the City loads pay for Makushin based on 100 million kWh of sales.									
** Additional sales by City assumed to be for heating sales with customers fuel switching for heat. Heating customers are assumed to pay the full Makushin rate, and savings shown are for electric customers only and do not include savings or losses to heating customers.									
NOTE: Sales in excess of 100 million kWh/year may result in the need to expand the Facility, and costs would increase from that shown.									

Impact to Ratepayers. To provide an indication of how important these costs and benefits shown above are, the impacts on customers' monthly bills are shown below for the first ten years of operations. These impacts are based on:

- 1) The average user for each rate class;
- 2) The comparison of Makushin costs with costs associated with continued use of diesel; and
- 3) The oil price assumptions presented on July 21.

	kWh/month/cust		NOTE: Billing impacts for scenario with Heat sales is based on heating customers paying full Makushin rate. Impact to Monthly Bill is for electric bill only and does not reflect savings or losses incurred by heating customers.									
Residential	448											
Small General Service	1,634											
Large General Service	12,575											
Industrial	152,086											
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10		
Rate Increase (Decrease) from Continued Use of Diesel (\$/kWh)												
City Only	0.262	0.264	0.265	0.261	0.256	0.251	0.253	0.254	0.255	0.257		
City + 30 million Full Rate	0.083	0.083	0.084	0.077	0.071	0.060	0.060	0.059	0.059	0.051		
City + 30 million Reduced Rat	0.136	0.136	0.137	0.131	0.125	0.115	0.115	0.116	0.116	0.108		
City + 60 million	0.010	0.009	0.009	0.002	(0.006)	(0.021)	(0.022)	(0.023)	(0.024)	(0.041)		
City + 60 million + Heat	(0.058)	(0.059)	(0.060)	(0.068)	(0.076)	(0.091)	(0.093)	(0.095)	(0.097)	(0.114)		
Monthly Bill Increase (Decrease)												
City Only												
Residential	\$ 117.11	\$ 117.95	\$ 118.79	\$ 116.82	\$ 114.72	\$ 112.49	\$ 113.11	\$ 113.72	\$ 114.32	\$ 114.91		
Small General Service	427.58	430.65	433.70	426.51	418.85	410.69	412.96	415.19	417.38	419.53		
Large General Service	3,290.95	3,314.57	3,338.08	3,282.76	3,223.78	3,161.00	3,178.43	3,195.58	3,212.43	3,228.97		
Industrial	39,800.85	40,086.49	40,370.80	39,701.85	38,988.53	38,229.27	38,440.04	38,647.40	38,851.20	39,051.29		
City + 30 million kWh @ Full Rate												
Residential	\$ 37.28	\$ 37.34	\$ 37.39	\$ 34.62	\$ 31.72	\$ 26.99	\$ 26.79	\$ 26.57	\$ 26.33	\$ 22.72		
Small General Service	136.11	136.33	136.50	126.40	115.80	98.54	97.81	97.01	96.14	82.94		
Large General Service	1,047.60	1,049.26	1,050.59	972.87	891.26	758.47	752.82	746.65	739.95	638.40		
Industrial	12,669.74	12,689.77	12,705.82	11,765.92	10,778.94	9,172.98	9,104.58	9,029.99	8,949.03	7,720.85		
City + 30 million kWh @ Reduced Rate												
Residential	\$ 60.73	\$ 61.02	\$ 61.30	\$ 58.78	\$ 56.12	\$ 51.63	\$ 51.68	\$ 51.71	\$ 51.72	\$ 48.36		
Small General Service	221.71	222.78	223.82	214.60	204.88	188.51	188.68	188.79	188.83	176.57		
Large General Service	1,706.46	1,714.70	1,722.69	1,651.69	1,576.87	1,450.94	1,452.21	1,453.03	1,453.40	1,358.98		
Industrial	20,637.97	20,737.69	20,834.22	19,975.61	19,070.72	17,547.67	17,563.02	17,573.02	17,577.49	16,435.59		
City + 60 million kWh												
Residential	\$ 4.34	\$ 4.09	\$ 3.82	\$ 0.73	\$ (2.49)	\$ (9.22)	\$ (9.75)	\$ (10.30)	\$ (10.88)	\$ (18.18)		
Small General Service	15.85	14.92	13.94	2.68	(9.10)	(33.67)	(35.60)	(37.61)	(39.71)	(66.39)		
Large General Service	121.97	114.84	107.30	20.62	(70.04)	(259.13)	(274.02)	(289.51)	(305.62)	(511.00)		
Industrial	1,475.10	1,388.89	1,297.64	249.36	(847.08)	(3,133.93)	(3,313.99)	(3,501.36)	(3,696.23)	(6,180.10)		
City + 60 million kWh + Heat												
Residential	\$ (25.75)	\$ (26.30)	\$ (26.88)	\$ (30.27)	\$ (33.80)	\$ (40.85)	\$ (41.69)	\$ (42.56)	\$ (43.46)	\$ (51.09)		
Small General Service	(94.01)	(96.03)	(98.12)	(110.51)	(123.42)	(149.13)	(152.22)	(155.40)	(158.67)	(186.54)		
Large General Service	(723.56)	(739.15)	(755.23)	(850.53)	(949.91)	(1,147.79)	(1,171.57)	(1,196.04)	(1,221.21)	(1,435.75)		
Industrial	(8,750.80)	(8,939.27)	(9,133.80)	(10,286.40)	(11,488.20)	(13,881.46)	(14,168.99)	(14,464.91)	(14,769.41)	(17,364.02)		

Additionally, there are known expenses the City is agreeing to contribute in this PPA:

- Up to \$5 million for upgrading the City distribution system, with OCCP committing up to \$7 million. We are agreeing to initially fund the integration and interconnection study, but will be reimbursed from OCCP after the fact.

LEGAL: City Attorney, Brooks Chandler, has been engaged in the PPA development and negotiations with OCCP from the beginning.

STAFF RECOMMENDATION: The City team remains supportive of this project and are excited about what it might mean for the future of our community. The PPA before you this evening has been prepared in accordance with City Council Directives.

As your City Manager, I do, however, recommend tabling Resolution 2020-55 and allowing for time to obtain written commitments from self-generating processors for the purchase of power. These commitments would significantly lessen the financial risk to the City, and the City would be better positioned to sell the power we are agreeing to purchase through the PPA with OCCP. This benefits all rate payers, and in the end, is beneficial to the entire project and community.

Mechanically, this would be accomplished by a Council member first moving to approve and then moving to postpone indefinitely. Council can only postpone to a date certain if that date is the very next meeting. The target date to have these commitments with self-generators and the PPA with OCCP appear before City Council could be the first meeting in January.

No matter what Council chooses to do this evening, my staff and I are ready to support the decision and move forward in accordance with Council's direction.

PROPOSED MOTION: I move to approve Resolution 2020-55.

ATTACHMENTS:

- Memo from City Attorney
- PPA between OCCP and City of Unalaska

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MEMORANDUM

TO: Unalaska City Council



FROM: Brooks Chandler
City Attorney

DATE: August 21, 2020

RE: Geothermal Power Purchase Agreement

At the August 11 city council meeting the city council directed staff to accept the OCCP proposal to share in the upside with the “meter” on the upside sharing starting at 100,000,000 kWh in annual sales. The OCCP proposal as described on page 3 item 5 in a letter to the City Council was “OCCP and City will split the upside for electrical sales above 100M kWh”. OCCP had not in fact proposed the “share in the upside” to start at 100,000,000 kWh per year but on a monthly basis so additional negotiations were required to translate a sharing in the upside to annual kWh sales.

Council also directed staff to negotiate for a daily rate of \$20,000 per day in liquidated damages and to require OCCP to promise to construct two subsea cables so as to provide greater system reliability.

Council’s goals have been accomplished as reflected in the final draft of the power purchase agreement. The two subsea cable requirement is contained in the definitions of “Facility” in Section 1(i) and “Interconnection Plan” in Section 1(m). Section 16 sets the daily liquidated damages amount at \$20,000.

The “split the upside” requirement is stated in Section 5 (h) and uses a mathematical formula set out in Exhibit F. Here is how it works using the 125,000,000 kWh in annual sales

that is the example in Exhibit F. This is a 50/50 split based on kWh sold above 100,000,000 as determined by the rate per kWh paid by the City. The additional payment to OCCP in the example is 2,037,500 an additional 12.5% of the annual 16,300,000 payment. 12.5% is a 50-50 split of the 25% increase in kWh sold above the 100,000,000 kWh threshold. OCCP gets 12.5% of this upside. The City gets 12.5% of the upside.

This provision will allow OCCP the opportunity to recover some, all or more than all of the additional \$5,000,000 they have promised to invest in heat pump infrastructure should the project exceed the point where the additional meter payment starts “running”. This clearly would generate a “win-win” for OCCP and city ratepayers.

Other provisions of the agreement and our assessment of risks have been described in our memoranda of March 10, 2020, July 17, 2020 and July 27, 2020 and are not repeated here.

POWER PURCHASE AGREEMENT

BETWEEN

CITY OF UNALASKA, a first-class Alaska municipal corporation

AND

OUNALASHKA CORPORATION/CHENA POWER, LLC, an Alaska limited liability company

Parties

This POWER PURCHASE AGREEMENT, dated August 31, 2020 (Agreement) is made between the City of Unalaska, a first-class Alaska municipal corporation (Purchaser) and Ounalashka Corporation/Chena Power, LLC (Seller) a licensed Alaska limited liability company duly organized under the laws of the State of Alaska.

Recitals

Whereas, the Purchaser owns and operates water, sewer and electric public utilities for the City of Unalaska;

Whereas, the Seller intends to develop and build a geothermal power system to generate electricity for sale to the Purchaser (Makushin Geothermal Project); and

Whereas, the Purchaser desires to purchase electric power from the Seller under the terms and conditions set forth herein; and

Whereas, upon complete satisfaction of the conditions precedent set forth in this Agreement, the Purchaser and Seller intend for this Agreement to become binding and fully enforceable on the Parties.

Now, therefore, the Purchaser and the Seller (jointly the Parties) in order to achieve the foregoing do agree and commit as follows.

Terms and Conditions

1. DEFINITIONS

- (a) "Agreement" means this Power Purchase Agreement.
- (b) "Actual Project Capability" means a Project Capability, as determined by an independent third-party engineer, that is less than the stated Project Capability and

such that the Purchaser is unable to meet 100% electrical demand with Energy from the Facility.

- (c) **“City Distribution System”** means all city-owned equipment interconnected with the City distribution and transmission lines up to the Delivery Point.
- (d) **“Commercial Operations Date”** means the date on which the last of the following events occurs: 1) construction of the Facility and the transmission lines from the Facility to the Delivery Point have been substantially completed in accordance with the terms and conditions of this Agreement and Applicable Laws and the Facility and transmission lines possess all the other material characteristics necessary for delivery of Energy to the Delivery Point pursuant to this Agreement; 2) the Facility has successfully completed all tests which must be performed prior to commercial operation as required by applicable laws, start up and testing procedures required by the Engineering Procurement Construction Contract between OCCP, LLC and its manufacturers and installers and has demonstrated as confirmed by an independent engineer retained by Seller in a written report consistent with Prudent Electrical Practices or the terms of the Interconnection/Integration Plan that the Facility is fully available to be operated and able to provide not less than the Project Capability to the Delivery Point and that output can be dispatched into the Purchaser’s system without disruption and on a commercial basis; 3) Seller has obtained all governmental approvals and Permits required to begin commercial operations and operate and maintain the Facility in accordance with this Agreement, and all such Permits and approvals are final and in full force and effect; and; 4) Seller and Purchaser have obtained the insurance specified in Section 18.
- (e) **“Commercial Operation Deadline”** means May 31, 2024 which is the date by which the Facility must have reached the Commercial Operations Date, or such other date as provided in this Agreement or as may be agreed to in a writing signed by both Parties.
- (f) **“Delivery Point”** means the interconnection point(s) between the Seller’s Facility and the City Distribution System. This may be comprised of a single point or points for transferring energy between the Seller’s Facility and the City Distribution System.
- (g) **“Energy”** means geothermal energy for electrical power generation expressed in kWh generated from the Facility and provided to Purchaser by Seller under this Agreement.

- (h) **“Equivalent Availability Factor”** means the ratio of hours the Facility is available for power generation at Project Capacity to the number of hours in a particular calendar month. The removal or derating of any operational component which would limit the ability to generate at Plant Capacity to the Delivery Point shall be considered Unavailable. An example of how Equivalent Availability Factor is calculated is attached as Exhibit D.
- (i) **“Facility”** means any Facility/facilities or component/components of/to the Makushin Geothermal Project used to produce Energy owned by the Seller including all electric power interconnection and transmission equipment located on Seller’s side of the Delivery Point. Transmission equipment shall include two subsea cables each capable of transmitting Energy to the Delivery Point. Facility includes an electric generating facility with a net output of 30 MVA at the Delivery Point, using geothermal fluid as the fuel source and located near the existing ST-1 well (“Project Site”). Additional capacity added to the Facility after the Commercial Operation Date shall not be subject to this Agreement unless the Parties have executed and approved an amendment to this Agreement.
- (j) **“Fixed Payment”** means the annual payment Purchaser and Seller agree will be paid for electrical energy which may be utilized during the initial Year of the Term and thereafter increased based on Section 5 requirements. The fixed payment shall be divided into 12 equal monthly payments.
- (k) **“Force Majeure”** means (a) any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, civil disturbances, sabotage, blockade, expropriation, confiscation, fire, unusual or extreme adverse weather-related events or natural disasters (such as lightning, landslide, earthquake, tornado, hurricane, storm or flood), pandemic, epidemic or any order, regulation or restriction imposed by any Governmental Authority, or (b) any other event of circumstance, which, in each case of clauses (a) and (b), (i) prevents a Party from performing any of its obligations under this Agreement, (ii) could not reasonably be anticipated as of the date of this Agreement, (iii) is not within the reasonable control of, or the result of negligence, willful misconduct, breach of contract, intentional act or omission or wrongdoing on the part of the affected Party (or any subcontractor or Affiliate of that Party), and (iv) which by the exercise of due diligence the affected Party is unable to overcome or avoid or cause to be avoided; provided, nothing in this clause (iv) shall be construed so as to require either Party to accede or agree to any provision not satisfactory to it in order to settle and terminate a strike or labor dispute in which it may be involved. A Force Majeure does not include any of the following: (1) events arising from the failure by Seller to construct, operate or maintain the Facility in

accordance with this Agreement; (2) any increase of any kind in any cost; (3) delays in or inability of a Party to obtain financing or other economic hardship of any kind; or (4) any changes in the financial condition of Purchaser, Seller, or any subcontractor or supplier affecting the affected Party's ability to perform its obligations under this Agreement.

- (l) **“Initial Synchronization”** means the date upon which the Facility is first synchronized at the Delivery Point with Purchaser's system.
- (m) **“Interconnection / Integration Plan”** means the document agreed by the Parties that represents requirements for system interconnection and integration of power to the Purchaser's existing system. The plan shall include two subsea cables each capable of transmitting Energy to the Delivery Point and shall consider city, state, federal codes and standards, in conjunction with the geothermal plant design basis and shall incorporate Prudent Electrical practices to integrate the City Distribution System taking into account methodology to improve Purchaser's Electrical System Integrity to the extent agreed in Section 11, or as mutually agreed in the actual plan which is to be attached as Exhibit B, when completed.
- (n) **“kWh”** means a kilowatt-hour of electric energy.
- (o) **“Local Tax”** means ad valorem real and personal property taxes levied by the City of Unalaska on the Facility.
- (p) **“Metered Energy”** means the Energy delivered to Purchaser by Seller at the Delivery Point as measured by the Purchaser's supplied Meter at the Delivery Point.
- (q) **“Metering Equipment”** means equipment required to provide a complete metering circuit including; cabinets, potential transformers (PT's), current transformers (CT's), raceway and interconnection wiring.
- (r) **“Month”** means a calendar month.
- (s) **“Outage”** means a duration of time in which the facility cannot provide 100% of required demand, requiring the Purchaser or self-generators to run additional generation, interrupt loads, or reduce loads. Outages shall be measured in hours. An outage of any period of time up to 60 minutes shall be equal to 1 hour. A sum of all single outages less than 60 minutes, in a 24-hour period shall be a maximum of 24 hours.
- (t) **“Peak Capacity”** has been reached when a measurement of power in MVA or KW has exceeded 1.5% for any duration of time, i.e., 30 MVA Peak Capacity = 30.405 MVA.

- (u) **“Permits”** means all applications, permits, licenses, franchises, certificates, concessions, consents, authorizations, approvals, registrations, orders, filings, entitlements, and similar requirements of whatever kind and however described that are required to be obtained from a Governmental Authority with respect to the development, siting, design, acquisition, construction, equipping, financing, ownership, possession, start-up, testing, operation or maintenance of the Facility, the production and delivery of Energy or any other transactions or matter contemplated by this Agreement (including those pertaining to electrical, building, zoning, environmental, and occupational safety and health requirements).
- (v) **“Plant Availability”** means that the Facility is operating at a capacity such that all power requirements of the Purchaser are met up to the Project Capability.
- (w) **“Plant Reliability”** is defined as the Facility’s ability to load follow demand, up to Project Capability.
- (x) **“Project Capability”** means the installed capability of the Facility to maintain Plant Reliability at the Delivery Point at Peak Capacity.
- (y) **“Project Finance”** means a loan from the Department of Energy or third-party lender sufficient to pay for and/or reimburse Seller for construction and initial operations costs and expenses associated with the Makushin Geothermal Project.
- (z) **“Project Site”** means the real property shown on the attached Exhibit A.
- (aa) **“Prudent Electrical Practices”** means those standards of design, engineering, construction, workmanship, operation, care and diligence normally practiced by internationally recognized engineering and construction firms and prudent operators of electric generation facilities similar to the Facility and electrical transmission systems in the Western United States during the relevant time period, which practices, methods and acts, in the exercise of prudent and responsible professional judgment in the light of the facts known at the time the decision was made, could reasonably have been expected to accomplish the desired result consistent with good business practices, reliability and safety. Prudent Electrical Practice is not intended to be the optimum practice, method or act to the exclusion of all others, but rather is intended to be any of the practices, methods and/or actions generally accepted in the Western United States during the relevant time period. Prudent Electrical Practice includes taking reasonable steps to ensure that: (a) equipment, materials, resources, and supplies are available to meet the Party’s needs; (b) sufficient operating personnel or control procedures are available at all times and are adequately

experienced, trained and licensed as necessary to operate the Facility or Purchaser's system properly and efficiently, and are capable of responding to reasonably foreseeable emergency conditions; (c) preventive, routine, and non-routine maintenance and repairs are performed on a basis that ensures reliable long-term and safe operation, and are performed by knowledgeable, trained, and experienced personnel utilizing proper equipment and tools; and (d) appropriate monitoring and testing are performed to ensure equipment is functioning as designed.

- (bb) **"Purchaser"** means the City of Unalaska through its Public Utilities Department.
- (cc) **"Purchaser's Electric System Integrity"** means operation of Purchaser's electric power and transmission system in a manner that minimizes risks of injury or damage to persons and/or property and enables Purchaser to provide reliable electric power service to its customers.
- (dd) **"Seller"** means the Ounalashka Corporation/Chena Power, LLC, an Alaska limited liability company.
- (ee) **"Startup Period"** means the period that begins at Initial Synchronization and ends at the Commercial Operations Date.
- (ff) **"Year"** means each twelve (12) month period during the Term commencing on the Commercial Operation Date or the anniversary of such date.

2. GENERAL

- (a) During the Startup Period and continuing through the term of this Agreement, Seller shall deliver to Purchaser, and Purchaser shall receive from Seller electric energy output from the project Facility/facilities in accordance with the terms and conditions of this Agreement.
- (b) Subject to 2 (c) and (d) below, Seller shall sell exclusively to Purchaser; provided, however, that minimum payments are made by the Purchaser, as described in Section 5 of this Agreement.
- (c) Purchaser shall have the exclusive right to provide electric service to all new and existing customers within Purchaser's existing service area at the City's then existing tariff rates. Purchaser shall have the right of first refusal to provide electric service to all new customers located outside Purchaser's existing service area that

may request electric service from the Project, including to any operations owned and/or controlled by Seller and new customers owned in whole or in part by Ounalashka Corporation, Chena Power LLC or any subsidiary or affiliated entity at a rate equal to the City's cost of city purchased or city generated power plus applicable standard customer charges. The first right of refusal period shall expire thirty (30) days after Purchaser is provided written notice of such new customer ("Refusal Period"). At the expiration of the Refusal Period Seller shall have the exclusive right, in its sole discretion, to provide electrical service to new customer(s) under a separate agreement, the terms of which shall be negotiated exclusively between Seller and such third-party(ies). Any such Agreement between Seller and such third party(ies) shall not reduce Seller's obligation to provide 30 MVA to the Purchaser at the Delivery Point.

- (d) Seller shall convey title to and risk of loss of all energy delivered to the Purchaser at the Delivery Point.

3. FACILITY CONSTRUCTION AND COMMERCIAL OPERATION

- (a) Seller shall use reasonable commercial efforts to construct the Facility and achieve the Commercial Operation Date by the Commercial Operation Deadline. Seller shall provide Purchaser with periodic reports about the progress of the Facility construction and completion.
- (b) Seller shall provide Purchaser with at least 70 days advance notice of the date when Seller anticipates achieving Initial Synchronization.
- (c) Seller shall provide Purchaser with at least 45 days advance notice of when Seller anticipates beginning to demonstrate Commercial Operation has been achieved. Purchaser shall be allowed to observe the Facility during demonstration or testing required to establish Commercial Operation. Purchaser shall accommodate or allow reasonable correspondence and collaboration with Purchaser customers to facilitate adequate loading of Facility to allow completion of all tests required to complete the "start-up" process.
- (d) Energy exchange during the Start-Up Period shall be at no cost to the Purchaser or customers of the Purchaser.
- (e) Seller shall provide Purchaser written certification of Commercial Operations when Seller believes that all requirements under this Agreement for achieving

Commercial Operation Date of the Facility, including the conditions precedent specified in the definition of “Commercial Operation Date” in Section 1, have been satisfied. If Purchaser rejects certification of Commercial Operations, Purchaser shall state in detail the reasons for its rejection. The Parties shall immediately meet and confer to address Purchaser’s concerns. Commercial Operation shall be deemed to have occurred on the date that the requirements for Commercial Operation are satisfied, which date may be earlier or later than the date on which Purchaser accepts Seller’s certification that Commercial Operation has occurred and/or the date on which any concerns that Purchaser expresses in connection with Seller’s notice are resolved; provided the Parties acknowledge or are deemed to have acknowledged, or it is determined through dispute resolution, that all such requirements for Commercial Operation have been satisfied on such earlier date.

- (f) Seller shall provide Purchaser with as built drawings of the Facility and all equipment placed at the Delivery Point within sixty (60) days after the date of Commercial Operations.
- (g) Purchaser may inspect the Facility during the term hereof upon reasonable advance notice to Seller.

4. TERM

- (a) Subject to Sections 4 (b) and (c) below, this Agreement shall become effective on the date it is executed and delivered by both Parties and shall continue in effect for a period of thirty (30) years after the Commercial Operation Date (Term).
- (b) The Term of this Agreement may be extended by mutual agreement of the Parties for an additional period, provided that the Purchaser or the Seller request in writing an extension of this Agreement not less than eighteen (18) months prior to the expiration of the initial Term. In the event an extension request is submitted by either party, Purchaser and Seller shall each negotiate in good faith using commercially reasonable efforts to agree on the terms, conditions, and length of an extended term.
- (c) Seller and Purchaser agree that the purpose and intent of this Agreement is dependent on the successful completion of the construction of the Facility/Facilities and the related achievement of the Commercial Operation Date by the Commercial Operation Deadline. As such, in the event that either; 1) Seller fails to obtain Project Financing by June 10, 2021; or 2) construction of the Facility/Facilities is

at any time discontinued, abandoned or otherwise terminated by Seller in its sole discretion , or 3) Seller fails to provide written assurances to Purchaser that the Commercial Operation Deadline will be achieved in a form consistent with Prudent Utilities Practices, or 4) the Project fails to reach Commercial Operation by the Commercial Operation Deadline, then either Party may terminate this Agreement upon thirty (30) day's prior written notice to the other party. In the event that a party elects to terminate this Agreement pursuant to this Section 4 (c), neither Seller nor Purchaser shall have any further liability and/or obligations to the other hereunder after the termination date, except for obligations, liabilities and/or duties that accrued prior to such termination or that survive such termination by the terms of this Agreement.

5. FIXED PAYMENT

- (a) The Seller agrees to sell and the Purchaser agrees to purchase electrical energy which may be utilized immediately for a Fixed Payment of sixteen million three hundred thousand dollars per year (\$16,300,000.00). Each successive Year during the Term the Fixed Payment shall increase; 1) by one per cent (1%) plus; 2) by an amount equal to the total amount of Local Tax paid by Seller during the previous Year.
- (b) If Seller elects to construct the Project at a different location than the Project Site which decreases construction and operating costs by more than five per cent (5%), prices shall be revised downward to reflect the decreased construction and operating costs.
- (c) If Purchaser requests Seller to increase the generating capacity of the Facility above the Project Capability, the Fixed Payment shall be increased, via an addendum to this PPA in an amount to be negotiated by the Parties.
- (d) In the event the Facility fails to deliver Plant Availability at Project Capability the following adjustment to pricing and Seller actions are agreed. The intent of these adjustments are not to act as a penalty to the Seller, but to reduce Purchaser's actual financial hardship and to place Purchaser in the same position as if the Facility delivered Plant Availability at Project Capability as agreed. Purchaser and Seller recognize that determination of the actual financial impact to Purchaser in such circumstances is not easily capable of precise calculation and have adopted these provisions for that reason. This subsection does not supersede Purchaser's or Seller's rights to declare a Default under section 15.

(e) If in any month during the Term the Seller cannot provide the Plant Availability at the Delivery Point for reasons other than limitations within the Purchaser's Electric System Integrity and the Purchaser must either operate its generation equipment or generate power from its own facilities or purchase power from other sources to meet its load obligations or allow customers to self-generate power they otherwise would have been supplied by Purchaser or reimburse customers for their cost of fuel used to self-generate power, Seller shall reimburse the Purchaser the sum of the following : ("Reimbursement Payment"):

- 1) the cost of Purchaser's fuel
- 2) the cost of fuel of customers who self-generate
- 3) one cent (.01) per kilowatt hour for each kWh of energy generated by Purchaser and self-generators that would have been supplied by the Facility ("Administrative Charge"). Each successive Year during the Term the Administrative Charge shall increase by one per cent (1%).

The Reimbursement Payment or Increased Reimbursement Payment shall be treated as a deduction to the Fixed Price Payment made by the Purchaser in the following month.

(f) If at any period during the Term, Seller cannot provide the Project Capability at the Delivery Point for either a period of three consecutive calendar months, or six or more months in any Year, the Actual Project Capability will be determined and the Administrative Charge for those months shall be increased by .02 per kWh beginning with the next monthly payment ("Increased Reimbursement Payment").

(g) After Actual Project Capability has been determined, Seller shall then undertake the necessary means and methods to restore the Facility to Project Capability. The applicable Increased Reimbursement Payment shall continue until Seller has restored Project Capability. However, if instead of restoring Project Capability Seller negotiates lower Project Finance payments the Fixed Price shall be reduced in proportion to Seller's lower Project Finance payments.

(h) If Metered Energy delivered in any Year exceeds 100,000,000 kWh Purchaser shall make an additional payment to Seller calculated as set forth in Exhibit F ("Additional Payment"). The Additional Payment shall be paid in the first month of the following Year.

6. METERING AND PAYMENT OF INVOICES

- (a) Meters shall be owned and operated per city code. Purchaser shall read Purchaser's meter at the Delivery Point on the last day of each month after Initial Synchronization and continuing through the month following the end of the Term, unless otherwise mutually agreed to by the Parties. Purchaser shall prepare and render to Seller within five (5) business days after the end of each month a statement detailing daily and hourly records of Metered Energy during the preceding month. Seller shall have the right to monitor and witness such readings at its own cost and expense. Within five (5) business days after receipt of the statement of Metered Energy Seller shall prepare and render to Purchaser an invoice for Seller's calculation of the payments due to Seller for such month.
- (b) Each Year, monthly payments due shall be equal to one-twelfth of the Base Price (less applicable credits)
- (c) Purchaser shall pay the undisputed amount of Seller's invoices within thirty (30) days after receipt of the invoice. If either the invoice date or payment date is not a Business Day, then such invoice or payment shall be provided on the next following Business Day. Payment shall be made at the office of the Seller, as designated in writing by the Seller. If Purchaser disputes the accuracy of an invoice, or Seller disputes the accuracy of the statement of Metered Energy, the Parties shall use commercially reasonable efforts to resolve the dispute. Any adjustments which the Parties may subsequently agree to make regarding any such invoice shall be made by a credit or additional charge on the next invoice submitted.
- (d) If any payment due from either party under this Agreement shall not be paid when due and payable to the other party, the offending party agrees to compensate the harmed party at the amount in arrears times a rate equal to two percent (2%) over the prime rate as published by the "Money Rates" section of the New York City edition of the *Wall Street Journal*, or mutually agreed upon alternative ("Interest Rate").
- (e) At any time during normal business hours, either party shall have the right, upon reasonable prior notice to the other party, to examine and /or make copies of the records and data of the other party relating to this Agreement (including all records and data relating to or substantiating any charges paid by or to either party and including without limitation metering records of energy delivered) for the period such records and data are required to be maintained. All such records and data shall

be maintained for a minimum of seven (7) years after the creation of such records for data.

7. METER AND SUBSTATION LOCATION AND PROCEDURES

- (a) As a condition precedent the Parties agree to establish a mutually acceptable location for a new terminal switching station taking the undersea cable and fiber and converting to power acceptable for tie into the City Distribution System.
- (b) As a condition precedent the Parties agree to establish mutually acceptable locations for Metering Equipment locations.
- (c) Supply, operation, maintenance and ownership of revenue meters and all Metering Equipment shall be in accordance with paragraph 7(e), and the Interconnection/Integration Plan and Operating Procedures adopted as required by Section 11.
- (d) Purchaser and Seller shall supply each other with easements as needed for installation, operation and maintenance of equipment by the responsible party.
- (e) After the date of Commercial Operations meters shall be maintained and read by the Purchaser. Purchaser shall maintain the Meter according to the manufacturer's suggested maintenance and testing recommendations. The manufacturer's maintenance recommendations and Purchaser's maintenance records for the Meter will be made available to Seller upon reasonable written request. Meters shall be furnished and installed by Purchaser.
- (f) Purchaser shall test and calibrate the meters by comparison with accurate standards at intervals satisfactory to the Parties. Purchaser shall make special meter tests at any time at Seller's request using an independent party selected by Purchaser. The costs of all tests shall be borne by Purchaser; provided however, that if any special meter test made at Seller's request discloses that the meters are reading accurately, Seller shall reimburse Purchaser for the cost of such test. Meters registering no more than two percent (2%) above or below normal shall be deemed to be accurate. The readings of any meter which shall have been disclosed by the test to be inaccurate shall be corrected, based on the inaccuracy at the time of testing, for the shorter of (1) the number of days since the meter being tested was installed, (2) the number of days since the last test indicating that such meters were performing properly, or (3)

the one hundred eighty (180) days prior to the current test, in accordance with the percentage of inaccuracy found by such test.

- (g) To the extent that the adjustment period covers a period of deliveries for which payment has been made by Purchaser, Seller shall use the corrected measurements to re-compute the amount due (which amount shall not include interest) for the period of the inaccuracy and shall subtract the previous payments by Purchaser for such period from such re-computed amount. If the difference is a positive number, such difference shall be paid by the Purchaser to the Seller, and if the difference is a negative number, such difference shall be paid by the Seller to the Purchaser. Payment of such difference shall be made by means of a credit or an additional charge on the next statement rendered.

8. HEATING SYSTEM

Within one (1) month of executing this PPA, Seller will commission a feasibility study, at its cost, to survey Unalaska homes and business for conversion and use of air source heat pump (ASHP) technology. Assuming feasibility proven to the mutual satisfaction of Seller and Purchaser (metrics for feasibility are less greenhouse gas emissions and air pollution to the community, and less net cost to consumers for heating), Seller will design, procure, and install to entities who wish to convert their homes and business to ASHP at no cost to consumers. Seller shall pay for all design and installation costs up to a maximum of ten million dollars.

9. DISPATCH, OPERATIONS AND MAINTAINENCE.

- (a) After the Commercial Operation Date, Purchaser (or a designee on behalf of Purchaser) shall dispatch the Facility as necessary to meet Purchaser's need for electrical energy, up to the Project Capability.
- (b) Seller (or a designee on behalf of Seller) shall operate and maintain the Facility in accordance with Prudent Electrical Practices, Applicable Laws and Permits and in a manner that does not materially adversely affect Purchaser's Electric System Integrity. It shall be Seller's responsibility to provide suitable protective equipment as it concerns the Facility, such as fuses, circuit breakers, and relays, to adequately protect the Facility's and Purchaser's electric power equipment, and to ensure that the electric power interconnection for the Facility complies with all applicable legal, safety, and electrical code requirements.
- (c) To the extent not inconsistent with Prudent Electrical Practices and manufacturers' guidelines and recommendations generally applicable to the Facility, Seller shall

cause the Facility to promptly comply with all dispatch orders issued by Purchaser or on behalf of Purchaser.

- (d) At least sixty (60) days prior to the estimated date of Initial Synchronization, Seller shall provide Purchaser with a maintenance schedule for the Facility for the Facility's first year of operation. Thereafter, Seller shall submit to Purchaser annual maintenance schedules for the Facility no later than October 1 of each year that cover the twelve (12) month period starting January 1 and ending December 31 of the succeeding year and a long-term maintenance schedule that will encompass the immediately ensuing four (4) maintenance years. Purchaser shall provide written notice of any reasonable objections to the proposed then applicable annual maintenance schedule within ten (10) Business Days of Purchaser's receipt thereof. Seller shall furnish Purchaser with reasonable advance notice of any change in the annual maintenance schedule. Reasonable advance notice of any change in the annual maintenance schedule involving any shutdown of the entire Facility is as follows:

Scheduled Outage	Expected Duration	Advance Notice to Purchaser
(1)	Less than 2 days	At least 24 hours
(2)	2 to 5 days	At least 7 days
(3)	Major overhauls (over 5 days)	At least 30 days

- (e) The Facility shall be designed to operate with 100% Plant Availability and 100% Plant Reliability.
- (f) The Facility shall obtain and maintain an average Equivalent Availability Factor of ninety-five percent (95%).
- (g) Outages shall not exceed more than 87 hours in a 365-day period. If the number of Outages is exceeded, the Seller shall be required to install equipment to limit outages to less than 87 hours, provided same outages are a result of Facility.
- (h) Subject to the foregoing, Seller shall have the right to interrupt the supply of electrical power and energy for reasonable maintenance of lines, generation equipment and other facilities. Seller shall have no obligation or responsibility to Purchaser to provide standby generation in the event power delivery from the Facility is interrupted.
- (i) If either Seller's ability to supply available electric power and energy from the Facility or Purchaser's ability to receive and transmit available electrical power and energy from the Facility shall fail, be interrupted, or become defective through an act of Force Majeure, the affected party shall be excused from performance of obligations under this Agreement to the extent such performance is prevented or

delayed by such event or circumstance and the affected party shall not be liable therefore for damages caused thereby, provided the Party, as soon as practicable after becoming aware of the Force Majeure, declares the Force Majeure by giving a written notice (the "Force Majeure Notice") to the other Party and upon request by the other Party furnishes the other Party with a detailed description of the full particulars of the Force Majeure reasonably promptly (and in any event within fourteen (14) days after the request therefor), which shall include information with respect to the nature, cause and date and time of commencement of such event, and the anticipated scope and duration of the delay. The Party providing the Force Majeure Notice shall be excused from fulfilling its obligations under this Agreement until such time as the Force Majeure has ceased to prevent performance or other remedial action is taken, at which time the Party shall promptly notify the other Party of the resumption of its obligations under this Agreement. The relief provided by this section shall only apply if the affected party is taking commercially reasonable efforts to remedy such situation and such situation was not the result of the negligence or fault of the affected party. No event or circumstance shall be considered to excuse a party's obligations under this Agreement to the extent such event or circumstance could have been prevented, overcome or remedied if the affected party had exercised commercially reasonable efforts to do so, and shall expressly exclude a party's financial inability to perform.

- (j) **Operations Log.** Seller shall maintain an operations log, which shall include information on the actual average hourly, monthly and annual electric power output of the Facility, well availability and output, planned and unplanned maintenance outages, circuit breaker trip operations requiring a manual reset, partial de-ratings of equipment, and any other significant event related to the operation of the Facility. The operations record shall be available for inspection by Purchaser upon reasonable advance written request, and Seller shall make the data available on a real-time basis by remote access to Purchaser if Purchaser acquires the necessary equipment and software license to process the data by remote access.
- (k) **Monthly Reports.** If requested in writing by Purchaser, Seller shall provide to Purchaser an electronic monthly report, no later than thirty (30) days after the end of each calendar month identified in the written request, regarding the operations of the Facility that shall include: all reporting information maintained in the operations record and hourly electric power output of the Facility. The monthly report shall also include an estimate of monthly electric power output for the calendar year and such other information related to the operation of the Facility that Purchaser reasonably requests in writing.

10. OPERATING COMMITTEE AND OPERATING PROCEDURES

- (a) Purchaser and Seller shall each appoint one delegate and one alternate delegate to act on matters relating to the operation of the Facility under this Agreement. Such

delegates shall constitute the "Operating Committee". The Parties shall notify each other in writing of such appointments and any changes thereto. The Operating Committee shall have no authority to modify the terms or conditions of this Agreement.

- (b) The Operating Committee shall, acting reasonably, establish mutually agreeable written operating procedures ("Operating Procedures") in draft form no later than the Commercial Operations Date. Operating Procedures shall include: the method of day-to-day communications; metering, telemetering, telecommunications, and data acquisition procedures; operating and maintenance scheduling and reporting; operations log; and such other matters as may be mutually agreed upon by the Parties.

11. SYSTEMS INTERCONNECTION AND INTEGRATION

- (a) Within twenty months (20) of executing this Agreement, the Parties shall agree to the Interconnection/Integration Plan a copy of which shall be attached to this Agreement by reference as Exhibit B.
- (b) The Seller shall bear all cost of outside engineering, design and installation costs associated with the Interconnection and Integration requirements with the City Distribution System. The equipment necessary to interconnect at Project Capacity with the City system shall be approved by the City consistent with Prudent Electrical Practice.
- (c) Purchaser shall commission an engineering study to determine reliability upgrades required for the City Distribution System to accept Energy from the Facility. The first two million dollars, (\$2,000,000.00) in cost, for the engineering study and resulting reliability upgrades to the City Distribution System identified in the Interconnection/Integration Plan will be borne solely by the Seller. The next ten million dollars (\$10,000,000) in cost for reliability upgrades identified in the Interconnection/Integration Plan, will be shared equally by Purchaser and Seller. Seller's obligation to share costs are in addition to Seller's cost obligations under paragraph 11(b).
- (d) All equipment interconnected with the City Distribution System shall be installed in accordance with applicable City of Unalaska ordinances and the Interconnection/Integration Plan including but not limited to installation of a revenue grade meter(s) approved, installed and maintained by Purchaser, in equipment provided by the Seller at each Point of Delivery.

12. TAXES

The Parties shall pay to the appropriate taxing authority when due all sales, use and similar taxes levied on Seller's sales, and Purchaser's purchase from or use, occupancy, or operation of the Facility/facilities during or for any part of the Term.

13. COMPLIANCE WITH APPLICABLE LAW

The Parties shall comply with all local, state and federal laws, statutes, ordinances, rules, regulations, decrees, injunctions, orders and codes now or hereafter applicable to the Facility/facilities, regardless of whether they are of legislative, administrative or judicial origin or implement a new or changed governmental policy, including all of those which address planning, zoning, use, subdivision, occupancy, building, construction, maintenance, repair, health, safety, insurance, environmental conservation, environmental pollution and/or hazardous substances.

14. RIGHT OF ACCESS

Duly authorized representatives of either party shall be permitted entry and/or access to premises, facilities and property of the other party, to the extent related to the Facility/Facilities, at all reasonable times in order to carry out the provisions of this Agreement.

15. DEFAULT

- (a) Seller Events of Default. The following shall constitute an event of default on the part of Seller under this Agreement: 1) Seller shall fail to comply with any material provision of this Agreement, and such failure shall continue uncured for thirty (30) days after notice thereof by Purchaser, provided that if such failure is not capable of being cured within such period with the exercise of reasonable diligence, then such cure period shall be extended for an additional reasonable period of time (not to exceed one hundred and eighty (180) days) so long as Seller is exercising reasonable diligence to cure such failure; 2) Seller fails to achieve Commercial Operation by the Commercial Operation Deadline and such failure is not cured within ninety (90) Business Days after Notice from Purchaser; or 3) Seller abandons the Facility (i.e., ceased construction or operation of the Facility or the Facility has ceased production and delivery of the Energy for a consecutive sixty (60) day period and such cessation is not a result of an event of weather or Force Majeure) and such abandonment is not cured within sixty (60) Business Days after Notice from Purchaser.
- (b) Purchaser Events of Default. The following shall constitute events of default on the part of Purchaser under this Agreement:

- (i) Purchaser shall fail to make payments for undisputed amounts due under this Agreement to Seller within ten (10) days after notice from Seller that such payment is unpaid when due;
 - (ii) Purchaser shall fail to comply with any material provision of this Agreement (other than the obligation to pay money when due), and such failure shall continue uncured for thirty (30) days after notice thereof by Seller, provided that if such failure is not capable of being cured within such period of thirty (30) days with the exercise of reasonable diligence, then such cure period shall be extended for an additional reasonable period of time (not to exceed one hundred and eighty (180) days) so long as Purchaser is exercising reasonable diligence to cure such failure.

- (c) With Respect to Either Party. The following shall constitute events of default on the part of either Party under this Agreement: 1) a Party assigns this Agreement or any of its rights hereunder for the benefit of creditors other than a collateral assignment by Seller with respect to the financing of the Facility; 2) a petition in bankruptcy or insolvency or for reorganization or arrangement under the bankruptcy laws of the United States or under any insolvency act of any state if filed against a Party and is not dismissed within sixty (60) days of such filing, or the Party voluntarily taking advantage of any such law or act by answer; or 3) a Party consolidates or amalgamates with, or merges with or into, or transfers all or substantially all of its assets to, another entity and, at the time of such consolidation, amalgamation, merger or transfer, the resulting, surviving or transferee entity fails to assume all the obligations of such Party under this Agreement to which it or its predecessor was a party by operation of law or pursuant to an agreement reasonably satisfactory to the other Party;

- (d) Remedies for Default. If an event of Default occurs there will be no opportunity for cure except as specified in Sections 15 (a) and 15(b). The Party claiming Default may, for so long as the Event of Default is continuing, (i) deliver a written notice which establishes a date (which date shall be no earlier than thirty (30) days after the Non-Defaulting Party delivers notice) on which this Agreement shall be terminated (Termination Date), (ii) withhold any payments due under this Agreement, (iii) seek recovery of liquidated damages to the extent allowed under Section 16; and (iv) pursue any other remedies available at law or in equity, except to the extent such remedies are expressly limited by this Agreement.

- (e) Survival. Expiration or termination of this Agreement shall not affect any rights or obligations which have arisen or accrued prior to such expiration or termination. In addition, all rights and obligations for indemnity under Section 17 shall survive termination of this Agreement.

16. LIQUIDATED DAMAGES

Seller and Purchaser recognize that delivery of Energy is the essence of this Agreement and that the Purchaser will suffer financial loss if Energy is not delivered as promised in accordance with the Agreement. These losses include employee overtime hours, additional wear and tear on Purchaser's generation equipment, actual and estimated future expense of procuring an alternate supply of electricity, lost sales to customers who return to self-generating, lost opportunities for sales to prospective customers and general public inconvenience. They also recognize that such losses multiply over time and that there is significant difficulty and expense in proving in a legal proceeding the actual loss suffered by Purchaser if Energy is not delivered as promised. Accordingly, instead of requiring such proof, Seller and Purchaser agree that as liquidated damages for failure to supply Energy (but not as a penalty) Seller shall pay Purchaser Twenty Thousand Dollars (\$20,000) for each day a Seller Event of Default as described in Paragraph 15(a) exists up to a maximum of five million dollars (\$5,000,000).

17. INDEMNIFICATION

- (a) Each Party shall indemnify, defend and hold the other and its officers, directors, affiliates, agents, employees, contractors and subcontractors, harmless from and against any and all Claims, to the extent caused by the negligence or willful misconduct of the indemnifying Party or the indemnifying Party's own officers, directors, affiliates, agents, employees, contractors or subcontractors. In the event that any loss or damage with respect to any Claim is caused by the negligence or willful misconduct of both Seller and Purchaser, including their respective officers, directors, affiliates, agents, employees, contractors or subcontractors, such loss or damage shall be borne by Seller and Purchaser in the proportion that their respective negligence or willful misconduct bears to the total negligence or willful misconduct causing such loss or damage.
- (b) An Indemnitee seeking indemnification under this Section 16 shall give notice to the Indemnitor within twenty (20) days of receipt of notice of the assertion of any action or claim (including discovery of any loss, damage or injury giving rise to any claim by the Indemnitee), or the commencement of any action, suit, or proceeding, in respect of which indemnity may be sought hereunder. Failure to give such notice shall not relieve the Indemnitor of any liability hereunder, except that the Indemnitor shall be entitled to relief from its obligations under this Section 17 to the extent such failure to give such timely notice materially prejudiced the Indemnitor. The Indemnitee shall give the Indemnitor such information regarding the claim, action or proceeding as the Indemnitee may reasonably request. If a claim for indemnification arises from any action, suit or proceeding, the Indemnitor shall, at its expense assume the defense of such action, suit or proceeding, with counsel of its choice, reasonably satisfactory to the Indemnitee and the Indemnitor shall conduct the defense actively and diligently. The Indemnitee shall have the right, but not the duty, to participate in its own defense and to employ at its own expense counsel separate from counsel

employed by the Indemnitor. The Indemnitor shall be liable for the fees and expenses of counsel employed by the Indemnitee if the Indemnitor has not assumed the defense thereof. Whether or not the Indemnitor chooses to defend or prosecute any claim, the Indemnitees and the Indemnitor shall cooperate in the defense or prosecution thereof and shall furnish such records, information and testimony, and attend such conferences as are reasonably required. The Indemnitor will not consent to the entry of any judgment on or enter into any settlement with respect to a claim without the prior written consent of the Indemnitee, which shall not be unreasonably delayed, conditioned or withheld, unless the judgment or proposed settlement involves only the payment of money damages by the Indemnitor and does not impose an injunction or other equitable relief upon the Indemnitee. The Indemnitee shall not consent to the entry of any judgment on or enter into any settlement with respect to any claim without the prior written consent of the Indemnitor, which shall not be unreasonably delayed, conditioned or withheld.

18. INSURANCE

Within ten (10) days from the date of Seller's notice pursuant to section 3(b) and continuing through the entire Term, Seller shall obtain and maintain in force, insurance coverage in accordance with the requirements stated in Exhibit C, Insurance Requirements, which is attached hereto and incorporated into this Agreement.

Within ten (10) days from the date of receipt of notice from Seller pursuant to section 3(b) and continuing until the Commercial Operations Date, Purchaser shall obtain and maintain in force, insurance coverage in accordance with the requirements stated in Exhibit C, Insurance Requirements, which is attached hereto and incorporated into this Agreement.

Each party shall deliver to the other party an insurance certificate evidencing the required coverage, limits and additional insured provisions as required by Exhibit C.

19. REPRESENTATIONS and WARRANTIES

On the Effective Date, each Party represents, warrants and covenants to the other Party that:

- (a) It has or will timely acquire all regulatory authorizations necessary for it to legally perform its obligations under this Agreement;
- (b) There is not pending, or to its knowledge, threatened against it or, in the case of Seller, any of its Affiliates, any legal proceedings that could materially adversely affect its ability to perform under this Agreement;
- (c) No Event of Default with respect to it has occurred and is continuing and no such event or circumstance would occur as a result of its entering into or performing its

obligations under this Agreement;

- (d) It is acting for its own account and its decision to enter into this Agreement is based upon its own judgment, not in reliance upon the advice or recommendations of the other Party and it is capable of assessing the merits of and understanding, and understands and accepts the terms, conditions and risks of this Agreement.
- (e) It has not relied upon any promises, representations, statements or information of any kind whatsoever that are not contained in this Agreement in deciding to enter into this Agreement;
- (f) It has entered into this Agreement in connection with the conduct of its business and it has the capacity or ability to make or take delivery of the Energy as contemplated in this Agreement; and
- (g) It shall act in good faith in its performance under this Agreement.

20. CONDITIONS PRECEDENT

This Agreement is subject to the following conditions precedent, which shall be fully satisfied on or before the dates identified for each condition precedent:

- (a) Seller shall obtain a written commitment for Project Financing, by 6/10/2021.
- (b) The Parties shall negotiate in good faith to establish the Interconnection / Integration Plan” no later than 20 months after contract execution. The Interconnection/Integration Plan shall include but not be limited to; 1) a mutually acceptable Delivery Point; 2) a location for new distribution and transmission equipment required to connect to the Purchasers existing City Distribution System at Project Capacity, and 3) locations for metering equipment.
- (c) Seller shall have provided Purchaser a utility easement allowing placement, maintenance and operation of all equipment and connections at 1) the Delivery Point and 2) a location for new distribution and transmission equipment required to connect to the Purchasers existing City Distribution System at Project Capacity in a form reasonably satisfactory to Purchaser at no cost to Purchaser by 20 months after contract execution.
- (d) Seller shall have provided Purchaser fully executed Member Guarantees in the form attached hereto as Exhibit E no later than September 1, 2020.
- (e) The Parties have required insurance in place by the dates specified in Section 18.

Termination Caused by Failure to Satisfy Conditions Precedent. This Agreement may be terminated by either party due to the failure of any such condition precedent to timely or fully occur through no fault on the part of such Party. If and when such a termination should occur neither Purchaser nor Seller shall have any further claims, rights or remedies against each other under this Agreement except for obligations, liabilities and/or duties that accrued prior to such termination or that survive such termination by the terms of this Agreement.

21. Dispute Resolution

The Parties shall attempt in good faith to resolve all disputes arising out of or related to or in connection with this Agreement promptly by negotiation, as follows. Any Party may give the other Party written notice of any dispute not resolved in the normal course of business. Senior executives of both Parties shall meet at a mutually acceptable time and place within ten (10) days after delivery of such notice, and thereafter as often as they mutually agree, to attempt to resolve the dispute. The Parties further agree to provide each other with reasonable access during normal business hours to any and all non-privileged records, information and data pertaining to any such dispute. If the matter has not been resolved within thirty (30) days from the referral of the dispute to the Parties' senior executives, or if no meeting of the Parties' senior executives has taken place within fifteen (15) days after such referral, either Party may initiate legal action for resolution of the dispute. All negotiations pursuant to this Section 21 are deemed confidential hereunder. Transfers or assignments of the Facility shall not relieve Seller of any obligation hereunder except to the extent agreed to in writing by Purchaser.

22. GENERAL PROVISIONS.

- (a) Time of Performance. Time is of the essence of this Agreement. It is the express intention of all of the parties to this Agreement that no extensions or grace periods beyond the deadlines set forth in this Agreement shall be provided, because all intended extensions and grace periods have been taken into consideration in establishing such deadlines.
- (b) Parties Bound and Benefitted. The covenants, terms and conditions contained in this Agreement shall be binding upon and inure to the benefit of the assigns and successors of the respective parties hereto.
- (c) Amendment and Novation. No amendment or novation to or of this Agreement shall be effective unless it is completely and unambiguously contained in a writing executed by all of the parties to this Agreement. No such amendment or novation shall be effective unless and until it is supported by a resolution of the board of directors of each corporation, the council of each municipal corporation or the

policy-making authority of each other entity that is a party or a successor or assign of a party to this Agreement, which has expressly approved such amendment or novation.

- (d) Marginal Titles and Headings. The marginal titles, subtitles, headings and subheadings of the paragraphs, subparagraphs, sections and subsections herein are intended to be for reference and for the sake of convenience only and shall not be construed to narrow or broaden the scope of or affect whatever interpretation or construction would otherwise be given to the plain and ordinary meanings of the words herein.
- (e) Entire Agreement. This written Agreement is fully integrated, constitutes the entire agreement between the parties with respect to the subject matter hereof, and supersedes all other prior and contemporaneous agreements, contracts, representations, promises, acknowledgments, warranties and covenants, oral or written, by and between the parties with respect to such subject matter which are not expressly included herein. In the case of any conflict or inconsistency between this Agreement and any other prior agreement between the parties relating to any property or easement conveyed or exchanged herein, this Agreement shall prevail.
- (f) Applicable Law. This Agreement and the respective rights and obligations of the parties hereunder shall be construed and interpreted as a contract under the laws of the State of Alaska, without regard to its conflicts of law principles.
- (g) Exclusive Jurisdiction/Venue. In the event that a question, dispute or requirement for interpretation or construction should arise with respect to this Agreement, the jurisdiction and venue therefor shall lie exclusively with the courts for the Third Judicial District for the State of Alaska, or, alternatively, with the United States District Court for the District of Alaska, at Anchorage, Alaska, unless a nonwaivable federal or Alaska state law should require to the contrary.
- (h) Limited Waivers. Any failure or delay by any party to object to a default or exercise any rights or remedies under this Lease shall not constitute a waiver of the right to do so in the future, unless such failure is accompanied by an express written waiver by such party.
- (i) Interpretation. The language in all parts of this Agreement shall be construed (a) according to its fair meaning and common usage and (b) not strictly for or against any party to this Agreement.

- (j) Counterparts. This Agreement may be executed in counterparts, so long as each of the parties to this Agreement executes at least one counterpart; and all such executed counterparts shall collectively constitute one and the same original document
- (k) Warranties of Authority. Each party and each natural person who executes this Agreement on behalf of such party acknowledges, warrants and represents for the benefit of the other party(ies) to this Agreement: (a) that such person is duly authorized and empowered to execute this Agreement on behalf of such party; (b) that, if a corporation, limited liability company, joint venture, trust, partnership, limited liability partnership or other entity (i) such party has been duly formed and organized and is in good standing and (ii) all necessary and appropriate resolutions and actions by such party's board of directors, general partner(s), manager(s), members or other policy-making authority authorizing such party to enter into, execute and perform this Agreement and the transactions contemplated by this Agreement have been obtained; and (c) that all steps have been taken and acts performed that are conditions precedent to making this Agreement valid, enforceable and binding against such party in accordance with its terms and conditions.
- (l) Independent Counsel. Each party to this Agreement acknowledges that it has enjoyed the advice and representation of competent independent legal counsel in negotiating, entering into and executing this Agreement or waived its right to do so. The fact that this Agreement may have been drafted in whole or in part by one such party's counsel shall not cause any part of this Agreement to be construed against such party.
- (m) Severability. In the event that any term or condition of this Agreement is declared by a court of competent jurisdiction to be void or unenforceable, the remaining terms and conditions shall nevertheless be valid and enforceable; and such void or unenforceable term shall be modified to the minimum extent necessary to be valid and enforceable to the fullest extent permitted by applicable law and enforced as such.
- (n) Survival. All of the representations, warranties and covenants of the parties shall survive any and all deadlines contemplated by this Agreement and shall remain in full force and effect unless and until otherwise satisfied, terminated or discharged.
- (o) Attorneys Fees and Legal Costs. All of the attorneys fees and legal costs incurred by the respective parties in negotiating and forming this Agreement shall be borne by the respective parties. All legal costs and attorneys fees actually incurred by any

party to this Agreement to enforce any obligations of any other party under this Agreement or any instruments executed in connection herewith shall be paid to the prevailing party by the other party and shall bear interest at the legal rate.

- (p) No Third Party Beneficiaries. Nothing in this Agreement shall be construed to create any rights in, or grant remedies to, any third party as a beneficiary of this Agreement or of any duty, covenant, obligation or understanding established under this Agreement. Neither Party, by this Agreement, dedicates any part of the Facility to the public or to the service provided under this Agreement, nor affects the status of Purchaser as an unregulated utility enterprise of a municipal corporation, or Seller as an individual or entity.

23. NOTICES AND DEMANDS

Each notice required under this Agreement or by law shall: (a) be in writing; (b) contain a clear and concise statement setting forth the subject and substance thereof and the reasons therefor; and (c) be personally delivered, electronically transmitted (Email), or duly mailed by certified mail, return receipt requested, to each party to this Agreement at its address set forth below or to such other address as that party may have most recently given notice of to all of the other parties. All such notices shall be effective (a) when actually received by the recipient or an authorized representative or agent of the recipient or (b) three (3) business days after they are mailed, whichever occurs earlier.

24. MAILING ADDRESSES/POINTS OF CONTACT

OC/CP, LLC:

Attn: Natalie A. Cale
P. O. Box 149
Unalaska, Alaska 99685
Tel. No. (907) 581-1276

City:

City of Unalaska
Attn: City Manager
P. O. Box 610
Unalaska, Alaska 99685
Tel. No. (907) 581-1251

with a copy to:

Boyd, Chandler, Falconer & Munson
Attn: Brooks W. Chandler
911 West Eighth Avenue, Suite 302
Anchorage, Alaska 99501
Tel. No. (907) 272-8401

Formation

In witness whereof, Seller and Purchaser have duly executed, delivered and formed this Agreement through their authorized representatives, the effective date of which is August 31, 2020 ("Effective Date").

OC/CP, LLC:

By: OUNALASHKA CORPORATION, an
Alaska business corporation
Its Managing Member

Dated: August 31, 2020

By Christopher P. Salts, Sr.
Christopher P. Salts
Its Chief Executive Officer

Dated: 8.31, 2020

By Margaret A. Lekanoff
Margaret A. Lekanoff
Its Secretary

CITY OF UNALASKA:

Dated: 9/3, 2020

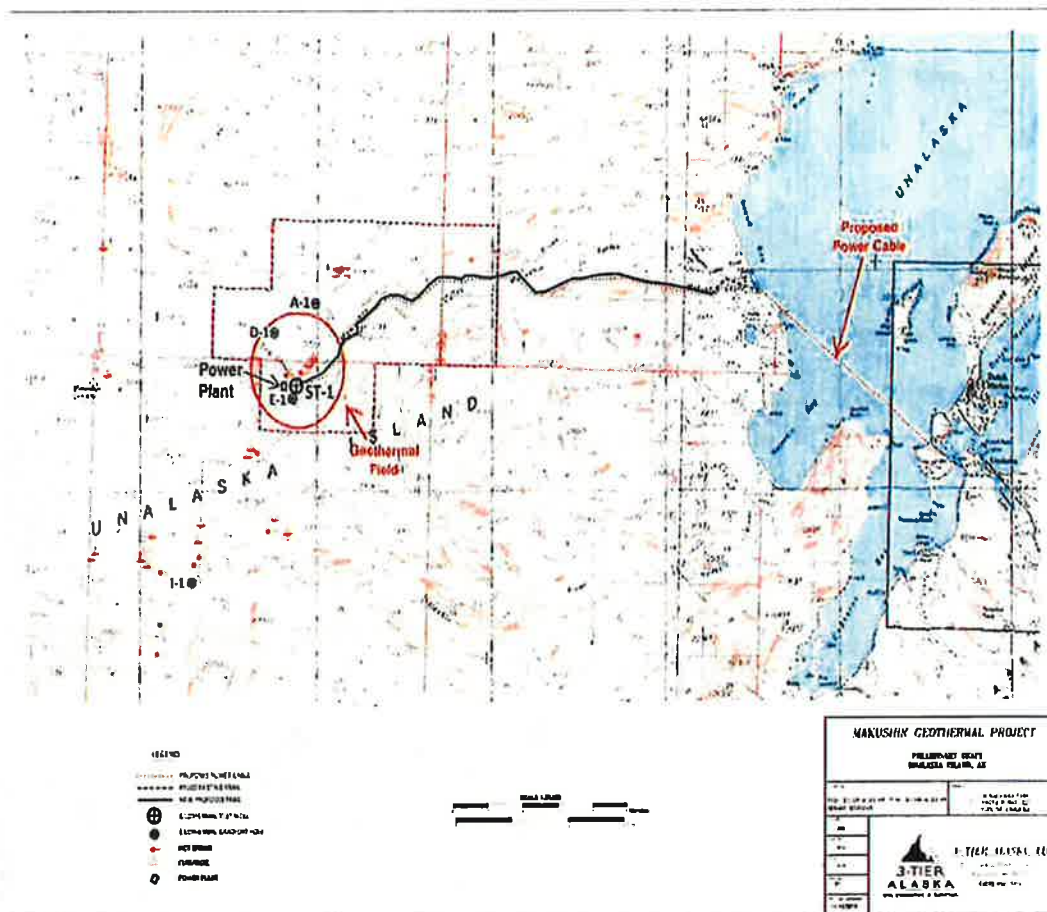
By [Signature]
Erin Reinders
Its City Manager

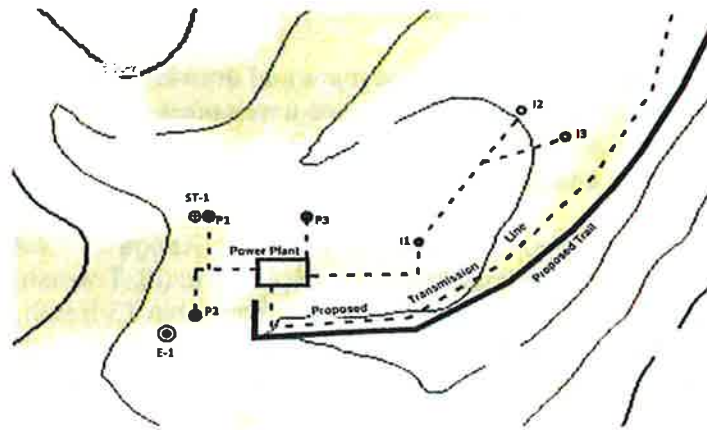
Exhibit A

Project Site

The project site is as generally depicted on the attached maps and drawings. Actual project site will be updated to reflect the as-built status when development is complete. Specifically, the Project Site or Project is the Facility described in this PPA and is included within the following legal boundaries:

"All of the area located in Sections 30 and 31, Township 72 South, Range 118 West (Unsurveyed), Seward Meridian; Sections 25, 26, 27, 33, 34, 35, and 36, Township 72 South, Range 119 West, Seward Meridian; Sections 2 and 3, Township 73 South, Range 120 West, Seward Meridian; located within the Records of the Aleutian Island Recording District, Third Judicial District, State of Alaska and more particularly shown cross-hatched in the attached."





1. ALL DISTANCES ARE APPROXIMATE.
 2. ALL DISTANCES ARE BASED ON THE
 3. 1:50,000 SCALE MAP.
 4. ALL DISTANCES ARE BASED ON THE
 5. 1:50,000 SCALE MAP.

- LEGEND
- POWER
 - TRANSMISSION
 - POINT OF INTEREST
 - POINT OF INTEREST
 - POINT OF INTEREST
 - POINT OF INTEREST
 - POINT OF INTEREST

MUNICIPAL GOVERNMENT FORM
 COMMUNITY DEVELOPMENT
 POWER PLANT LOCATIONS

DATE	10/18/00
BY	J. H. HALL
FOR	ALASKA
PROJECT	ALASKA
SCALE	1:50,000

J. H. HALL, INC.
 ALASKA
 3-1111 1/2 ST. W. S.F.

Gov Lot 9, Section 2, T735, R118W, S1M



1. This plan is a legal description of the
 2. Governmental Lot 9, Section 2,
 3. T735, R118W, S1M.



Exhibit B

Interconnection / Integration Plan

[to be provided by the Parties within 20 months of Agreement

Exhibit C

Insurance Requirements

1. Within ten (10) days from the date of Seller's notice pursuant to section 3(b), Seller and Purchaser shall secure and maintain all insurance required.

2. Seller and Purchaser shall maintain in effect at all times specified by Section 18, insurance in accordance with the applicable laws relating to workers' compensation and employers' liability insurance, regardless of whether such coverage or insurance is mandatory or merely elective under the law.

3. Insurance coverage and limits shall be at a level as reflected in Paragraph 8 for the risks associated with the Facility contemplated by this Agreement. Required insurance coverages are to be purchased by respective Seller and Purchase at their sole expense. Purchaser may increase the limits of required coverage each five (5) years during the term of the Agreement provided the increased limits are commercially reasonable coverage limits.

4. Seller and Purchaser shall notify one or the other of any reduction of the aggregate limits under any of the required insurance policies, and if requested in writing, purchase additional limits of coverage as may be deemed appropriate by Purchaser in order to satisfy Seller's insurance obligations.

a. Seller and Purchaser shall maintain such insurance in full force and effect at all times specified by Section 18 of the Agreement. Seller shall maintain completed operations coverage, for two (2) years after the expiration or termination of this Agreement.

5. Seller and Purchaser shall ensure that any policies of insurance that Seller/Purchaser or any of its subcontractors and suppliers are required to carry as insurance by this Agreement) shall:

a. Be placed with such insurers and under such forms of policies as may be reasonably acceptable to Seller/ Purchaser.

b. With the exception of workers' compensation and employers' liability,

(i) be endorsed to name Purchaser/Seller as an additional insured; and

(ii) apply severally and not collectively to each insured against whom claim is made or suit is brought, except that the inclusion of more than one insured shall not operate to increase Seller's / Purchaser's limits of liability as set forth in the insurance policy.

c. Include within automobile coverage(s), owned, non-owned, hired and borrowed vehicles.

d. Be primary insurance with respect to the interest of Seller/ Purchaser respectively as an additional insured with any insurance maintained by Seller / Purchaser as excess and not contributory insurance with the insurance required under this Agreement.

e. Include a waiver of the insurer's right of subrogation against Seller/ Purchaser. Seller/Purchaser also hereby waives all rights of subrogation against Purchaser/Seller.

f. Provide that the policies will not be cancelled, or their limits or coverage reduced or restricted without at least thirty (30) days prior written notice to Seller / Purchaser.

6. Seller / Purchaser shall instruct and require its insurance agent/broker to complete and return an insurance certificate, in an ACORD form, as evidence that insurance policies providing the required coverage, limits and additional insured provisions as outlined within this Exhibit C are in full force and effect. Seller / Purchaser shall be fully responsible for all deductibles and self-insured retention's related to their respective insurance provided herein. At least sixty (60) days prior to the Startup Period, the completed insurance certificate form is to be returned to Seller/ Purchaser in accordance with the notice provisions included in the Agreement.

7. The insurance requirements of the Agreement and acceptability to Seller / Purchaser of insurers and insurance to be maintained by Seller/Purchaser, its subcontractors/suppliers, are not intended to and shall not in any manner limit or qualify the liabilities and obligations assumed by the insured under the Agreement. Seller /Purchaser is fully and solely responsible for the level of insurance coverage it requires of its subcontractors and suppliers. Purchaser/Seller will look to Seller/Purchaser and thereby Seller's /Purchaser's insurer for coverage for claims arising from the negligent acts or omissions of Seller/Purchaser or any subcontractor/supplier of Seller's /Purchaser's choosing.

8. Evidence of the following coverages shall be provided on an ACCORD Form or equivalent:

\$5,000,000 General Liability

\$10,000,000 Aggregate Liability

\$1,000,000 Automobile Liability

Statutory Worker's Compensation

Exhibit D

Equivalent Availability Factor

Availability measures are concerned with the fraction of time in which a unit is capable of providing service and accounts for outage frequency and duration. Equivalent Availability Factor (EAF) shows the percentage of capacity that could be delivered if it had to be dispatched. The EAF metric takes into account both scheduled maintenance and unplanned outages.

Equivalent Availability Factor (EAF) definition from IEEE Std 762-2006: "Equivalent availability factor (EAF): The fraction of a given operating period in which a generating unit is available without any outages and equipment or seasonal deratings."

The geothermal power plant will consist of a number of independent units composed of steam screw expanders, wet steam ORCs and low and high temperature brine ORCs. Each unit can be operated separately.

Each unit is capable of operating separately, and if any unit is operating and not derated, or capable of being operated, though it might not be in operation, and no matter its output and power delivered, the EAF for that unit is 100% for that time period. If all units are in the state described above the geothermal plant is at 100% EAF. Scheduled and unscheduled maintenance/outage, are also components of EAF.

It is agreed for illustrative purposes that:

1. Total equipment hours available (TEHA) per year = 5 ORCs x 24 hours/day x 365 days = 43,800 hours
2. Twelve 4-hour monthly maintenance checks (MMC) will be performed in a year (final number of hours or frequency may be different)
3. Four 12-hour quarterly maintenance checks (QMC) will be performed in a year (final number of hours or frequency may be different)
4. An annual 48-hour service check (ASC) will be performed (final number of hours may be different)
5. Unplanned failures (UF) may occur and are calculated as: number of ORC's down * number of repair hours
6. A unit may be derated (UD) for a period of time. Downtime is calculated as: derating fraction * number of days derated * 24 hours in a day

Total hours unavailable (THU) = MMC+QMC+ASC+UF+UD

Then EAF (%) = $1.0 - (\text{THU}/\text{TEHA}) * 100$

If MMC = 240, QMC = 240, and QMC = 240, then EAF (%) = $1.0 - (720 + \text{UF} + \text{UD})/\text{TEHA} * 100$

Exhibit E

Member Guaranty

THIS GUARANTEE (this "Guarantee") is made and entered into this 31st day of August, 2020, by and among Ounalashka Corporation, an Alaska Native Claims Act corporation organized under the laws of the State of Alaska, Chena Power LLC, an Alaska limited liability corporation (collectively the "Guarantor"), and the City of Unalaska an Alaska municipal corporation ("Purchaser"). Guarantor and Purchaser are each referred to herein as a "Party" and collectively as the "Parties." Capitalized terms used but not defined in this Guarantee shall have the meanings ascribed to them in the PPA (as defined below).

RECITALS

A. Guarantors are members of, Ounalashka Corporation/ Chena Power LLC, a limited liability company organized under the Laws of the State of Alaska ("Seller"). Seller has, as of the date hereof, entered into that certain Power Purchase Agreement (the "PPA") with the Purchaser, for the purchase by Purchaser of Energy.

B. Guarantor, directly or indirectly, owns all of the equity interests in Seller.

C. As a condition precedent to the execution of the PPA, the Purchaser requires the execution of this Guarantee.

NOW, THEREFORE, in order to induce the Purchaser to buy Energy from Seller as provided in the PPA, in consideration of the foregoing recitals, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Guarantor agrees as follows:

- 1. Guarantee.** Guarantor hereby unconditionally and irrevocably guarantees to the Purchaser the prompt, punctual and full payment and performance of (a) the obligations and covenants of Seller under the PPA to pay when due any amounts owing under the PPA for Liquidated Damages under the terms of the PPA, as now or hereafter amended, in accordance with the terms and conditions thereof (the "Obligation").
- 2. Term.** This Guarantee is a continuing guarantee of payment. This Guarantee shall remain in full force and effect until the earlier to occur of (a) the termination of the PPA in accordance with its terms and (b) the date Seller has fully discharged the Obligation.
- 3. Enforcement.** Guarantor's obligations are primary obligations and independent of all of Seller's obligations to the Purchaser. Upon default by Seller with respect to the Obligation, the Purchaser shall have no obligation to proceed against Seller, and may proceed directly against Guarantor without proceeding against Purchaser or any other person or pursuing any other remedy. Guarantor agrees to reimburse the Purchaser for all costs and expenses (including, without limitation, court and arbitration costs and reasonable attorneys' fees) incurred by the Purchaser in connection with the enforcement of the Purchaser's rights under this Guarantee.
- 4. Invalidation of Payments.** Guarantor's obligations hereunder shall not be affected by the commencement of any proceedings by or against Seller under the Bankruptcy Code (U.S.C. Title

11) or any other liquidation, conservatorship, bankruptcy, moratorium, rearrangement, receivership, insolvency, reorganization or similar debtor relief laws affecting the rights of creditors generally, any stay or ruling thereunder, or the disallowance of any claim thereunder. If all or any part of any payment to or for the benefit of the Purchaser in respect of the Obligations shall be invalidated, declared to be fraudulent or preferential, set aside or required for any reason to be repaid or paid to a trustee, receiver or other third party, then any Obligation that otherwise would have been satisfied by that payment or partial payment shall be revived and continue in full force and effect as if that payment had not been made. Guarantor shall be fully and primarily liable for such Obligation and as set forth in this Guarantee.

5. Waiver of Defenses. The Purchaser may, without notice to or consent of Guarantor (a) extend or, with the prior written consent of Seller, alter, the time, manner, place or terms of payment or performance of the Obligations, or (b) waive, or, with the prior written consent of Seller, amend any terms of the PPA or any other agreement executed pursuant to the PPA, without in any way changing, releasing or discharging Guarantor from liability hereunder. Guarantor hereby waives any defenses which Seller or any other person liable for the Obligation may have or assert regarding (i) the insolvency, bankruptcy, liquidation or dissolution of Seller or such other person or (ii) the invalidity, illegality, voidability or unenforceability of all or any portion of the Obligation as a result of ultra vires or other lack of authority, defective formation or other organizational deficiencies or similar types of defenses. Guarantor further waives notice of the acceptance of this Guarantee, presentment, demand, protest, and notices of protest, nonpayment, default or dishonor of the Obligation, and all other notices or demands of any kind or nature whatsoever with respect to the Obligation. Nothing in this Guarantee shall limit or otherwise affect the rights of Purchaser under the terms of the PPA.

6. Representation and Warranties. Each Guarantor represents and warrants to the Purchaser that: (a) Guarantor has received, or will receive, direct or indirect benefit from the making of this Guarantee; (b) Guarantor is a corporation duly organized, validly existing and in good standing under the Laws of the State of Alaska; (c) Guarantor has the requisite corporate power to enter into this Guarantee and to perform its obligations hereunder; (d) the execution, delivery and performance of this Guarantee have been duly and validly authorized by all necessary corporate action on the part of Guarantor; (e) this Guarantee has been duly executed and delivered by Guarantor and constitutes the valid and binding obligation of Guarantor, enforceable against Guarantor in accordance with its terms; (f) the execution, delivery and performance of this Guarantee will not (i) violate any provision of the certificate of incorporation or bylaws (or other governing instruments) of Guarantor or (ii) violate any judgment, order, ruling, or regulation applicable to Guarantor; (g) the execution, delivery and performance of this Guarantee by Guarantor will not be subject to any consent, approval or waiver from any Governmental Body or other third Person; (h) Guarantor possesses the necessary financial capability to fulfill the Obligation; and (i) there are no bankruptcy, insolvency, reorganization or receivership proceedings pending against, being contemplated by or, to Guarantor's knowledge, threatened against Guarantor.

7. Assignment. This Guarantee and the rights and obligations hereunder shall not be assignable or transferable by Guarantor except with the prior written consent of the Purchaser.

8. Amendments and Waivers. No amendment, modification or waiver in respect of this Guarantee shall be effective unless, in the case of an amendment or modification, such

amendment or modification shall be in writing and signed by Guarantor and the Purchaser, and, in the case of a waiver, such waiver shall be in writing, specifically refer to this Guarantee and be signed by the Person against which such waiver is sought to be enforced.

9. Notices. All notices and other communications shall be in writing and shall be delivered by hand or sent, postage prepaid, by express mail or reputable overnight courier service to the address for the Sellers set forth in Section 23 of the PPA or, in the case of Guarantor Chena Power LLC, to the following address:

Chena Power LLC
PO Box 58740
Fairbanks, Alaska 99711
Attn: Bernie Karl

Each Party may change its address for notice by notice to the other in the manner set forth above. All notices shall be deemed to have been duly given at the time of receipt by the Party to which such notice is addressed.

10. Governing Law. This Guarantee and the legal relations between the Parties shall be governed by and construed in accordance with the Laws of the State of Alaska, without regard to principles of conflicts of Laws that would direct the application of the Laws of another jurisdiction.

11. Counterparts. This Guarantee may be executed in counterparts, each of which shall be deemed an original instrument, but all such counterparts together shall constitute but one agreement.

12. Entire Agreement. This Guarantee constitutes the entire agreement between the Parties pertaining to the subject matter hereof, and supersedes all prior agreements, understandings, negotiations and discussions, whether oral or written, of the Parties pertaining to the subject matter hereof.

13. Severability. If any term or other provision of this Guarantee is held invalid, illegal or incapable of being enforced under any rule of law, all other conditions and provisions of this Guarantee shall nevertheless remain in full force and effect so long as the economic or legal substance of the transactions contemplated hereby is not affected in a materially adverse manner with respect to either Party.

IN WITNESS WHEREOF, the Parties have executed this Guarantee on the day and year first written above.

[Signature page follows]

GUARANTOR:

OUNALASHKA CORPORATION

By: /s/ Christopher P. Salts, Jr.
Name: Christopher P. Salts
Title: Chief Executive Officer

GUARANTOR:

CHENA POWER, LLC

By: /s/ Bernie Karl
Name: Bernie Karl
Title: Chief Executive Officer

PURCHASER:

CITY OF UNALASKA

By: /s/ Erin Reinders
Name: Erin Reinders
Title: City Manager

Exhibit F

Additional Payment

The formula for the Additional Payment only applies when Metered Energy for a Year exceeds 100,000,000 kWh. If that occurs, an Additional Payment is due calculated as follows:

Additional Payment = Facility Rate x (kWh through Meter for Year) – Fixed Payment

$$\text{Facility Rate} = \frac{\text{Fixed Payment}}{100 \text{ million kWh}} - \frac{\frac{\text{Fixed Payment}}{100 \text{ million kWh}} - \frac{\text{Fixed Payment}}{\text{kWh through Meter for the Year}}}{2}$$

EXAMPLE

Year 1- Fixed Payment = \$16,300,000

kWh through meter = 125,000,000

Facility Rate = 16,300,000/ 100 million kWh – [(16,300,000/ 100 million kWh) – (16,300,000/125 million kWh) / 2]

Facility Rate = .163-[(.163-.1304)/2]

.163-(.0326/2)= .1467

Additional Payment = (.1467 X 125,000,000)-\$16,300,000

18,337,500-16,300,000 =2,037,500

Additional Payment is 2,037,500

CITY OF UNALASKA
UNALASKA, ALASKA

RESOLUTION 2021-14

A RESOLUTION OF THE UNALASKA CITY COUNCIL APPROVING AMENDMENT 1 TO THE POWER PURCHASE AGREEMENT WITH OUNALASHKA/CHENA POWER, LLC AND AUTHORIZING THE CITY MANAGER TO SIGN THE AMENDMENT

WHEREAS, City of Unalaska operates a public utility to provide and distribute electricity to customers;

WHEREAS, City Council supports efforts and programs for reliable and cost effective alternative energy sources, including geothermal; and

WHEREAS, Ounalashka/Chena Power, LLC (OCCP) seeks to construct a geothermal plant and sell power to the City of Unalaska; and

WHEREAS, OCCP originally required a signed Power Purchase Agreement (PPA) with the City of Unalaska in order to obtain project financing; and

WHEREAS, City representatives negotiated a PPA with OCCP on behalf of the City of Unalaska in a manner consistent with City Council Directives; and

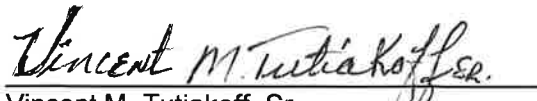
WHEREAS, the Unalaska City Council approved the PPA, and authorized the City Manager to enter into the agreement on August 25, 2020 through Resolution 2020-55; and

WHEREAS, OCCP will be unable to obtain financing by the required deadline of June 10, 2021 as outlined in the PPA; and

WHEREAS, OCCP has requested an amendment to the PPA, extending the deadline outlined in the PPA to obtain financing to June 10, 2022.

NOW THEREFORE BE IT RESOLVED that the Unalaska City Council approves Amendment Number 1 to the PPA, and authorizes the City Manager to sign the amendment.

PASSED AND ADOPTED by a duly constituted quorum of the Unalaska City Council on March 30, 2021.



Vincent M. Tutiakoff, Sr.
Mayor

ATTEST:



Marjie Veeder, CMC
City Clerk



MEMORANDUM TO COUNCIL

To: Mayor and City Council Members
From: Erin Reinders, City Manager
Date: March 23, 2021
Re: Resolution 2021-14: OCCP PPA Amendment

SUMMARY: Ounalashka/Chena Power, LLC (OCCP) required a Power Purchase Agreement (PPA) with the City of Unalaska to obtain financing for their Geothermal Project. In August of 2020, City Council approved Resolution 2020-55, and authorized entering into the PPA with OCCP. OCCP has requested an amendment to the PPA, extending the deadline outlined in the PPA to obtain financing. Resolution 2021-14 approves the Amendment to the PPA and authorizes the City Manager to sign the amendment.

PREVIOUS COUNCIL ACTION: The City continues to support efforts and programs for reliable and cost effective alternate energy sources, including geothermal. City Council has identified this support as a federal priority. To this end, during the fall lobby trip to Washington DC in 2019, City representatives sat alongside representatives from the Q-tribe and OC in a meeting with the Department of Energy demonstrating support for a geothermal project on our island. In August of 2020, City Council approved Resolution 2020-55 and authorized entering into the PPA with OCCP.

November 26, 2019

- Work Session, Presentation from OCCP regarding their Geothermal Project

January 30, 2020

- Special Meeting for a Work Session for an update on OCCP geothermal project (standalone meeting)

February 25, 2020

- Work Session, Report from OCCP regarding their Makushin geothermal project

March 10, 2020

- Reports, City Attorney conflict of interest opinion related to OCCP
- Executive Session
 - Discussion regarding potential PPA between City of Unalaska and OCCP
 - Discussion regarding potential Power Sales Agreements between City of Unalaska and local seafood processing facilities

May 26, 2020

- Directive to the Manager, *“Report back to the City Council by June 16, 2020 for possible action committing to a PPA with OCCP at the Council Meeting on June 23, 2020 a cos/benefit/risk analysis for a potential Power Purchase Agreement concept that commits Unalaska for the purchase of 100MkWhr/year, at \$0.16/kWh, for 30 years taking into account the probability of securing sufficient load sources by fall of 2023 within the Unalaska City Limits.”*

June 23, 2020

- Work Session, Presentation and discussion of the financial feasibility and potential risks and rewards related to OCCP's proposed Makushin Geothermal Power Project
- Directive to the Manager, *"Negotiate and work cooperatively with OCCP LLC to develop a Power Purchase Agreement that enables the City Council to act on such agreement at the Council Meeting on July 14, 2020. Initial loads to be negotiated should be between 80mkwhr and 100mkwhr. Costs and rates to be negotiated within the Power Purchase Agreement."*

July 21, 2020

- Special Meeting for Work Session & Executive Session, Discussion of PPA with OCCP

August 11, 2020

- Executive Session, Discussion of PPA with OCCP
- Directive to the Manager, *"I move to direct staff to accept both the OCCP proposal to share in the upside and daily liquidated damages in the amount of \$20,000.00 per day with a cap of \$5 million. The heat pump contribution is to remain at \$10 million cost to OCCP. The Annual cost is to be \$16,300,000.00. The meter on the upside sharing starts at 100,000,000kwh. A minimum of two transmission lines to the delivery point of the City is required."*

August 25, 2020

- Regular Meeting, City Council approves Resolution 2020-55: Approving the PPA with OCCP and authorizing the City Manager to enter into the agreement

March 23, 2021

- Work Session, OCCP provided City Council with an update on the project in preparation of considering an amendment to the PPA at the March 23, 2021 meeting. OCCP has requested an amendment to the PPA, extending the deadline outlined in the PPA to obtain financing.

BACKGROUND: City staff began working with the OCCP team in late 2019 to address project planning and development questions and to draft a PPA. On January 15 and 16, 2020, the City team met with OCCP representatives for a working meeting in Anchorage. The focus of the meeting was developing framework of general concepts that OCCP can take to its potential lenders to determine if financing can be obtained.

Following these Anchorage meetings, discussions and work continued. Focus was on the PPA, understanding the project, identifying challenges, mitigating risks, expanding opportunities, identifying steps to be done should the project move forward, and refining displaced costs. OCCP communicated that they planned to proceed with their fieldwork and research, which will help reduce the number of uncertainties and assumptions. We reached out to processors to garner their interest in the project and encourage them to attend the February 25, 2020 Council meeting, where OCCP would be presenting on their project. The City team met with the OCCP team while they were in town that week. Given travel and weather challenges, this meeting was not as in-depth as planned.

City staff met and talked with processors throughout March and April, striving to ensure they had an understanding of the overall concept of the project and potential agreements. Processors were unwilling to make a long term commitment at that time. The City team held a conference call with OCCP on April 24, 2020 and communicated the feedback we received from the processors. This was not done in person due COVID related challenges. The next step was for OCCP, along with the City, to meet with the processors. While those meetings were never organized, OCCP did

provide a detailed document outlining several concepts to the City for consideration on May 19, 2020. We responded with some initial thoughts and questions in a timely fashion.

On May 26, 2020, City Council issued a directive to provide a report and cost/benefit/risk analysis regarding a PPA at a particular commitment level. Our focus then shifted to the Council Directive and our long time consultant, Mike Hubbard, prepared the formal report and analysis. Brooks Chandler, our City Attorney, provided a memo related to non-recourse financing as another component of the assessment. This material was presented to Council at the June 23, 2020 Council Meeting. At the end of that meeting Council issued a directive to negotiate and work cooperatively with OCCP to develop a PPA for loads between 80mkwhr and 100mkwhr.

Given the complex nature of this topic and the time required to discuss it, a stand-alone special meeting was scheduled for July 21, 2020. This date was selected in coordination with OCCP. City Council provided direction to the City Team for further negotiations with OCCP.

City Council participated in a follow-up Executive Session on August 11, 2020. The City Team provided an update on the continued negotiations. City Council then issued a formal directive for continued negotiation. The PPA was then finalized consistent with Council Directives to the City Manager. At their August 25, 2020 meeting, City Council approved Resolution 2020-55 and authorized entering into the PPA.

DISCUSSION: A copy of the PPA is attached. Since the signing of the PPA, the City Team has been regularly communicating with OCCP and are now meeting on a monthly basis. We have also welcomed Anchorage based consultant, Thomas Lovas of Energy & Resource Economics to the City's team. In accordance with the PPA, the City contracted with Electrical Power Systems (EPS) to conduct the Interconnection and Integration Study. Much of the details and results will depend on the final design of OCCP's project itself, which is not yet completed. We have also worked to support OCCP's efforts in the Air Source Heat Pump Study, as outlined in the PPA.

Council heard an update from OCCP at the March 9, 2021 meeting. In that update OCCP requested an amending the PPA to extend by one year their deadline to obtain written commitment for project financing. The letter requesting this extension is included in the packet. The June 10, 2021 deadline for OCCP to secure financing commitment was identified in the original PPA as a key conditional precedent and a term factor that allows for the City to terminate the agreement. This amendment extends the deadline for OCCP to obtain project financing by a year at the request of OCCP. It also adjusts the deadline for the Interconnection / Integration Plan accordingly, as requested by the City. As of the drafting of this memo, we have not yet received final acceptance by OCCP of our request, but do not anticipate any issues. The Amendment is attached.

The challenge with this delay is the uncertainty it creates around the Geothermal Project as the City plans for and invests in Capital Projects to support our electrical system. This is mentioned in the CMMP discussion this evening. The Draft CMMP includes funding support necessary for integration and interconnection (which have not been fully identified), and projects necessary for the existing system which may or may not be necessary if the Geothermal project proceeds. Whether or not such improvements will be necessary depend on the design of the Geothermal project (which is not yet completed), the findings of the integration and interconnection study (which can't be done until the design is finalized), and significant timing and safety considerations present now. We continue to evaluate how best to proceed given what we know at this point.

FINANCIAL IMPLICATIONS: Primary financial implications of the PPA relate to the City's cost of purchasing power and the related financial impacts. The 30 year PPA required the City pay a fixed \$16.3 million annually (with 1% annual increases), for a total of just under \$567 million, to purchase up to 100 million kWh/yr. Our base power currently is estimated at 40 million kWh/yr. Ultimately, these costs will be passed along to the rate payers. Various scenarios were prepared analyzing these financial implications created from the PPA, regarding the base load and the potential increase sales and were provided to the City Council during the negotiation process.

Additionally, the PPA contains known expenses the City agreed to, including up to \$5 million for upgrading the City distribution system, with OCCP committing up to \$7 million. The City agreed to initially fund the integration and interconnection study, but will be reimbursed from OCCP after the fact.

ALTERNATIVES: Council has two primary options on how to proceed with the Resolution 2021-14 and the PPA amendment. These include:

1. Approve Resolution 2021-14, thereby approving the Amendment to the PPA and authorizing the City Manager to sign the Amendment.
2. Disapprove Resolution 2021-14, thereby disapproving the Amendment to the PPA.

LEGAL: City Attorney Brooks Chandler has been engaged in discussions with OCCP from the beginning and remains so. He drafted the PPA Amendment, and has provided a memo. Both the Amendment and memo are attached.

STAFF RECOMMENDATION: We remain supportive of this project and are excited about what it might mean for the future of our community. The existing 2020 PPA was prepared in accordance with City Council Directives. The proposed amendment shifts some of the deadlines but leaves the underlying agreement intact. So long as Council supports the underlying PPA, I recommend that Council approve this amendment.

However, as your City Manager, I still caution Council that the PPA requires 30 years of annual payments of \$16.3 million annually (with 1% annual increases) to purchase up to 100 million kWh/yr. This purchases 60 million kWh/yr more power than is currently sold by the City annually, currently estimated to be 40 million kWh. We have no commitments in place from existing business to cover this gap. Nor are we aware of any future development that is committed to locating in Unalaska and purchasing available power. Without more specifics about the geothermal project and its completion, it is unlikely we will be able to successfully market and sell more power. This condition precedent and term factor that allows for the City to terminate the agreement was included in the PPA to allow for this sort of deliberation at the Council level. If Council has concerns about the impacts of the underlying PPA and wishes not to move forward, I recommend disapproval of this amendment.

No matter what Council chooses to do this evening, my staff and I will support the decision and move forward accordingly with Council's direction.

PROPOSED MOTION: I move to approve 2021-14.

ATTACHMENTS:

- PPA between OCCP and City of Unalaska
- Letter from OCCP Requesting Extension
- Memo from City Attorney Regarding Extension Request
- PPA Amendment

AMENDMENT NO. 1

to

POWER PURCHASE AGREEMENT

BETWEEN

CITY OF UNALASKA, a first-class Alaska municipal corporation

AND

OONALASHKA CORPORATION/CHENA POWER, LLC, an Alaska limited liability company

For good and valuable consideration the receipt of which is hereby acknowledged, the City of Unalaska, a first-class Alaska municipal corporation (Purchaser) and Ounalashka Corporation/Chena Power, LLC (Seller) a licensed Alaska limited liability company duly organized under the laws of the State of Alaska agree to amend that certain POWER PURCHASE AGREEMENT, dated August 31, 2020(Agreement) as follows:

1. Paragraph 20(a) is hereby amended to read as follows:

(a) Seller shall obtain a written commitment for Project Financing, by 6/10/2022.

2. Paragraph 4(c) is hereby amended to read as follows:

(c) Seller and Purchaser agree that the purpose and intent of this Agreement is dependent on the successful completion of the construction of the Facility/Facilities and the related achievement of the Commercial Operation Date by the Commercial Operation Deadline. As such, in the event that either; 1) Seller fails to obtain Project Financing by June 10 2022; or 2) construction of the Facility/Facilities is at any time discontinued, abandoned or otherwise terminated by Seller in its sole discretion , or 3) Seller fails to provide written assurances to Purchaser that the Commercial Operation Deadline will be achieved in a form consistent with Prudent Utilities Practices, or 4) the Project fails to reach Commercial Operation by the Commercial Operation Deadline, then either Party may terminate this Agreement upon thirty (30) day's prior written notice to the other party. In the event that a party elects to terminate this Agreement pursuant to this Section 4 (c), neither Seller nor Purchaser shall have any further liability and/or obligations to the other

In witness whereof, Seller and Purchaser have duly executed, delivered, and formed this Amendment No. 1 through their authorized representatives, the effective date of which is _____, 2021 ("Effective Date").

OC/CP, LLC:

By: OUNALASHKA CORPORATION, an
Alaska business corporation
Its Managing Member

Dated: May 11th, 2021

By Christopher P. Salts, Jr.
Christopher P. Salts
Its Chief Executive Officer

Dated: May 11th, 2021

By Margaret A. Lekanoff
Margaret A. Lekanoff
Its Secretary

CITY:

CITY OF UNALASKA, a first-class
municipal corporation

Dated: April 22nd, 2021

By [Signature]
Erin Reinders
Its City Manager

CITY OF UNALASKA
UNALASKA, ALASKA

RESOLUTION 2021-55

A RESOLUTION OF THE UNALASKA CITY COUNCIL APPROVING AMENDMENT 2 TO THE POWER PURCHASE AGREEMENT WITH OUNALASHKA/CHENA POWER, LLC AND AUTHORIZING THE CITY MANAGER TO SIGN THE AMENDMENT

WHEREAS, the City of Unalaska operates a public utility to provide for and distribute electricity to customers; and

WHEREAS, Ounalashka/Chena Power, LLC (OCCP) sought to construct a geothermal plant and required a signed Power Purchase Agreement (PPA) with the City of Unalaska in order to obtain project financing; and

WHEREAS, the City Council approved the PPA developed in accordance with City Council Directives, and authorized the City Manager to enter into the agreement on August 25, 2020 through Resolution 2020-55; and

WHEREAS, OCCP was be unable to obtain financing by the deadline of June 10, 2021 as outlined in the PPA and requested an amendment to the PPA; and

WHEREAS, the City Council approved Amendment Number 1 to the PPA extending the deadline outlined in the PPA to obtain financing to June 10, 2022 and authorized the City Manager to signed the amendment through resolution 2021-14 on March 30, 2021; and

WHEREAS, the City of Unalaska and OCCP have negotiated and signed a Memorandum of Agreement outlining initial upgrade projects and the cost reimbursement schedule in accordance with the PPA; and

WHEREAS, the City of Unalaska and OCCP agree that a one year extension to the Commercial Operations Date by one year from May 31, 2024 to May 31, 2025, corresponding with the one year extension to the financing deadline in the previous amendment, is necessary; and


NOW THEREFORE BE IT RESOLVED that the Unalaska City Council approves Amendment 2 to the PPA extending the Commercial Operations Date by one year, and authorizes the City Manager to sign the amendment.

PASSED AND ADOPTED by a duly constituted quorum of the Unalaska City Council on July 27, 2021.



Vincent M. Tutiakoff, Sr.
Mayor

ATTEST:



Marjie Veeder, CMC
City Clerk



MEMORANDUM TO COUNCIL

To: Mayor and City Council Members
From: Erin Reinders, City Manager
Date: July 27, 2021
Re: Resolution 2021-55: Approving Amendment 2 to the Power Purchase Agreement with Ounalashka/Chena Power, LLC and authorizing the City Manager to sign the amendment

SUMMARY: In August of 2020, City Council approved Resolution 2020-55, and authorized entering into the PPA with OCCP. OCCP later requested an amendment to the PPA, extending the deadline outlined in the PPA to obtain financing by one year. In response to this request, City Council approved Resolution 2021-14, and authorized the signing of Amendment 1 in March of 2021. Amendment 2 extends the Commercial Operations Date by one year to correspond with the extension in the previous amendment. This extension provides an additional construction season, important for the City because the utility upgrades making this date possible are being significantly dialed back this year due to OCCP's delayed funding.

PREVIOUS COUNCIL ACTION: City Council has identified support for efforts and programs for reliable and cost-effective alternate energy sources, including geothermal, as a federal priority. An outline of all the Council actions related to the PPA with OCCP for geothermal power is listed below.

November 26, 2019

- Work Session, Presentation from OCCP regarding their geothermal project

January 30, 2020

- Special Meeting for a Work Session for an update on OCCP geothermal project

February 25, 2020

- Work Session, Report from OCCP regarding their Makushin geothermal project

March 10, 2020

- Reports, City Attorney conflict of interest opinion related to OCCP
- Executive Session
 - Discussion regarding potential PPA between City of Unalaska and OCCP
 - Discussion regarding potential Power Sales Agreements between City of Unalaska and local seafood processing facilities

May 26, 2020

- Directive to the Manager: *“Report back to the City Council by June 16, 2020 for possible action committing to a PPA with OCCP at the Council Meeting on June 23, 2020 a cost/benefit/risk analysis for a potential Power Purchase Agreement concept that commits Unalaska for the purchase of 100MkWhr/year, at \$0.16/kWh, for 30 years taking into account the probability of securing sufficient load sources by fall of 2023 within the Unalaska City Limits.”*

June 23, 2020

- Work Session, Presentation and discussion of the financial feasibility and potential risks and rewards related to OCCP's proposed Makushin Geothermal Power Project
- Directive to the Manager: *"Negotiate and work cooperatively with OCCP LLC to develop a Power Purchase Agreement that enables the City Council to act on such agreement at the Council Meeting on July 14, 2020. Initial loads to be negotiated should be between 80mkwhr and 100mkwhr. Costs and rates to be negotiated within the Power Purchase Agreement."*

July 21, 2020

- Special Meeting for Work Session & Executive Session, Discussion of PPA with OCCP

August 11, 2020

- Executive Session, Discussion of PPA with OCCP
- Directive to the Manager: *"I move to direct staff to accept both the OCCP proposal to share in the upside and daily liquidated damages in the amount of \$20,000.00 per day with a cap of \$5 million. The heat pump contribution is to remain at \$10 million cost to OCCP. The Annual cost is to be \$16,300,000.00. The meter on the upside sharing starts at 100,000,000 kWh. A minimum of two transmission lines to the delivery point of the City is required."*

August 25, 2020

- Regular Meeting, City Council approves Resolution 2020-55, approving the PPA with OCCP and authorizing the City Manager to enter into the agreement

March 23, 2021

- Work Session, OCCP provided City Council with an update on the project in preparation of considering an amendment to the PPA at the March 23, 2021 meeting. OCCP has requested an amendment to the PPA, extending the deadline outlined in the PPA to obtain financing.

March 30, 2021

- Special Meeting continued from the Regular Meeting on March 23, City Council approved Resolution 2021-14, approving the PPA Amendment and authorizing the City Manager to sign said amendment. The amendment extended the deadline for OCCP to obtain financing and adjust the deadlines related to the Interconnection/Integration Plan.

BACKGROUND: In August of 2020, after several months of negotiations and meetings, City Council approved Resolution 2020-55 and authorized entering into the PPA with OCCP. An outline of all the Council actions related to the PPA is listed above. [A copy of the PPA is attached.](#) The 30 year PPA requires the City pay a fixed \$16.3 million annually (with 1% annual increases). Our base load is currently 40 million kilowatt hours per year, but to make this economical we need full participation of self-generators to get up to 90 to 100 million kilowatt hours per year. We have no commitments in place from existing business to cover this gap, nor are we aware of any future development that is committed to locating in Unalaska and purchasing available power.

The PPA contains known expenses the City agreed to, including up to \$5 million for studying and upgrading the City distribution system, with OCCP committing up to \$7 million. The City agreed to initially fund the integration and interconnection study, but this cost will be reimbursed from OCCP in accordance with the PPA. To this end, the City contracted with Electrical Power Systems (EPS) to conduct the study.

OCCP requested amending the PPA to extend by one year their deadline to obtain written commitment for project financing in March of 2021. The original June 10, 2021 deadline for OCCP to secure financing commitment was identified in the original PPA as a key conditional precedent that allowed for the City to terminate the agreement if they so desired. Council supported the request and approved the first PPA Amendment. [A copy of PPA Amendment 1 is attached](#). This amendment extended the deadline for OCCP to obtain project financing to June 10, 2022 and also adjusted the deadline for the Interconnection / Integration Plan accordingly.

The challenge with this delay was the uncertainty around the Geothermal Project as the City plans for and invests in Capital Projects to support the electrical system. The FY22-31 CMMP includes the City's share of funding support necessary, per the PPA, for integration and interconnection, and projects necessary for the existing system which may or may not be necessary if the Geothermal project proceeds. Whether or not such improvements will be necessary depend on the design of the Geothermal project (which is not yet completed), the findings of the integration and interconnection study (which can't be fully completed until the design is finalized), and significant timing and safety considerations present now. We continue to evaluate how best to proceed given what we know at this point.

DISCUSSION: Since the approval of Amendment 1, Electrical Power Systems (EPS) produced an Interim Intertie Study. This interim report identifies rough order magnitude estimates for separate projects. The highest priority projects include eight separate projects totaling \$13.7 million. The new projects (second priority) include four separate projects totaling \$2.6 million. In total there are twelve separate projects totaling \$16.25 million. As the design progresses some projects may be modified, and some new projects may be required and estimates may change. Regardless, the total cost of the upgrades will likely exceed \$12 million, meaning that the OCCP obligation under the PPA will hit the \$7 million maximum and the City will likely need to contribute more than \$5 million towards upgrades. This project list in the interim study has been agreed to formally by both OCCP and City representatives through a Memorandum of Agreement (MOA). [A copy of the MOA is attached](#). The MOA also outlines the cost reimbursement schedule for OCCP's obligation identified in the PPA.

As OCCP and the City finalized the MOA it became apparent that an extension to the Commercial Operations Date was necessary. Amendment 2 extends the Commercial Operations Date by one year from May 31, 2024 to May 31, 2025, corresponding with the one year extension to the financing deadline in the previous amendment. This extension provides an additional construction season, now required because the planned utility upgrades are being significantly dialed back this year due to OCCP's delayed funding. This extension will also provide another year to potentially gain new customers, however, it is unlikely we will be able to fully market and sell more power until specifics about the geothermal project are clearly understood and the project itself is completed.

FINANCIAL IMPLICATIONS: Primary financial implications of the PPA relate to the City's cost of purchasing power. The 30 year PPA requires the City pay a fixed **\$16.3 million annually (with 1% annual increases), for a total of just under \$567 million over 30 years**. Our base load is currently 40 million kilowatt hours per year, but to make this economical we need near-full participation of current self-generators to get up to 90 to 100 million kilowatt hours per year. Although this extension will provide another year to prepare and potentially gain new customers, without more specifics about the geothermal project and its completion, it is unlikely we will be able to successfully market and sell more power. Ultimately, costs associated with the PPA will be passed along to the rate payers. Various scenarios were prepared analyzing these financial

implications created from the PPA regarding the base load and the potential increased sales were provided to the City Council during the PPA negotiation process.

The PPA also commits the City to **\$5 million for upgrading the City distribution system, with OCCP committing \$7 million, of the first \$12 million necessary for upgrades. EPS's interim Intertie report identifies rough order magnitude estimates for twelve separate upgrade projects totaling \$16.25 million.** As the design progresses some projects may be modified, and some new projects may be required and estimates may change. These projects will be necessary over the course of the next few construction seasons. Budgetary adjustments may be required to roll out these projects for necessary upgrades and to accommodate the reimbursement schedule as we implement the PPA.

ALTERNATIVES: Council has two primary options on how to proceed with the Resolution 2021-55 and the second PPA amendment. These include:

1. Approve Resolution 2021-55, thereby approving the second amendment to the PPA and authorizing the City Manager to sign the Amendment; or
2. Disapprove Resolution 2021-55, thereby disapproving the second amendment to the PPA.

LEGAL: City Attorney Brooks Chandler has been engaged in discussions with OCCP from the beginning and remains so. He was involved in finalizing the PPA, the amendments, as well as the finalizing of the referenced MOA. All of which are attached to this memo.

STAFF RECOMMENDATION: This amendment extends the Commercial Operations Date by a year in keeping with the extension outlined in the first amendment, which provided an additional year for OCCP to secure financing. These amendments do not change the underlying PPA prepared in accordance with Council directives and approved by City Council in August of 2020. This extension will allow an additional construction season to perform necessary utility upgrades that are significantly dialed back this year due to OCCP's delayed funding. For these reasons, I recommend approval of this amendment.

PROPOSED MOTION: I move to adopt Resolution 2021-55.

ATTACHMENTS:

1. PPA between OCCP and City of Unalaska
2. PPA Amendment 1
3. Memorandum of Agreement
4. PPA Amendment 2

AMENDMENT NO. 2

to

POWER PURCHASE AGREEMENT

BETWEEN

CITY OF UNALASKA, a first-class Alaska municipal corporation

AND

OUNALASHKA CORPORATION/CHENA POWER, LLC, an Alaska limited liability company

For good and valuable consideration the receipt of which is hereby acknowledged, the City of Unalaska, a first-class Alaska municipal corporation (Purchaser) and Ounalashka Corporation/Chena Power, LLC (Seller) a licensed Alaska limited liability company duly organized under the laws of the State of Alaska agree to amend that certain POWER PURCHASE AGREEMENT, dated August 31, 2020(Agreement) as previously amended by Amendment No. 1 as follows:

1. Paragraph 1(e) is hereby amended to read as follows:

(e) "Commercial Operation Deadline" means May 31, 2025 which is the date by which the Facility must have reached the Commercial Operations Date, or such other date as provided in this Agreement or as may be agreed to in a writing signed by both Parties.

2. No other provisions in the Agreement are altered by this amendment.

In witness whereof, Seller and Purchaser have duly executed, delivered, and formed this Amendment No. 2 through their authorized representatives, the effective date of which is July 28, 2021 ("Effective Date").

OC/CP, LLC:

By: OUNALASHKA CORPORATION, an
Alaska business corporation
Its Managing Member

Dated: 7/15/21, 2021

By Christopher P. Salts, Jr.
Christopher P. Salts
Its Chief Executive Officer

Dated: 7/15/21, 2021

By Margaret A. Lekanoff
Margaret A. Lekanoff
Its Secretary

CITY:

CITY OF UNALASKA, a first-class
municipal corporation

Dated: 7/28/21, 2021

By [Signature]
Erin Reinders
Its City Manager

CITY OF UNALASKA
UNALASKA, ALASKA

RESOLUTION 2022-07

A RESOLUTION OF THE UNALASKA CITY COUNCIL APPROVING AMENDMENT 3 TO THE POWER PURCHASE AGREEMENT WITH OUNALASHKA/CHENA POWER, LLC AND AUTHORIZING THE CITY MANAGER TO SIGN THE AMENDMENT

WHEREAS, the City of Unalaska operates a public utility to provide for and distribute electricity to customers; and

WHEREAS, Ounalashka/Chena Power, LLC (OCCP) sought to construct a geothermal plant and required a signed Power Purchase Agreement (PPA) with the City of Unalaska in order to obtain project financing; and

WHEREAS, the City Council approved the PPA developed in accordance with City Council Directives, and authorized the City Manager to enter into the agreement on August 25, 2020 through Resolution 2020-55; and

WHEREAS, OCCP was be unable to obtain financing by the deadline of June 10, 2021, as outlined in the PPA and requested an amendment to the PPA; and

WHEREAS, the City Council approved Amendment Number 1 to the PPA extending the deadline outlined in the PPA to obtain financing to June 10, 2022, and authorized the City Manager to sign the amendment through Resolution 2021-14 on March 30, 2021; and

WHEREAS, the City of Unalaska and OCCP negotiated and on July 15, 2021, signed a Memorandum of Agreement (MOA) outlining initial upgrade projects and the cost reimbursement schedule in accordance with the PPA; and

WHEREAS, the City Council approved Amendment Number 2 to the PPA extending the Commercial Operations Date deadline outlined in the PPA by one year from May 31, 2024, to May 31, 2025, and authorized the City Manager to sign the amendment through Resolution 2021-55 on July 27, 2021; and

WHEREAS, OCCP has requested Amendment Number 3 of the PPA to extend the financing and commercial completion deadlines, and further requested Amendment 1 of the MOA to align with this new schedule; and

WHEREAS, the City of Unalaska and OCCP have agreed that extending the deadline to obtain financing to December 10, 2023; to finalize the Interconnection/Integration Plan and identify necessary easements to January 1, 2024; and the commercial operation date to May 31, 2027 are necessary; and

WHEREAS, the City of Unalaska and OCCP have also agreed in the value of OCCP to provide written reports to the City regarding potential customers beginning on March 1, 2022; and

WHEREAS, the City of Unalaska and OCCP have negotiated Amendment Number 1 of the MOA in accordance with the PPA and its Amendments, and will sign once Amendment Number 3 of the PPA is approved by City Council.

NOW THEREFORE BE IT RESOLVED that the Unalaska City Council approves Amendment 3 to the PPA extending these deadlines and reporting requirements, and authorizes the City Manager to sign the amendment.

PASSED AND ADOPTED by a duly constituted quorum of the Unalaska City Council on February 22, 2022.



Vincent M. Tutiakoff, Sr.
Mayor

ATTEST:



Marjie Veeder, CMC
City Clerk



MEMORANDUM TO COUNCIL

To: Mayor and City Council Members
From: Erin Reinders, City Manager
Date: July 27, 2021
Re: Resolution 2022-07: Approving Amendment 3 to the Power Purchase Agreement with Ounalashka/Chena Power, LLC and authorizing the City Manager to sign the amendment

SUMMARY: In August of 2020, City Council approved Resolution 2020-55, and authorized entering into a Power Purchase Agreement (PPA) with Ounalashka/Chena Power, LLC (OCCP). Since that time, Council has approved two amendments to the PPA. Additionally an MOU was developed to help implement the PPA. What is before Council this evening is as a result of a request from OCCP to further amend the PPA and the MOA. If Council approves Amendment 3 through Resolution 2022-07 tonight, staff will then move forward with amending the MOA as well. The Amendment has been developed based on the direction received from Council on February 8, 2022.

PREVIOUS COUNCIL ACTION: Council identified, as a federal priority, support for efforts and programs for reliable and cost-effective alternate energy sources, including geothermal. An outline of Council actions related to the PPA with OCCP is listed below.

November 26, 2019

- Work Session, Presentation from OCCP regarding their geothermal project

January 30, 2020

- Special Meeting for a Work Session for an update on OCCP's geothermal project

February 25, 2020

- Work Session, Report from OCCP regarding their geothermal project

March 10, 2020

- Reports - City Attorney conflict of interest opinion related to OCCP
- Executive Session
 - Discussion regarding potential PPA between City of Unalaska and OCCP
 - Discussion regarding potential Power Sales Agreements between City of Unalaska and local seafood processing facilities

May 26, 2020

- Directive to the Manager: *“Report back to the City Council by June 16, 2020 for possible action committing to a PPA with OCCP at the Council Meeting on June 23, 2020 a cost/benefit/risk analysis for a potential Power Purchase Agreement concept that commits Unalaska for the purchase of 100MkWhr/year, at \$0.16/kWh, for 30 years taking into account the probability of securing sufficient load sources by fall of 2023 within the Unalaska City Limits.”*

June 23, 2020

- Work Session - Presentation and discussion of the financial feasibility and potential risks and rewards related to OCCP's proposed Makushin Geothermal Power Project
- Directive to the Manager: *"Negotiate and work cooperatively with OCCP LLC to develop a Power Purchase Agreement that enables the City Council to act on such agreement at the Council Meeting on July 14, 2020. Initial loads to be negotiated should be between 80mkwhr and 100mkwhr. Costs and rates to be negotiated within the Power Purchase Agreement."*

July 21, 2020

- Special Meeting for Work Session & Executive Session, Discussion of PPA with OCCP

August 11, 2020

- Executive Session, Discussion of PPA with OCCP
- Directive to the Manager: *"I move to direct staff to accept both the OCCP proposal to share in the upside and daily liquidated damages in the amount of \$20,000.00 per day with a cap of \$5 million. The heat pump contribution is to remain at \$10 million cost to OCCP. The Annual cost is to be \$16,300,000.00. The meter on the upside sharing starts at 100,000,000 kWh. A minimum of two transmission lines to the delivery point of the City is required."*

August 25, 2020

- Council approves Resolution 2020-55, approving the PPA with OCCP and authorizing the City Manager to enter into the agreement

March 23, 2021

- Work Session - OCCP provided Council with an update on the project in preparation of considering an amendment to the PPA at the March 23, 2021 meeting. OCCP has requested an amendment to the PPA, extending the deadline outlined in the PPA to obtain financing.

March 30, 2021

- Special Meeting continued from the Regular Meeting on March 23, Council approved Resolution 2021-14, approving the PPA Amendment and authorizing the City Manager to sign said amendment. The amendment extended the deadline for OCCP to obtain financing and adjust the deadlines related to the Interconnection/Integration Plan.

July 27, 2021

- Regular meeting, Council approves Resolution 2021-55, approving Amendment 2 to the Power Purchase Agreement with Ounalashka/Chena Power, LLC and authorizing the City Manager to sign the amendment

February 8, 2022

- Executive Session, Discuss OCCP's requested amendment to the Power Purchase Agreement and to the Memorandum of Agreement between the City of Unalaska and Ounalashka/Chena Power, LLC

BACKGROUND: In August of 2020, after several months of negotiations and meetings, Council approved Resolution 2020-55 and authorized entering into the PPA with OCCP. An outline of all the Council actions related to the PPA is listed above. A copy of the PPA is attached. The 30 year PPA requires the City pay a fixed \$16.3 million annually (with 1% annual increases). Our base load is currently 40 million kilowatt hours per year, but to make this economical we need full participation of self-generators to get up to 90 to 100 million kilowatt hours per year. We have no

commitments in place from existing business to cover this gap, nor are we aware of any future development that is committed to locating in Unalaska and purchasing available power.

The PPA contains known expenses the City agreed to, including up to \$5 million for studying and upgrading the City distribution system, with OCCP committing up to \$7 million. The City agreed to initially fund the integration and interconnection study, but this cost will be reimbursed from OCCP in accordance with the PPA. To this end, the City contracted with Electrical Power Systems (EPS) to conduct the study.

OCCP requested amending the PPA to extend by one year their deadline to obtain written commitment for project financing in March of 2021. The original June 10, 2021 deadline for OCCP to secure financing commitments was identified in the original PPA as a key conditional precedent that allowed for the City to terminate the agreement if they so desired. Council supported the request and approved the first PPA Amendment. A copy of PPA Amendment 1 is attached. This amendment extended the deadline for OCCP to obtain project financing to June 10, 2022 and also adjusted the deadline for the Interconnection / Integration Plan accordingly.

Since the approval of Amendment 1, EPS produced an Interim Intertie Study. This project list in the interim study has been agreed to formally by both OCCP and City representatives through a Memorandum of Agreement (MOA). A copy of the MOA is attached. The MOA also outlines the cost reimbursement schedule for OCCP's obligation identified in the PPA. As OCCP and the City finalized the MOA it became apparent that an extension to the Commercial Operations Date was necessary. Amendment 2 extends the Commercial Operations Date by one year from May 31, 2024 to May 31, 2025, corresponding with the one year extension to the financing deadline in the previous amendment. A copy of PPA Amendment 2 is attached.

On January 6, 2022, the City received a written request from OCCP for Amendment 3 to the PPA and to temporarily suspend the MOA. A copy of this request is attached.

DISCUSSION: The City Team met with OCCP on January 14, 2022, to discuss this request in more detail. Basically, OCCP has requested Amendment 3 to the PPA to extend the financing and commercial completion date deadlines, and Amendment 1 of the MOA to align with this new schedule.

After Council's Executive Session on February 8, 2022, discussing this request and the various amendments, the City Team met with OCCP on February 11, 2022, and worked to develop Amendment 3 in accordance with the direction provided by Council in Executive Session. Together, we have agreed that the extension of deadlines to obtain financing to December 10, 2023; to finalize the Interconnection/Integration Plan and identify necessary easement to January 1, 2024; and the commercial operation date to May 31, 2027, are necessary for this project to continue moving forward. The City of Unalaska and OCCP have also agreed in the value of OCCP providing written reports to the City regarding potential customers beginning on March 1, 2022. This is all outlined Amendments 3 to the PPA, which OCCP has already indicated its concurrence. A copy of Amendment 3 is attached.

We have also worked with OCCP to develop Amendment 1 to the MOA to address the changes in PPA Amendment 3. A copy of Amendment 1 to the MOA is attached. Amendment 1 to the MOA will be signed after Council approves PPA Amendment 3.

FINANCIAL IMPLICATIONS: Primary financial implications of the PPA relate to the City's cost of purchasing power, which goes unchanged with this this PPA Amendment. The 30 year PPA requires the City pay a fixed **\$16.3 million annually (with 1% annual increases), for a total of just under \$567 million over 30 years.** Our base load is currently 40 million kilowatt hours per year, but to make this economical we need near-full participation of current self-generators to get up to 90-100 million kilowatt hours per year. Although this extension will provide another year to prepare and potentially gain new customers, without more specifics about the geothermal project and its completion, it is unlikely we will be able to successfully market and sell more power. Ultimately, costs associated with the PPA will be passed along to the rate payers. Various scenarios were prepared analyzing these financial implications created from the PPA regarding the base load and the potential increased sales, and were provided to the Council during the PPA negotiation process.

The PPA also commits the City to **\$5 million for upgrading the City distribution system, with OCCP committing \$7 million, of the first \$12 million necessary for upgrades. EPS's interim Intertie report identifies rough order magnitude estimates for twelve separate upgrade projects totaling \$16.25 million.** As the design of the overall geothermal project progresses, some intertie projects may be modified, some new projects may be required and estimates may change. These projects will be necessary over the course of the next few construction seasons. Budgetary adjustments may be required to roll out these projects for necessary upgrades and to accommodate the reimbursement schedule as we implement the PPA.

The uncertainty around the Geothermal Project, and the associated PPA and MOA amendments, poses challenges as the City plans for and invests in Capital Projects to support the electrical system. A budget amendment will likely be needed to adjust to the change in the cost share timing. The upcoming CMMP will be adjusted as well, especially as it pertains to the timing of OCCP's cost share. The City's focus now is the City's portion of electrical system interconnection upgrades and extensions in order to provide service to new customers and to improve reliability to the City's electrical distribution system. These improvements are also required to accept and distribute energy from the Makushin geothermal plant.

ALTERNATIVES: Council has two primary options on how to proceed with the Resolution 2022-07 and the third PPA amendment. These include:

1. Approve, thereby approving the third amendment to the PPA and authorizing the City Manager to sign the Amendment; or
2. Disapprove, thereby disapproving the third amendment to the PPA.

LEGAL: City Attorney Brooks Chandler has been engaged in discussions with OCCP from the beginning and remains so. He was involved in finalizing the PPA, the amendments, as well as the finalizing of the referenced MOA and its amendments, all of which are attached to this memo.

STAFF RECOMMENDATION: This amendment extends various deadlines in keeping with the extensions outlined in the previous amendments. These amendments do not change the underlying PPA prepared in accordance with Council directives and approved by Council in August of 2020. For these reasons, I recommend approval of this amendment.

PROPOSED MOTION: I move to adopt Resolution 2022-07.

ATTACHMENTS:

1. PPA between OCCP and City of Unalaska
2. PPA Amendment 1
3. MOA between OCCP and City of Unalaska
4. PPA Amendment 2
5. OCCP Request
6. PPA Amendment 3
7. MOA Amendment 1

AMENDMENT NO. 3

to

POWER PURCHASE AGREEMENT

BETWEEN

CITY OF UNALASKA, a first-class Alaska municipal corporation

AND

OUNALASHKA / CHENA POWER, LLC, an Alaska limited liability company

For good and valuable consideration, the receipt of which is hereby acknowledged, the City of Unalaska, a first-class Alaska municipal corporation (Purchaser) and Ounalashka / Chena Power, LLC (Seller) a licensed Alaska limited liability company duly organized under the laws of the State of Alaska agree to amend that certain POWER PURCHASE AGREEMENT, dated August 31, 2020 (Agreement) as previously amended by Amendment No. 1 and Amendment No. 2 as follows:

1. Paragraph 1(e) is hereby amended to read as follows:

(e) "Commercial Operation Deadline" means May 31, 2027 which is the date by which the Facility must have reached the Commercial Operations Date, or such other date as provided in this Agreement or as may be agreed to in a writing signed by both Parties.

2. Paragraph 4(c) is hereby amended to read as follows:

(c) Seller and Purchaser agree that the purpose and intent of this Agreement is dependent on the successful completion of the construction of the Facility/Facilities and the related achievement of the Commercial Operation Date by the Commercial Operation Deadline. As such, in the event that either; 1) Seller fails to obtain Project Financing by December 10, 2023; or 2) construction of the Facility/Facilities is at any time discontinued, abandoned or otherwise terminated by Seller in its sole discretion, or 3) Seller fails to provide written assurances to Purchaser that the Commercial Operation Deadline will be achieved in a form consistent with Prudent Utilities Practices, or 4) the Project fails to reach Commercial Operation by the Commercial Operation Deadline, then either Party may terminate this Agreement upon thirty (30) day's prior written notice to the

other party. In the event that a party elects to terminate this Agreement pursuant to this Section 4 (c), neither Seller nor Purchaser shall have any further liability and/or obligations to the other hereunder after the termination date, except for obligations, liabilities and/or duties that accrued prior to such termination or that survive such termination by the terms of this Agreement

3. Paragraph 11(a) is hereby amended to read as follows:

(a) The Parties shall agree to the Interconnection/Integration Plan a copy of which shall be attached to this Agreement by reference as Exhibit B, by January 1, 2024.

4. Paragraph 20(a) is hereby amended to read as follows:

(a) Seller shall obtain a written commitment for Project Financing by 12/10/2023.

5. Paragraph 20(b) is hereby amended to read as follows:

(b) The Parties shall negotiate in good faith to establish the Interconnection / Integration Plan” by January 1, 2024. The Interconnection/Integration Plan shall include but not be limited to; 1) a mutually acceptable Delivery Point; 2) a location for new distribution and transmission equipment required to connect to the Purchasers existing City Distribution System at Project Capacity, and 3) locations for metering equipment.

6. Paragraph 20(c) is hereby amended to read as follows:

(c) Seller shall have provided Purchaser a utility easement allowing placement, maintenance and operation of all equipment and connections at 1) the Delivery Point and 2) a location for new distribution and transmission equipment required to connect to the Purchasers existing City Distribution System at Project Capacity in a form reasonably satisfactory to Purchaser at no cost to Purchaser by January 1, 2024.

7. A new paragraph 2(e) is added to read as follows:

(e) Commencing March 1, 2022 Seller shall use its best efforts to identify potential new customers within and outside Purchaser’s existing service area who may be willing to receive electric service from Purchaser. Such efforts shall not, however, include offering such potential customers terms and conditions for electric service.

Seller shall provide Purchaser with written reports on at least a quarterly basis containing the names and contact information for potential customers.

7. Exhibit B is hereby amended to read as follows:

Interconnection / Integration Plan
[to be provided by the Parties by January 1, 2024]

8. No other provisions in the Agreement are altered by this amendment.

In witness whereof, Seller and Purchaser have duly executed, delivered, and formed this Amendment No. 3 through their authorized representatives, the effective date of which is March 11, 2022 ("Effective Date").

OC/CP, LLC:

By: OUNALASHKA CORPORATION, an
Alaska business corporation
Its Managing Member

Dated: 3-11, 2022

By Natalie A. Cale
Natalie Cale
Its Interim Chief Executive Officer

Dated: 3/11, 2022

By Margaret A. Lekanoff
Margaret A. Lekanoff
Its Secretary

CITY:

CITY OF UNALASKA, a first-class
municipal corporation

Dated: 3/11, 2022

By Erin Reinders
Erin Reinders
Its City Manager