Quinault Indian Nation Renewable Energy Plan
Beginnings

• 1990’s: Original biomass study
• 2002: QIN Renewable Energy Team formed
• 2004: DOE feasibility study starts (two-year)
• 2006: DOE Final Report
• 2006: USDA commercial study begins
QIN Goals

• Energy self-sufficiency
• Create an energy system consistent with:
  – Opportunity
  – Environmental sustainability
  – Cultural values
• Generate employment and business opportunities
Deliverables

• Conduct a feasibility study
• Generate a renewable energy development plan
The Quinault Indian 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 Assessment:
- Needs
- Opportunities
- Location
- Volume/Supply
- Energy Use
What we have studied: the QIR, Olympic Coast and Region

- 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
Other Considerations

• Align with QIN’s Strategic and Management Plans
• Align with QIN’s cultural beliefs
What we discovered

• Conservation – Weatherization and Refrigerator Replacement
• We’ve already implemented programs
What we discovered

- Wood Biomass – Wood to electricity, heat, oil, and charcoal
Possible Partners

• Possible partners – financing and development
  – DynaMotive
  – Crane Creek Cedar Corporation/Local Mills
  – Grays Harbor Paper
  – Emperium Renewables
DynaMotive

• Dynamotive develops and markets BioOil fuel technology and products based on patented fast pyrolysis technologies.

• Dynamotive produces and now markets carbon-neutral liquid fuel produced from cellulosic biomass.
Pyrolysis Process
Crane Creek Cedar Corporation

- Crane Creek successfully produces hemlock and cedar fence boards, generating 70 tons of inner-wood biomass waste per day.
- Crane Creek Letter of Intent to QIN
The Plan: Options

- **Conservation** – Weatherization and technology upgrades
- **Production for Local Use** – Small-scale wood biomass producing electricity and heat
- **Commercial Development** – Explore partnerships and utilize innovative technologies using wood biomass
The Plan: Financing


• Utilize nonprofit for wood waste removal to increase land productivity; and convert wood waste to a renewable energy.
The Plan: Jobs and Opportunities

Jobs will be created through:

- Commercial operation
- Nonprofit administration
- Nonprofit projects, i.e., wood waste removal from reservation lands
The Plan: Organization

- **Organization** – Create a Quinault Indian Nation Community Development Corporation to implement the Renewable Energy Plan
- Decide on “for-profit” options/transition
- Explore development of a QIN Utility
The Plan: Education and Awareness

• **Education** – Develop renewable energy education site in conjunction with National Park Service
• Develop a webpage on QIN’s main website
• Develop opportunities for future “sustainability” leaders of QIN
From DOE to USDA: Commercial Study

• Received a U.S.D.A. – Rural Business Enterprise Grant

• Purpose: Explore the feasibility of a commercial operation to produce bio-oil; and develop a business plan. Project ends 12/31/06

• Project is currently in progress
USDA Presents Check to Council for Wood Waste Conversion Project
Wood Waste Conversion Project (WWCP) Purpose:

• This project will focus on the opportunity for the development of a bio-oil and charcoal production facility in the Quinault Nation’s region.
WWCP Objectives

1. Complete a feasibility study and create an organizational plan
2. Organize an entity capable of developing a moderately sized pyrolysis facility and generate a business plan
WWCP Objectives

3. Determine a business relationship with a viable entity like Crane Creek
4. Identify and contact public and private sources of financing. Create a fund development strategy
Closing Remarks

• DOE study was successfully completed
• USDA study is important to future QIN commercial development
• Possibility of USDA funding for development/implementation
• QIN is poised to move forward with implementation, provided it proves to be viable for QIN
Thank You!

The Quinault Indian Nation wishes to thank DOE for the opportunity to explore renewable energy options!

Fawn R. Sharp, President
Quinault Indian Nation
Renewable Energy Plan