Statement of Work for *Renewable Energy* layer of Oregon
2009-11 Biennium

Background:

As concern over future climate change increases in Oregon, attention has focused on alternatives to foreign and carbon based fuels used for energy. Oregon has the potential to develop numerous alternatives to carbon energy, including geothermal wind and hydroelectric. Wind and hydroelectric are primarily used for commercial power generation to feed the grid, but geothermal sources in Oregon can be used both for large scale power generation and for business and residential heating as direct use sites. Renewable resources lessen the carbon footprint needed by these local users.

In order to take plan for and track the development of alternative energy resources, which tend to be widely distributed, a GIS layer of their locations and attributes should be compiled.

Proposed Activity:

The focus of work would be to provide multiple GIS layers that include:

- Updated Geothermal well data that contain water with temperatures that are suitable for direct use, greater than 20 degrees Celsius (68 degrees Fahrenheit) There are at least 2,000 additional wells that have been drilled throughout the state since the creation of the initial inventory of low temperature wells database in 1994. This information will update GTILO (Geothermal Information Layer for Oregon, developed in 2006-07 via $50K funding from ODOE.) New well data will be obtained through the Oregon Department of Water Resources records of well completion. Final data layer will include well location, depth and temperature information.

- Known wind farm locations, based on permitted sites from Oregon Department of Energy (ODOE.) There is not yet a GIS layer that shows the locations, extents and output of each of Oregon's wind farms. These records are public through the site permitting process, and can be compiled through digitization of maps included in the application of site permit, which DOGAMI already has through its role in the EFSC process.

- Wind Turbine Locations for large scale wind farm operations obtained from permit applications to ODOE for wind farm sites.

- Hydro facilities.

- All of these data and layers would then be assembled and put on an interactive web map application to be hosted on DOGAMI website.

- We will identify the primary responsible entity for data layers (where possible) and attempt to establish formal stewardship agreements with them for those particular data layers

Deliverables:

1.) Updated GIS database of Geothermal Well data. Attributes to include, and not limited to: Well Location, Depth, and Temperature
2.) Known wind farm location. This will include extents of wind farms, and approximate electric output, and ownership.
3.) Wind Turbine Locations (where available) will be a point shapefile locating each individual wind turbine in Oregon large scale wind farm.
4.) Geothermal Well locations, Wind Farm locations and Hydroelectric facility locations to be placed on interactive web map to be hosted on DOGAMI website.
5.) Known hydro electric sites with head, power output, ownership, licensee status
6.) Project metadata for each layer

Data size is small, and will be stored on site at DOGAMI. A CD with the data layers will be delivered to GEO by June 30th, 2011 in shapefile format.

Amount Requested: $58,911

Additional Information:

Governor Ted Kulongoski introduces green bills to the 2009 Legislature:

- SB 79 is intended to give green buildings a boost by creating energy performance certificates that will function like vehicle miles-per-gallon ratings. This proposed bill charges the Oregon Department of Energy ("ODOE") with creating an energy efficiency rating system to be adopted and implemented for new and existing residential buildings and commercial buildings of a certain size by 2011 and 2012, respectively. SB 79 also establishes a goal of net-zero emissions homes and buildings by 2030. To accomplish this, the bill calls for increased energy efficiency in commercial and residential building codes by 30 percent and 15 percent, respectively.

- HB 2180 would create a Renewable Energy Fund, similar to the Cultural Trust program, that would provide up-front funding for small renewable energy projects.

- HB 2181 would give municipal and county governments bonding authority, enabling participating homeowners to pay for energy efficiency upgrades over time.

- SB 201 would authorize the creation of an "Energy Matchmakers" fund in the Department of Housing & Community Services. Relying in part on federal and private sector investments, the fund would be used to make houses of low-income families more energy efficient.

- SB 168 would clarify the authority to develop renewable energy projects in state buildings or on state lands.

In the 2005-2007 biennium, DOGAMI received $50,000 for support of the first two parts of a six part statewide digital geologic map compilation. The NE and SE compilation areas were both completed on time, and published as OGDC-1 and OGDC-2 respectively.
In the 2007-2009 biennium, DOGAMI received $50,000 for support of the next two parts of a six part statewide digital geologic map compilation. The Central and SW compilation areas were both completed on time, and published as OGDC-3 and OGDC-4 respectively.
In the 2009-2011 biennium, DOGAMI received $150,000 for support of the final two parts of the six part statewide digital geologic map compilation. The W and NW compilation areas are essentially complete, and will be published by the end of the biennium as OGDC-5.

By submitting this application I understand and agree that all members of the project team shall recuse themselves from participation in the current proposal evaluation process.

Contact Information:

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