



Sustainable Development
Working Group



ARCTIC COUNCIL

SDWG PROJECT PROPOSAL TEMPLATE

<p>Project Title:</p> <p>Arctic Renewable Energy Atlas (AREA)</p> <p>*An Authorized Project of the SDWG; propose clustering this with the 2017 Arctic Energy Summit</p>	<p>Lead Country/Project leader(s):</p> <p>Suggested Co-Leads:</p> <ul style="list-style-type: none"> • U.S. • Iceland • Finland <p>Project Leader:</p> <ul style="list-style-type: none"> • Nils Andreassen, Institute of the North (US)
<p>Total Cost of Project: \$275,000</p> <p><i>Funders are yet to be determined, but potential contributions should be expected from State agencies, foundations, and organizational sponsors.</i></p>	<p>Relationship to other AC Working Groups:</p> <p>Scientific Collaboration Task Force</p> <p>Task Force on Telecommunications Infrastructure in the Arctic</p>

Criteria for assessing SDWG project proposal submissions:

Objective of Project:

Recommendations from the Arctic Energy Summits in both 2013 and 2015 highlight the urgent need to increase awareness of renewable energy resources and energy efficiency in the Arctic. Both Summits were projects of the SDWG, and correspond to one of SDWG’s priority thematic areas: Energy and Arctic Communities. Specifically, this thematic area focuses on the “importance of environmentally friendly economic activity in the energy sector to ongoing social and economic development in the Arctic region.” The Arctic Energy Summit has been clear in associating this with increasing the adoption of renewable energy, driving down the high cost of energy, and promoting savings via energy efficiency.

The Energy Summit, too, produced a specific recommendation to produce something like an Arctic Renewable Energy Atlas (AREA), which this proposal responds to. This project will deliver increased access to energy information by developing a best practices guide in the form of an Atlas which would include a baseline assessment of renewable energy potential, energy efficiency standards/practice, and community storytelling, informed by traditional knowledge complementing science.

Overall objective: To contribute to sustainable development in the Arctic region by creating a comprehensive online tool to enhance knowledge of the best practices and local adaptation actions on renewable energy and energy efficiency within the Arctic



Sustainable Development
Working Group



ARCTIC COUNCIL

region. The purpose is to design and maintain the Arctic Renewable Energy Atlas (AREA) as a free-of-charge resource for the general public, researchers and Arctic public officials to raise awareness of energy efficiency opportunities and renewable energy solutions.

The opportunity to engage Permanent Participants in the active sharing of community energy challenges and solutions, being able to document that and share it globally, is especially significant. Indigenous peoples in Arctic communities know firsthand the struggle for power and heat; here we see a chance to highlight innovative solutions to those challenges.

Generally, this project also complements current efforts underway to see better access to exactly this kind of information in a manner that is accessible to policy makers, community leaders and the public. The project intersects with the work of the Task Force on Scientific Collaboration, especially as it applies to multi-layered data visualization. The Telecommunications Task Force, as well, could contribute to this project, inasmuch as remote telecommunications infrastructure depends on micro-energy – often renewable – systems; and energy systems depend on good data communication.

Timetable and Project Completion/Project Management:

- See attached project management spreadsheet.

Project Principals:

The **Arctic Portal** is a comprehensive gateway to Arctic information and data on the internet, increasing information sharing and co-operation among Arctic stakeholders and granting exposure to Arctic related information and data. For this purpose, Arctic Portal works in close collaboration with partners all over the world, developing new projects and initiative. Ultimately the Arctic Portal is working to increase Arctic-related knowledge. The Arctic Portal Mapping System provides visual information about Arctic related information through various databases and websites. Contact: Halldór Jóhannsson Norðurslóðagáttin ehf, Skipagata 12, PO Box 170, 602 Akureyri, Iceland, tel. +354 462 2800, mob. +354 899 2929, halldor@arcticportal.org

The **Sámi Education Institute** is a secondary degree school that provides a variety of vocational training in both Finnish and Sámi, and promotes Sámi culture in the whole of the Sámi region. SEI is involved in large scale international cooperation which has a particular focus in promoting and developing the traditional livelihoods of indigenous peoples of the Circumpolar North. SEI cooperates closely with the Sami Council and the Sami Parliament of Finland. Contact: Liisa Holmberg, Rector, Sámi Education Institute, Fin-99870 Anár / Inari, Finland Tel. + 358 40 7276717, lholmber@sogsakk.fi



Sustainable Development
Working Group



ARCTIC COUNCIL

The **Institute of the North** is a non-partisan policy center that provides best practices from around the Circumpolar North to address critical challenges and take advantage of timely opportunities stemming from an increasingly active region. The Institute hosts initiatives that cross sectors and jurisdictions to empower northern peoples, increasing knowledge of northern issues at local, national and international levels of governance while strengthening Alaskans' voices in decision-making processes. The Institute of the North has been the PI for the AMATII and Arctic Energy Summit SDWG projects, the Secretariat for the Circumpolar Infrastructure Task Force for SDWG, and the editor of AMSA for PAME. Contact: Nils Andreassen, Executive Director, Institute of the North, 1675 C St., Suite 106, Anchorage, AK 99501, USA (o) 907 786-6324 (c) 907 351-4982, nandreassen@institutenorth.org

The **Northern Forum**, an Observer Organization of the Arctic Council, provides Northern regional leaders the means to share their knowledge and experience in addressing common challenges and to support sustainable development and the implementation of cooperative socio-economic initiatives among Northern regions and through international fora. Contact: Mikhail Pogodaev, PhD, Acting Executive Director of Northern Forum, Chair of the Association of World Reindeer Herders, Chernyshevskogo street, 14 Yakutsk, Russia, 677018 Cell: +79243669879, pogodaevm@gmail.com

These organizations will work together to deliver AREA, each bringing unique but complementary expertise to advance a project consistent with the thematic priority of SDWG and the goals of the Arctic Council.

Arctic State and PP support:

As a recommendation from now two Arctic Energy Summits, it is clear that Arctic communities, researchers and public officials have expressed an interest in seeing this project successful. Arctic State support is expected by co-lead countries the U.S., Iceland, and Finland. Additionally, we expect strong participation by Canada, Greenland and Russia. All six Permanent Participants have a strong role to play in the development and delivery of the project.

Contribution to:

The AREA project builds the capacity of Arctic residents to better manage the current and future challenges and opportunities in the circumpolar region. In terms of capacity building, AREA accomplishes in a number of ways:

- By visualizing and promoting local solutions, the project enhances knowledge of the environmental challenges and develops a guide of best practices for community and agency leaders to implement.



Sustainable Development
Working Group



ARCTIC COUNCIL

- By producing the Atlas as a free-of-charge resource for the general public, and producing video series and a documentary the project creates an interesting educational/training mechanism for schools or exhibition material for museums around the world. Therefore, it serves to promote public awareness and education, as well as skills enhancement.
- By offering on the ground solutions and stories, and increasing access to renewable energy and energy efficiency information, AREA directly contributes to fulfilling the objective of sustainable development in the Arctic.

Many of the Arctic policies and strategies from the Arctic States reference renewable energy and energy efficiency as components of sustainable development. This project advances these, as well as responds to recent negotiations at COP21.

Finally, this project contributes to science-informed decision-making, helping to standardize definitions and increase agency awareness of counterpart measures across the Arctic.

Total Cost/Budget of Project:

Category	Total
Website/Map development	\$25,000
Data Collection	\$65,000
Video	\$60,000
Travel	\$50,000
Project management	\$35,000
In-person meetings	\$40,000
Total	\$275,000

Activities and Outputs:

The project will result in the identification of 3-5 best practices/solutions per Arctic State; the potential for pilot projects and/or initiatives that Observers could contribute expertise and resources to; eight individual video stories developed in collaboration with Permanent Participants about renewable energy/local adaptation, which would then be compiled into one documentary; an online Atlas that maps out solar, wind, geothermal, tidal and riverine resources, which can be overlaid on existing data sets; an easily accessible website; and outreach conducted in international fora.

Website development and visualization – the website design and construction will utilize the latest technology advances, a highly skilled website development team, and a design element that will ensure content is accessible and engaging. Integral to the website’s design will be how its component pieces – best practices, mapping, database, pilot



Sustainable Development
Working Group



ARCTIC COUNCIL

project and video – are represented as individual elements and interconnected. At the same time, understanding that slow/low internet connectivity in remote areas of the Arctic limits upload/download speeds and viewing, the website should account for ways to mitigate this challenge.

- Arctic Portal will be the project principal directly managing this process.

Renewable energy atlas – Based on the Renewable Energy Atlas produced by the State of Alaska ([see attachment](#)), which is only a print version, the AREA’s vision is for data compiled from all eight Arctic States to be collected and streamlined such that current GIS mapping can incorporate it into searchable fields and layers, that can be sorted by state and resource. This should produce factual, relevant information for communities, researchers and public officials.

- Arctic States are encouraged to request and compile data
- All project partners will work to ensure that data is collected
- Arctic Portal will be the project principal managing data visualization

Energy efficiency database – Very little data exists in the Arctic about individual or even public power consumption and efforts to adopt energy efficiency measures. Demand management is one element to this, but a baseline is needed. The online map will identify all Arctic communities and present a basic database that describes current power consumption and any energy efficiency measures in place, standards, or goals toward increasing energy efficiency.

- Arctic States are encouraged to request and compile data
- Dept. of Energy will assist in streamlining data
- Institute of the North will manage overall data collection, and Arctic Portal will manage data visualization

Best practice guide – This was an additional recommendation by the 2015 Arctic Energy Summit participants, and will need to be developed in scope by the steering committee of the AREA project, which includes interested SDWG delegations. The vision, however, is to frame this in such a way that state energy authorities or power companies, utilities and researchers are able to submit examples of best practices as they relate to increased renewable energy adoption, increased energy efficiency, decreased cost to produce power or heat, and design and engineering of buildings. A library of resources will be one feature of this, as relevant information is submitted, and case studies presented as featured examples for each State.

- Institute of the North will be responsible for initiating requests for best practices, working with universities and government agencies to standardize and streamline this process, and conduct peer review

Community energy stories – These three to five minutes videos from communities around the Arctic will be developed with guidance by Permanent Participants, and will



Sustainable Development
Working Group



ARCTIC COUNCIL

highlight voices from northern communities. Original footage will showcase the community and environment, as well as the power projects featuring emerging energy technology or renewable energy integration. See example from Alaska: <https://vimeo.com/140926284>. Taken together, these community energy stories will combine as a full length documentary, with additional commentary from agency officials within the Arctic.

- Northern Forum will manage this component, soliciting, compiling and editing stories from northern member and non-member regions.

Pilot projects – Community leaders, utilities and energy agencies shall have the ability to submit pilot projects that incorporate renewable energy resources, emerging best practices, and energy efficiency for consideration by Observer States, universities and private investors. Potential project partners, then, can contribute financial resources or practical experience to seeing a project through to completion.

- Institute of the North will advance this element of the project

Anticipated Outcomes:

AREA will:

- Increase public awareness of renewable energy in the Arctic
 - o Measured by website visits and energy video views
- Increase community adoption of energy efficiency goals
 - o Measured by community submission of baseline data and standards/targets
- Increase the application of best practices and use of renewable energy resources
 - o Measured by tracking new projects proposed or completed from 2017-19

Integration of Traditional and Local Knowledge:

The demand for the Atlas was indicated by local and regional experts, as well as community members – participants of the Arctic Energy Summit – who highlighted the urgent need to increase access to energy education by developing a best practice online guide. Having local/regional actors – indigenous peoples, education institutions, regional leaders, policy think tanks and outreach institutions – as co-designers ensures local buy-in of the final product. Critical to this will be the inclusion of traditional and local knowledge holders.

While the project doesn't relate directly to the application of traditional knowledge – the project will not solicit information pertaining to the traditional practices, unique experiences, or cultural knowledge of indigenous peoples – AREA will depend on local and indigenous peoples to express their perspectives and priorities as it relates to best practice and community-centered solutions.



Sustainable Development
Working Group



ARCTIC COUNCIL

Communications:

Target Audiences

- Public officials – AREA’s identification of renewable energy resources across Arctic states, baseline assessment of energy efficiency, and best practice guide will provide Ministries of Energy and state power authorities incredibly useful insights into potential policy recommendations at both an international and domestic level
 - AREA will conduct outreach at up to three international Arctic policy events a year, as well as via the Arctic Council
- Community leaders - AREA’s visualization of renewable energy resources locally and relative to other Arctic states, targets for energy efficiency, and best practice guide will provide local leaders an opportunity to consider improving community power systems
 - AREA will invite community leaders to attend the Arctic Energy Summit, as well as will conduct outreach via Permanent Participants, and to regional leaders via Northern Forum
- Project proponents - AREA’s visualization of renewable energy resources locally and relative to other Arctic states, and best practice guide, will provide companies, agencies and communities an opportunity to include renewable energy more effectively into a potential project, and the pilot project component of the website will be particularly attractive
 - AREA will conduct outreach at international Arctic events and share this tool with utility association and trade organizations
- General public (Arctic) – AREA makes accessible and visually engaging the process toward a clean energy future, and the public will better understand local and international approaches to renewable energy development and energy efficiency solutions
 - AREA will promote utilizing the individual networks of project principals
- General public (non-Arctic) - AREA makes accessible and visually engaging the contributions that Arctic nations are making toward a clean energy future, and the public will better understand the potential of the Arctic to mean not just oil, gas and shipping, but renewable energy development and energy efficiency solutions
 - AREA will encourage Arctic states to conduct outreach nationally and internationally

SDWG and/or the State Project lead will work with AREA project principals to communicate AREA’s goals/objectives, implementation strategy and final results to the broader Arctic Council community, proponents, beneficiaries and Arctic residents. Key to this collaboration will be a steering committee comprised of project principals, subject matter experts and SDWG members.