Quinault Indian Nation Renewable Energy Feasibility Study

Participants

- Department of Energy
- Quinault Indian Nation
- Institute for Washington’s Future
- World Water Corporation
- Community Power Corporation
- Bonneville Power Administration
- Grays Harbor Public Utilities

The purpose of this study is to conduct a feasibility study and generate a renewable energy development plan so that the Quinault Indian Nation will be energy self-sufficient and, if feasible, export energy to the commercial market.

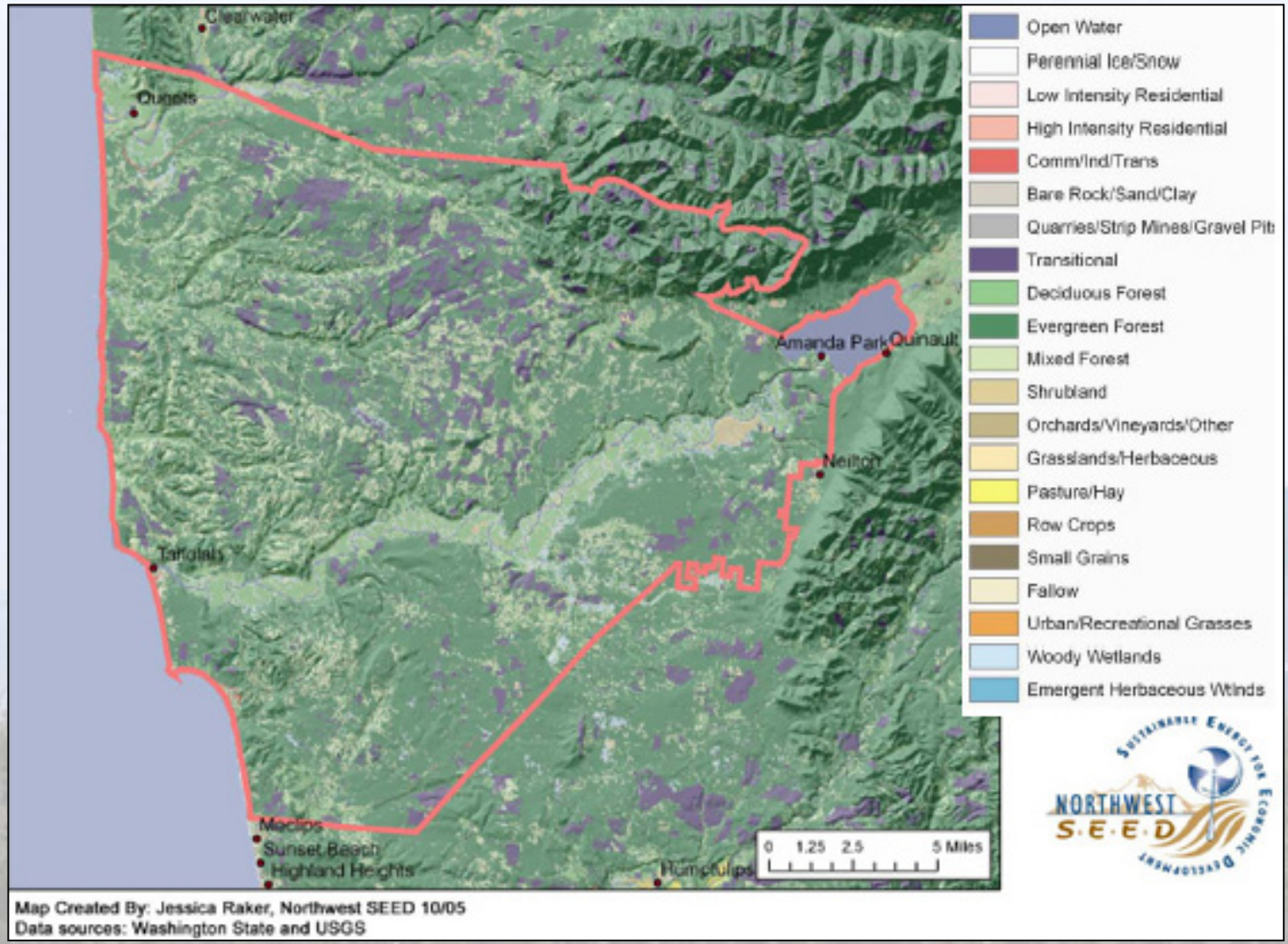
Self-sufficiency and commercial production present two very different challenges

- Self-Sufficiency – Produce energy in a cost-effective way for a small (less than two megawatts) very dispersed market.
- Commercial production – Produce energy for a large, highly integrated market where the present cost for electricity is the least expensive in the world.

This purpose and challenge is defined by the unique situation of the Quinault Nation

- People and History
- Geography
- Resources – fish, trees, wind, and water

Resources of the Nation



What we have studied: the Quinault Indian Reservation, Olympic Coast, and Olympic Region

Needs:

- Place
- Volume
- Use
- Time

What we have studied: the Quinault Indian Reservation, Olympic Coast, and Olympic Region

Resources:

- Conservation
- Wind
- Waves
- Water
- Solar
- Wood Biomass
- Solid Waste

What we have studied: the Quinault Indian Reservation, Olympic Coast, and Olympic Region

Technologies:

- Turbines
- Pyrolysis
- Gasification
- Bioconversions

What we have studied: the Quinault Indian Reservation, Olympic Coast, and Olympic Region

Markets:

- Electricity
- Fuels
- By-Products

What we have studied: the Quinault Indian Reservation, Olympic Coast, and Olympic Region

Economics:

- Costs
- Income
- Jobs
- Financing

What we have discovered

Conservation – Weatherization and Refrigerator replacement along with Energy Conservation Education

What we have discovered

Wood biomass – Wood to electricity, heat, oil, and charcoal

What we have discovered

Niche Markets – Difficult to serve electricity and gas markets, potential of charcoal and bio-oil

What we have discovered

Possible partners – financing and development

New Directions: Elements of the Plan

- Conservation – Reduce seasonality and peak loads through weatherization and technology upgrades

New Directions: Elements of the Plan

Production for use – The small-scale wood biomass producing electricity and heat to make major building self-sufficient

New Directions: Elements of the Plan

- Commercial Development – Explore partnerships to meet the specialized energy needs of the Olympic Coast by adopting innovative technologies using wood biomass

New Directions: Elements of the Plan

Financing – Utilize innovative technology to exploit possible low-level natural gas resources to help finance the renewable energy program

New Directions: Elements of the Plan

- Organization – Create a Quinault Indian Nation Community Development Corporation to implement the Renewable Energy Plan

New Directions: Elements of the Plan

Education – Develop renewable energy education site in conjunction with National Park Service

Next Steps

Complete Quinault Indian Nation Renewable Energy Plan

Next Steps

Generate Business Plan for Community Development Corporation

Next Steps

- Conduct site assessment and pre-development for small-scale biomass technology on the Quinault Indian Reservation

Next Steps

Further explore natural gas potential

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