STATEMENT OF QUALIFICATIONS
ALASKA MICROGRID GROUP

Energy Consulting Services

COMPANY OVERVIEW

Statement of Corporate Mission:

Alaska Microgrid Group, Inc. (AMG) is dedicated to providing the world's microgrid market with access to proven microgrid and renewable energy integration expertise and development tools. AMG is a nonprofit organization pooling deep knowledge from the utility, research and vendor solution provider communities to leverage decades of experience designing, building and operating microgrid projects across Alaska - the U.S. leader in microgrid deployments.

Established in 2020, AMG is based in Alaska but includes team members from throughout the U.S. AMG's combination of self-reliant utilities, leading academics and private sector thought leaders offers a unique blend of advice that is particularly relevant during early stages of project conception and planning. Using technical due diligence and effective communication and stakeholder engagement strategies, AMG can get your project moving.

AMG offers a competitive edge by drawing upon lessons learned in the most successful microgrid market in the U.S. where projects have been driven by economic necessity under extremely challenging conditions. AMG's expertise is particularly relevant to electric utilities, many of which have struggled to figure out their role in the continental U.S. Remote microgrids – which dominate Alaska's portfolio in terms of numbers – is the leading microgrid application segment in the world. As such, the Alaska microgrid experience is also highly relevant to emerging economies that represent the largest long-term market for microgrids. Alaska offers important lessons for emerging hot spots for microgrids including Puerto Rico, Hawaii, the Asia Pacific region and a growing number of promising markets around the world.

The bottom-line is this: AMG is flexible. It can customize its contributions to a project, offering exactly what it requires.

PARTNER ORGANIZATIONS

AMG utilizes a core team and leverages its relationships with a number of experts and organizations to deliver right-size solutions for clients:

- **Alaska Center for Energy and Power (ACEP)**: An applied energy research and testing center focused on lowering the cost of energy throughout Alaska and developing economic opportunities for the State, its residents, and its industries.
- **Renewable Energy Alaska Project (REAP)**: A non-profit dedicated to increasing the development of renewable energy and energy efficiency in Alaska through collaboration, education, training, and advocacy.
- **University of Alaska Fairbanks (UAF)**: A leading Arctic research university.

- **Center of Innovation, Commercialization, and Entrepreneurship (Center ICE):** The University of Alaska's innovation hub and AMG product development partner.
- **Arctic Remote Energy Network Academy (ARENA)**: An energy knowledge-sharing and professional network for remote Arctic communities.
- **Cordova Electric Cooperative (CEC)**: Trailblazes clean energy solutions in a remote coastal community in southeast Alaska.
- **Kodiak Electric Association (KEA):** Generates nearly 100% of its electricity from hydro and wind on Kodiak Island.
- **Alaska Village Electric Cooperative (AVEC)**: Serves 58 remote communities across Alaska, including 20 that have integrated wind energy onto diesel grids.
- **Kotzebue Electric Association (KEA)**: Has pioneered the use of wind, solar and energy storage above the Arctic circle.
- **Guidehouse Insights**: A leading source of data and insights for global microgrid markets, applications and vendors.
- **V3 Energy, LLC**: Provides specialized village-scale renewable energy power system design, planning and assessment.
- **Office of Naval Research (ONR)**: A funding partner and an executive branch agency within the Department of Defense.

SERVICES

AMG serves as a one-stop-shop for finding viable microgrid sites and partners, conceptualizing the design, building a partner ecosystem and then drawing out key findings with lessons learned in case studies and other formats. AMG uses its broad understanding of the Alaska energy ecosystem to apply lessons learned to the development of microgrids in remote communities around the world. AMG's suite of services includes the following:

- Regional, community and business-based energy planning, stakeholder outreach and project roadmap development.
- Stakeholder engagement
- Microgrid system design, including initial modeling and DER integration analysis
- Independent evaluation and review of site and equipment selection
- Project management
- Resource, economic and carbon emission analyses
- Hardware prototyping and technology testing
- Training, mentoring and capacity building
- Case studies and thought leadership on lessons learned

AMG's subsidiary, Dynamic Microgrid Solutions, works with companies and innovators to design and test the next generation of clean energy technologies and solutions.

KEY PERSONNEL

AMG's core team includes its executive director, chief technology officer and project manager.

Executive Director Peter Asmus is a leading global authority on microgrid markets and other emerging trends in sustainable and resilient energy systems. Author of four books, he has been writing about and analyzing emerging trends in energy policy, technology and applications since 1986. Most recently, he

was Research Director with Guidehouse Insights where he started up the world's first global data set on microgrids and developed a forecast methodology to estimate future growth. He has served as a global thought leader on microgrids and other DER platforms such as virtual power plants. Among his past clients are ABB, ATCO, AutoGrid, Bank of Tokyo, EDF, Enbala (now Generac Grid Services), Engie, GE, Hitachi Energy, Horizon Power, Power Ledger, Schneider Electric, Siemens and many others.

Chief Technology Officer Robert Bensin is both a journeyman electrician and an electrical administrator. With over 25 years of experience, he was involved in the construction and management of one of the first wind farms built in rural Alaska. He is senior research engineer specializing in practical knowledge of arctic construction at the Alaska Center for Energy and Power (ACEP), and Chief Technology Officer at AMG.

Project Manager Patty Eagan provides AMG project management, coordination, and operations support. She is also a project manager for the Alaska Center for Energy and Power. Eagan's focus is on meeting the organizational and logistical needs of AMG to help drive both innovative and tried-and-true lessons learned to communities. Eagan earned her masters of business administration from University of Alaska Fairbanks. Before AMG she helped coordinate ACEP's Microgrid Boot Camp and ACEP's internship program which each collaborate between utility personnel, students, and researchers throughout Alaska.

BOARD OF DIRECTORS

The true value of AMG is the ability to leverage the expertise of its board of directors, which each offer deep experience in bringing real projects to fruition - and then maintaining them for the long-term.

William Thomson has 50 years of experience as an electrical engineer in both Alaska and Canada. Most of his work has focused on integrating renewable energy into traditional energy systems including 20 years designing the equipment necessary for Alaska Village Electric Cooperative (AVEC) to deploy a dozen wind-diesel hybrid microgrids. Thomson is a licensed professional engineer in both Alaska and British Columbia. He also holds two patents.

Brad Reeve was the CEO and general manager of Kotzebue Electric Association for 29 years. He is nationally known as an early adopter of wind energy and a pioneer in integrating wind into diesel microgrids. Reeve has received several honors and awards for his innovative work.

Brian Rogers was a principal at Information Insights for more than 20 years, an economic and public policy consulting firm that he founded. Rogers served for seven years as the University of Alaska system's finance vice president, four years in the Alaska State House of Representatives, eight years as a member of the UA Board of Regents, and seven years as University of Alaska Fairbanks chancellor.

Clay Koplin has been the general manager of Cordova Electric Cooperative since 2007. Koplin's expertise includes electrical engineering, project management, underground electric and communication line design, electric utility business management, and strategic planning and execution. Koplin is also the former mayor of Cordova, and a leader in many other community organizations.

Gwen Holdmann has been the first director for the Alaska Center for Energy and Power (ACEP) since 2010. ACEP is an applied energy research program based at the University of Alaska Fairbanks focused on community-scale energy technologies. She has received numerous awards, including Alaska's Top Forty Under 40, an R&D 100 award from R&D Magazine and has been inducted into the Alaska's Innovator Hall of Fame.

Meera Kohler is the former president and CEO of Alaska Village Electric Cooperative (AVEC), a not-for-profit utility serving 58 remote villages across Alaska for two decades. Under her leadership, AVEC established itself as an innovator in developing hybrid wind-diesel systems in many of AVEC's small communities. More than 20 of AVEC's villages now generate a percentage of their power from wind. Kohler has been active with the National Rural Electric Cooperative Association and has chaired several affiliated boards in Alaska and the Pacific Northwest.

Bill Stamm is the current CEO of Alaska Village Electric Cooperative (AVEC). He has over a quarter century of experience in the construction, operation and design of energy systems in remote communities across Alaska. Stamm's work has included the design of fuel delivery and storage systems, diesel power plants, power generation and distribution facilities and the practical integration of wind generation into small diesel microgrids.

Raaj Kurapati is the University of Memphis' Executive Vice President for Business & Finance and Chief Financial Officer. Kurapati previously held the positions of Vice President for Finance and Chief Financial Officer for Texas A&M University, Kingsville and Associate Vice Chancellor for Financial Services and Business Operations for the University of Alaska Fairbanks. Originally from Pohnpei, Micronesia, he has a breadth of experience working across the Pacific Islands, a leading future market for remote microgrids in the Asia Pacific region

KEY PARTNER PERSONNEL

Darron Scott has been the President/CEO of Kodiak Electric Association, Inc. since 2000. Under his leadership, the utility is now generating nearly 100% of its electricity from renewable energy resources. Has been recognized as a leader through many awards including Alaska's Top 40 Under 40 Award and the Director's Corporate Stewardship Award from the U.S. Fish and Wildlife Service.

Chris Rose is the founder and Executive Director of Renewable Energy Alaska Project (REAP), a statewide, nonprofit clean energy education and advocacy group based in Anchorage, Alaska. REAP has been instrumental in establishing and promoting clean energy programs and policy in Alaska, including the creation of the state's Renewable Energy Fund. Before his work with REAP, he had a private law and mediation practice for 13 years.

RELEVANT COMPANY EXPERIENCE

Carbon Reduction for Golden Valley Electric Association

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Golden Valley Electric Association, an Interior Alaska electric cooperative, engaged the Alaska Center for Energy and Power to recommend measures that would reduce GVEA's carbon footprint by 26 percent

by 2030 with minimal long-term rate impact. The Alaska Microgrid Group provided overall project management and developed a scenario model to determine the effects of various options on electrical production, reliability, carbon production, electrical consumption, debt service and rate impact. AMG extended the analysis through 2040, providing ACEP and GVEA with several options to meet the GVEA Board goal.

SaskPower: Peter Ballantyne Cree Nation Utility Development

SaskPower
Powering our future®

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SaskPower, a Canadian Crown Corporation, asked ACEP and Dynamic Microgrid Solutions (an Alaska Microgrid Group subsidiary) to make recommendations for the formation of a tribally-owned distribution utility to serve the members of the Peter Ballantyne Cree Nation, a Saskatchewan First Nations band. The report provided a viable path to developing the first tribally-owned electric cooperative utility in Canada to own and operate local renewable energy projects, including 4 MW solar photovoltaic projects.

Pilgrim Hot Springs Low-Temperature Geothermal Deployment

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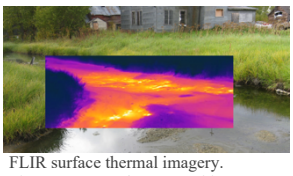
FLIR surface thermal imagery.
Photos curtesy of Gwen Holdmann.


Shallow temperature survey and mapping using a Geoprobe.

Kawerak, Inc., a tribal corporation in Nome, Alaska, sought to revitalize Pilgrim Hot Springs by providing stable electricity to the area. ACEP developed options using wind, solar, and geothermal power production. The Alaska Microgrid Group provided a summary economic analysis of the options and a presentation format to allow Kawerak and its potential grant-makers to compare the choices. The work prioritized geothermal electric production for its long-term development impact on the hot springs property, one of the few microgrids in the world to tap this 24/7 renewable energy resource.

Pilgrim Hot Springs is located on the Seward Peninsula in western Alaska and is on the National Register of Historic Places. It is considered one of the highest potential geothermal resources in the state. It is owned by Unaatuq, LLC, a consortium of seven local organizations based in the Bering Straits region. Kawerak is a managing partner of Unaatuq and is organized as a tribally owned and operated non-profit serving the residents and communities of the Bering Straits region.

AMG is an equal opportunity employer and does not discriminate on the basis of race, religion, color, national origin, citizenship, age, sex, physical or mental disability, status as a protected veteran, marital status, changes in marital status, pregnancy, childbirth or related medical conditions, parenthood, sexual orientation, gender identity, political affiliation or belief, genetic information, or other legally protected status.