

General Categories of Layers Requested for the AREA-Atlas

The following table categorizes the types of Renewable Energy and Renewable Energy-related data we are collecting for the Arctic Renewable Energy Atlas (AREA). We are interested in collecting data for various spatial resolutions and for any geographic extent that falls within the general Arctic region, however, the following categories are not broken out by such.

Biomass	Soft Wood Products	
	Hard Wood Products	
	Wood Trimmings	
	Crop Residue	
	Solid Waste	
	Landfil Gas and Biogas	
	Ethanol	
	Biodiesel	
	Biomethane	
	Biopower Plants	
	Biorefineries	
Algea		

Geothermal	Geology	
	Volcanoes	
	Geothermal Heat Flow	
	Thermal Conductivity	
	Borehole Temperature Observations (Temperature at Depth)	
	Deep EGS	
	Shallow EGS	
	Wells and Springs	
	Hydrothermal Areas	
	GHP-related Data	
	Existing Plants	
	Developing Plants	
Permitting/ Land Ownership		

MHK		Annual	Monthly	Hourly
	Tidal Current Speed			
	Tidal Power Density			
	Ocean Current Power Density			
	Ocean Current Speed			
	Wave Power Density			
	Significant Wave Height			
	Wave Energy Period			
	Hindcast Wave Direction			
	Ocean Depth			
	Bathymetry			
	Instream River Potential			
Existing Hydroelectric Sites				

Wind		Onshore			Offshore		
	Wind Farm Sites						
		80m	100m	Other	80m	100m	Other
	Wind Speed						
	Wind Power Class/Power Density						

Solar		Annual	Monthly	Hourly
	GHI			
	DNI			
	DHI			
	Lat Tilt			
	TMY Data			

Transportation	Fueling Stations (by Fuel Type)	
	Vehicle Density	

Power Network	Transmission Lines	
	Substations	

Generation, Market, & Demand	Fuel Cost (\$)	
	Fuel Usage (liters)	
	Peak Load Demand	
	Avg. Power Usage	
	Total Generation Per Resource	
	Generation infrastructure	

Ancillary Meteorological Data		Annual	Monthly
	Air Temperature		
	Atmospheric Pressure		
	Cooling Degree Days		
	Heating Degree Days		
	Earth Skin Temperature		
Relative Humidity			

Exclusion Layers	Rivers	
	Lakes	
	DEM/Topography	
	Protected Lands	
	National Parks	
	Glaciers	
	Sea Ice	