Quil Ceda Power
Bio-Gas Project

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Introduction

- Background
- Description of Project
- Partnership
- Feasibility Study/Business Plan
- Creation of Quil Ceda Power
- Funding
- Creation of Qualco Energy
- Closing
Background

- Land-Use Changes from Agriculture to Other Types of Development
- Skykomish River WQ Problems
  - Bacteria
  - Nutrient Loading
- Relationship Between Tribes and Dairies
- Poor Economy for Dairy Operations
Project Description

- Sewage Treatment for Cow Manure
  - Collect Cow Manure from Dairies
  - Flow into Anaerobic Digester
  - Capture Methane Gas
  - Burn Gas to Produce Electricity
Associated Products

- Methane and/or Electricity
- Bio-Solids for Compost and/or Fertilizers
- Treated Effluent Water for Farm Irrigation
- Native Plant Nursery
  - Habitat Restoration Projects
  - Landscaping
Partnership

- Snohomish Basin Biogas Partnership
  Formed April 2, 2003
  - Lower Skykomish River Habitat Conservation Group
  - Northwest Chinook Recovery
  - Tulalip Tribes
  - Washington State Dairy Federation
Food Waste: > 80 Ton/Day
Flush Dairies: 1,572,000 GPD
Scraper Dairies: 26,775 GPD

Monroe-Snohomish Area, 10-Mile Radius
Feasibility Study/Business Plan

- Initiated Study June 13, 2003
  - Environmental and Tribal Benefit Analysis
  - Biomass Resource Assessment
  - Technical Evaluation and Economic Analysis
  - Preliminary Design & Support Plan
  - Marketing Plan
  - Funding Plan/Investors
  - Management Structure
  - Funding towards Salmon Recovery
Quil Ceda Power

- Incorporated as an extension of Tribal Government
- Board of Trustees
  - Tulalip Board of Directors
  - Chair of the Sno/Sky Agricultural Alliance
Funding

- Department of Energy Grant for Feasibility Study and Business Plan
- Department of Agriculture Grant and CREB Bonds for Construction
- Tulalip Tribal Funds
Qualco Energy

- Formed as a non-profit organization to manage the Biogas project
- Three-way partnership between the Tulalip Tribes, Sno/Sky Agricultural Alliance and Northwest Chinook Recovery
Closing

- Dairies and Tribes working together
- Improved WQ for Fish and People
- Salmon Habitat Restoration
- Renewable Energy Supply