


The Business Case for Renewable Energy Projects

A night photograph of a town street with snow on the ground, illuminated by streetlights and building lights, with mountains in the background. The street is lined with buildings, some with lit-up signs, and several cars are parked or driving. The mountains in the background are dark and silhouetted against the night sky.

**SYMPOSIUM: RENEWABLE ENERGY IN REMOTE AND
INDIGENOUS COMMUNITIES**

Saskatoon, Canada September 5 & 6, 2017

Cordova, Alaska – Remote & Indigenous



Cordova Electric Business Model: Electric Cooperative

- ▶ Owned by the electric utility customers (citizens)
- ▶ Governed by an elected board of Seven (3years)
- ▶ Community health is our measure of success
- ▶ Not-for-profit Business Model
- ▶ Planning Horizon Spans Decades
- ▶ Value, not cost or profit driven

DIVERSE COMMUNITY NEEDS



Power Creek Hydroelectric Project

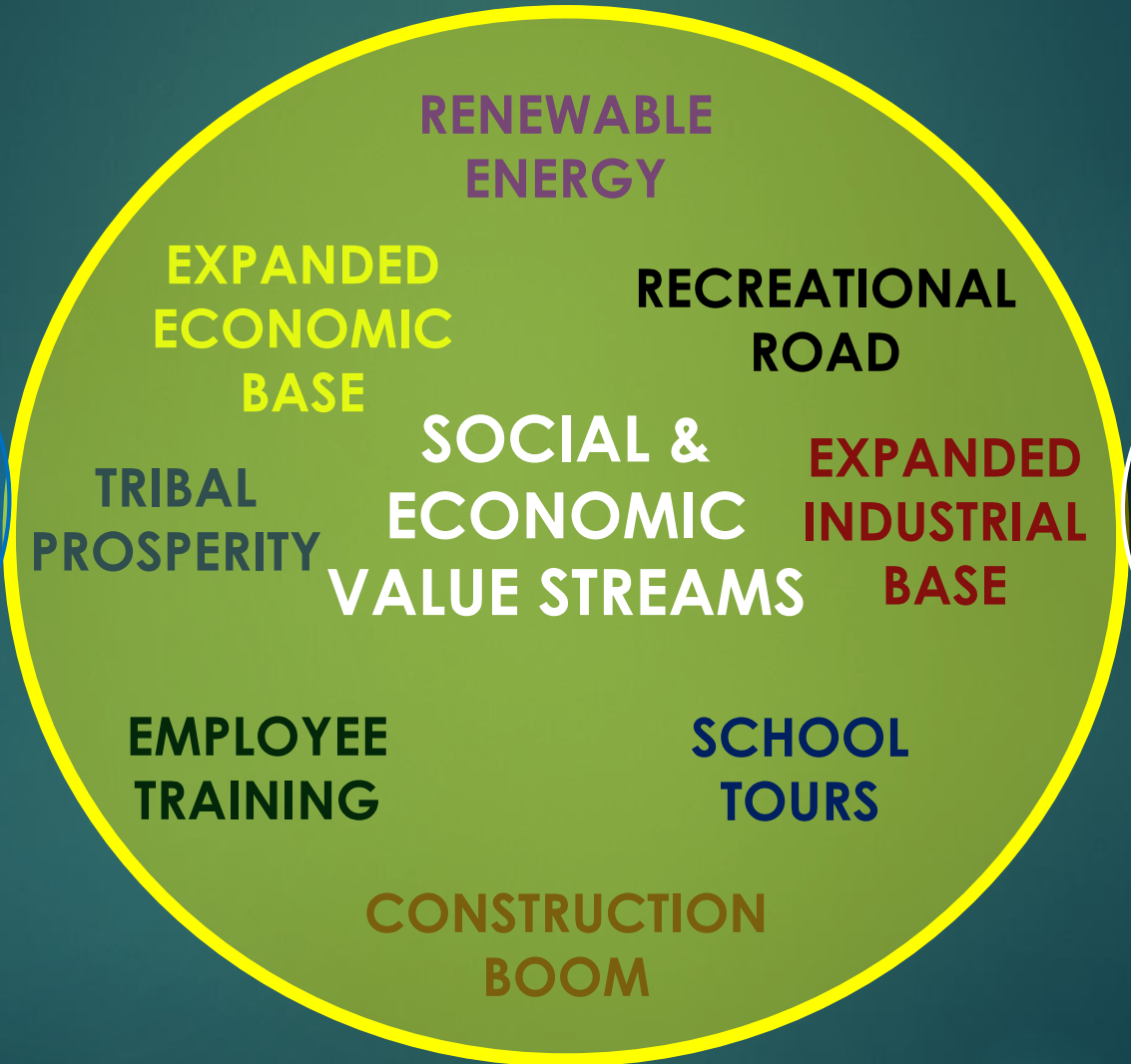
High Technical and Operational Integration
Low Community Integration



SHARED COST & BENEFIT POWER CREEK



**PUBLIC
SAFETY**



**PUBLIC
HEALTH**

Ultimate Project Outcomes

- ▶ Strong Relationship with Tribe
- ▶ \$31,000,000 diesel fuel savings 2002-Present
- ▶ Capability growth – Community skill and confidence
- ▶ Community adoption and trust
- ▶ Educational asset
- ▶ Reduced O&M costs
 - ▶ 70% hydro production at 30% O&M Cost
 - ▶ 30% diesel production at 70% O&M Cost
- ▶ 50,000 tons of reduced air emissions
- ▶ Economic growth to 13th largest US seafood delivery port
- ▶ Largest Alaska fishing fleet

Opportunity and Threats of Renewable Investments



Opportunities

- ▶ Energy Security
- ▶ Community Prosperity
- ▶ Environmental Health
- ▶ Recreational
- ▶ Educational
- ▶ Operational Improvements
- ▶ Technology Development
- ▶ Capability Expansion

Threats

- ▶ Project Failure
 - ▶ Delays
 - ▶ Cost Overruns
 - ▶ Political Resistance
 - ▶ Performance Failure(s)
- ▶ Environmental Damage
- ▶ Economic Burden
- ▶ Political Controversy
- ▶ Project Fails to Perform

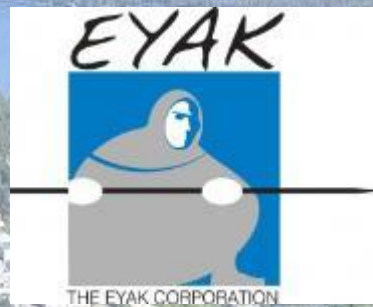
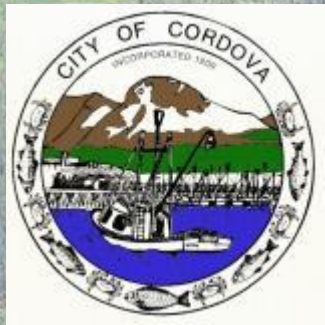
Crater Lake Hydroelectric Project

High Technical Integration, High Community Integration



CORDOVA PARTNERS

**CURRENT HYDRO PROJECTS ARE ON EYAK LAND,
DIESEL PLANT IS ON CITY LAND, WE'VE ALL WORKED
TOGETHER ON FUNDING AND CONSTRUCTION**



ADDITIONAL PARTNERS:

- Citizen Groups (recreation, aesthetics and adjacent land owners)
- Environmental Groups (Watershed Project, Eyak Preservation Council)
- Emergency Services (FEMA, State of Alaska, Cordova) – Coastal Water Supply
- Private Industry (environmental offset investments, partnering, ownership)
- US Government (Technology development and assistance, financing)
- Greenland? Educational / Technology Partnership

Summary of Project Goals

PRIMARY GOAL: SUSTAINABILITY FOR ALL STAKEHOLDERS

- **Stored water supply for health & industry**
- **Expanded renewable energy supply**
- **Path to 100% renewable and room for growth**
- **Strengthen existing partnerships & capabilities**
- **Create New Partnerships**
- **Meet stakeholder needs**

Anticipated Outcomes

(project success)

- Security and Sustainability for Cordova
- Improved Quality of Life
- Strong and Lasting Partnerships
- Reduced Negative Environmental Impacts
- A Demonstration Model for Global Best Practices

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