Manzanita Wind Energy
Feasibility Study

Prepared for the
Manzanita Band of the Kumeyaay Nation
November 19, 2003
Study Overview

- Manzanita is managing the Feasibility Study
- SeaWest Consulting, LLC is performing the technical scope of work
- A division of SeaWest WindPower, most established wind energy consulting firm in the US
Purpose and Scope

Provide a technical and economic evaluation for developing a commercial wind energy project on Manzanita land.
Milestone 1

• Document site conditions
• Land ownership, topography
• General suitability for a wind farm.
Milestone 2
Wind Resource Assessment
• on-site wind data collection
• correlation with long-term off-site wind data sources
• estimation of average wind speeds
• estimate of average annual energy produced
Milestone 3

- Review of permitting requirements
- Costs and timing to secure permits
- Results in site selection
- Provides the basis for defining the specific site area and project definition.
Milestone 4

Transmission/Interconnection

- Identify likely interconnection scheme
- Estimate available capacity and timing
- Preliminary costs for interconnection
Milestone 5

Construction Cost Estimate

• Preliminary costs based on assumed conditions
• Assumes wind turbine type
• Assumes realistic balance of plant improvements
Milestone 6
Technology Evaluation

• Evaluate wind turbine models
• Suitable to the wind resource and site conditions
• Economic comparison (market conditions)
• Select primary balance of plant equipment
Milestone 7

Prepare Economic Model

- Financial assumptions
- Estimate income & operating costs
- Forecast economic performance
- Evaluate economic feasibility
Milestone 8

Tribal Training
- Prepare information and education package
- Social and Economic benefits
- Hold seminar/meeting with Manzanita
Milestone 9

Develop Business Plan

- Financial evaluation
- Ownership structure
- Present Financial Model to business council
- Prepare Report
- Present to Manzanita
Timetable

- Feasibility Study initiated Dec. 02
- Draft Feasibility Report Nov. 24, 03
- Manzanita Review by Dec. 15, 03
- Finalize Report by Dec. 30, 03
- Training/Tribal Professional Development materials by Jan. 15, 04
- Business Plan by Jan. 28, 2004
Opportunities for Manzanita

Landowner
• Wind Energy Lease income over 25 years

Developer
• Pre-Development Asset

Tribal Capacity

Other Roles
• To be determined
Tribal Capacity Building

- Skilled employment
- Education on Renewable Technology
- Revenue sources
- Income diversification
- Compatibility with existing and future uses
Foote Creek III
Arlington, Wyoming
Questions & Answers?