Capacity Building

Acquisition of Kerr Dam

&

Biomass Feasibility

March 25, 2014

ENERGY KEEPERS, INC.

A CORPORATION OF THE CONFEDERATED SALISH & KOOTENAI TRIBES

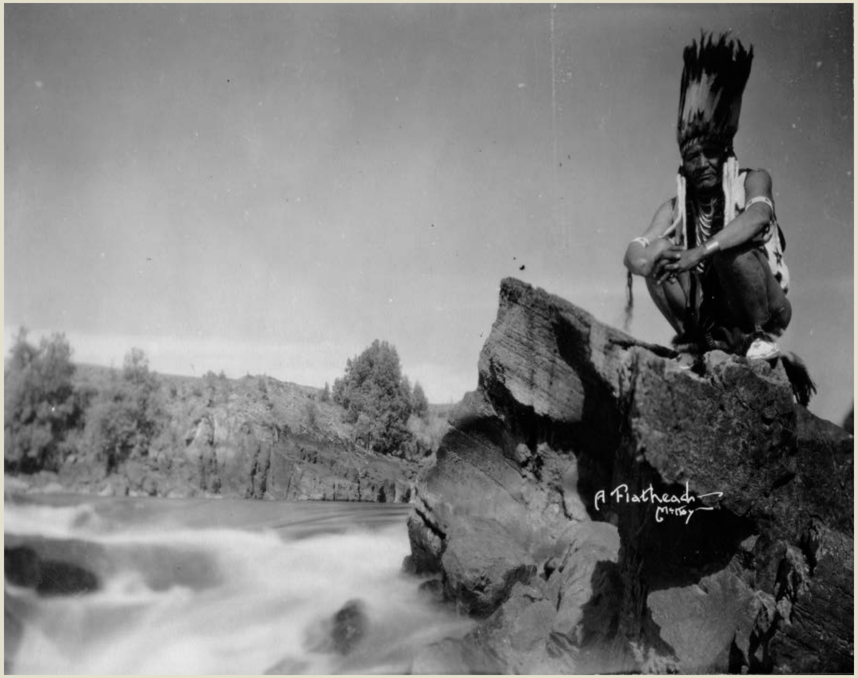
# *538 days to "go live"*

# EKI and Kerr Acquisition – Plan Concepts

Energy Keepers, Inc. (EKI) is a wholly owned subsidiary corporation of the Confederated Salish and Kootenai Tribes ("CSKT" or "Tribes"). EKI was established to manage, operate, and maintain the Kerr Hydroelectric Project consistent with the terms of the Federal Energy Regulatory License No. 005.

# CSKT – Our People

- The Tribal confederacy is comprised of the Bitterroot Salish, the Pend d'Oreille, and the Kootenai Tribes.
- Historically, the three tribes were allies with ancestors who shared territory in areas now known as western Montana, parts of Idaho, British Columbia, and Wyoming.
- Presently, there are approximately 7,500 Tribal members.



# CSKT – Our Resources

- The Tribes preserved the Flathead Indian Reservation as a permanent homeland for Tribal people by the terms of the Hellgate Treaty of 1855.
- The Reservation is 1.317 million acres in size. Although the Reservation was opened to non-Indian settlement as a result of historic federal policies, CSKT has diligently protected its ownership interests and diligently pursued reacquisition of federally-divested interests so that CSKT now owns over 70% of Reservation lands including the bed and banks of the south half of Flathead Lake.
- The Reservation is located in the mountains and valleys of Northwest Montana in the upper Columbia River Basin.
- The Kerr Plant is located on CSKT-owned land on and adjacent to the Flathead River six miles downstream from Flathead Lake.

# CSKT - Our Government and Businesses

- The Hellgate Treaty establishes the Tribes as a sovereign entity and formalizes our government-to-government relationship with the United States.
- The Tribal government was established in 1934 pursuant to the terms of the Indian Reorganization Act; CSKT is a constitutional government governed by a popularly-elected ten-member Tribal Council.
- CSKT administers 30 government agencies with a collective annual budget of approximately $110 million and employs approximately 1,200 government workers.
- CSKT owns eight for-profit businesses engaged in electronics manufacturing, information technology, engineering, aerospace, environmental restoration, gaming, and hotel/hospitality services.
- CSKT operates Mission Valley Power, a federally-owned electrical utility, serving approximately 22,000 customers, located on the reservation, with annual revenue of approximately $23.8 million.

# CSKT – Kerr History

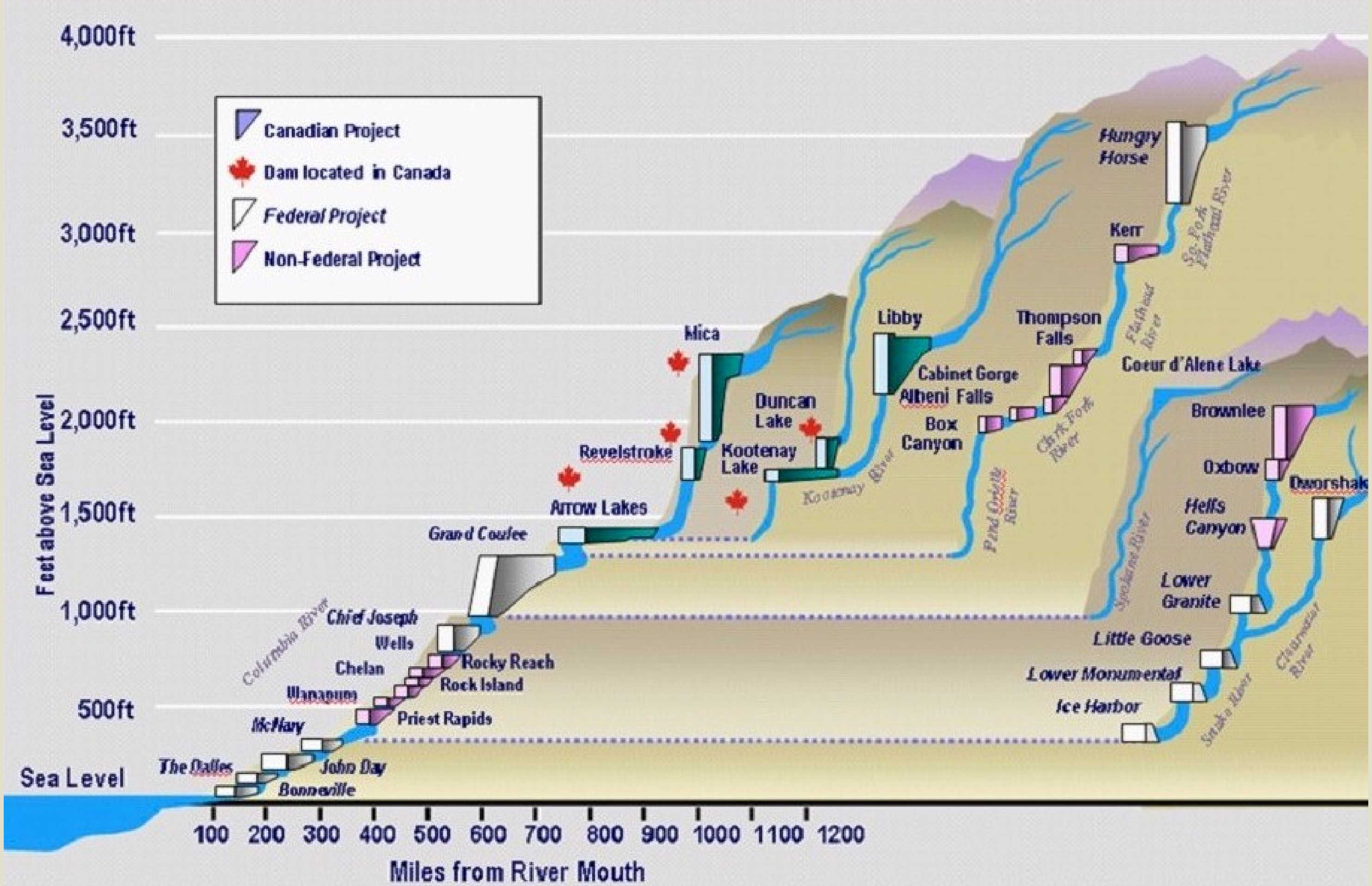
- The Kerr Project was developed as result federal assimilation polices implemented on the Flathead Indian Reservation from 1908-1934
  - Allotting of the land
  - Creation of the Flathead Indian Irrigation Project (irrigation and power)
  - Development of power sites by non-Indian business entities

- **1921** Applications are filed for licenses to develop five power sites on the Flathead River within the Flathead Reservation.
- **1930** The Federal Power Commission issued the first 50-year license to the Rocky Mountain Power Company for the Kerr Dam site.
- **1939** Rocky Mountain Power Company transferred its interest in the License to the Montana Power Company ("MPC"). Kerr Dam began producing power.
- **1976** CSKT filed a competing application with the Federal Energy Regulatory Commission ("FERC") for relicensure of Kerr .
- **1980** The first license expired and FERC issued a series of one-year licenses to MPC.
- **1985** the Tribes successfully negotiate co-licensee status with the MPC and the option to acquire Kerr as the sole owner in 2015. New License issued to MPC and CSKT for a 50-year term through 2035.
- **1999** PPL Montana (PPLM") acquires Kerr from MPC and FERC transfers MPC's License interest to PPLM.
- **2011+** CSKT prepares to exercise its exclusive and unilateral right to acquire Kerr and create its energy enterprise

# Kerr Today

- A 200 foot high, 381 foot long concrete arch dam with fourteen spillway sections. Three concrete lined penstocks each with a 23 foot diameter and 765-865 foot length. A steel framed and reinforced-concrete power house.
- Three generator units are collectively rated at 188.25 MW.  Kerr produces approximately 1,100,000 MWH per year on average.
- Kerr's reservoir is the top ten feet of Flathead Lake with 1,219,000 million acre feet of storage capacity.
- Kerr is electrically connected to the NorthWestern Energy Corp. energy control area and is designated a network resource
- Kerr is part of the Columbia River basin flood control system coordinated through the Pacific Northwest Coordination Agreement.
- Recent engineering and safety studies indicate the facility is in good operating order and has an expected useful life that exceeds the balance of the FERC license term (i.e. 2035)

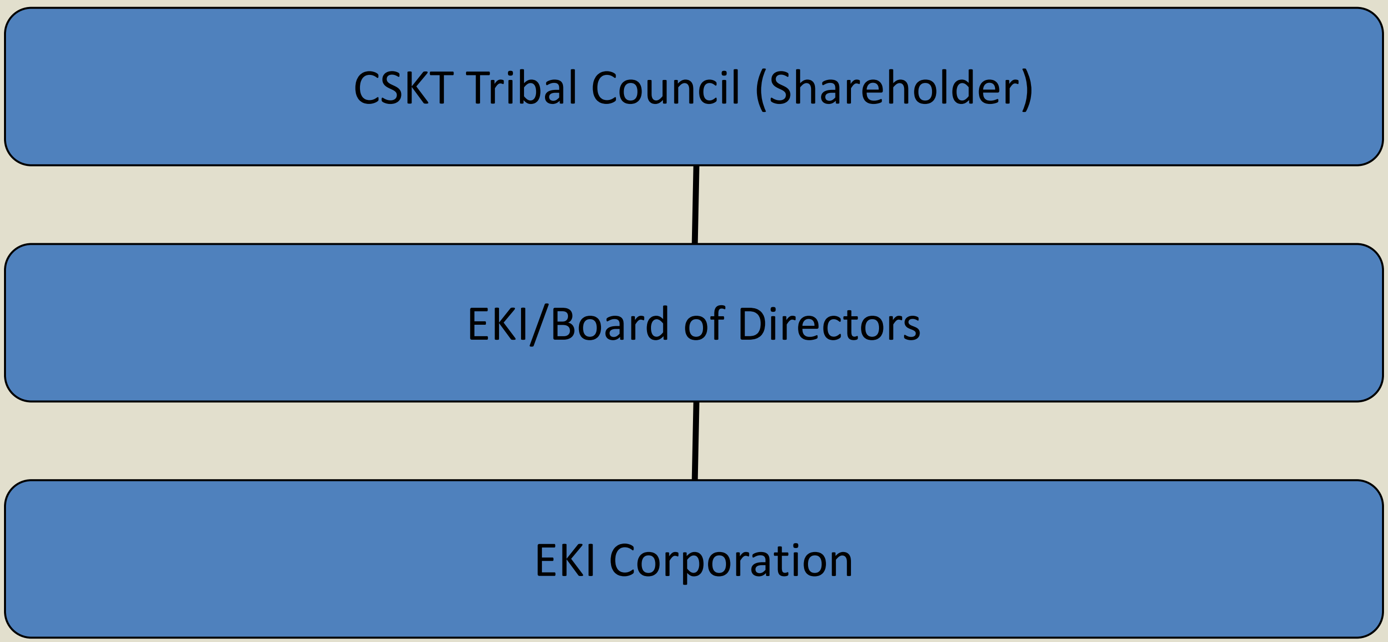
# Kerr is a part of the Columbia Hydroelectric Resource Base



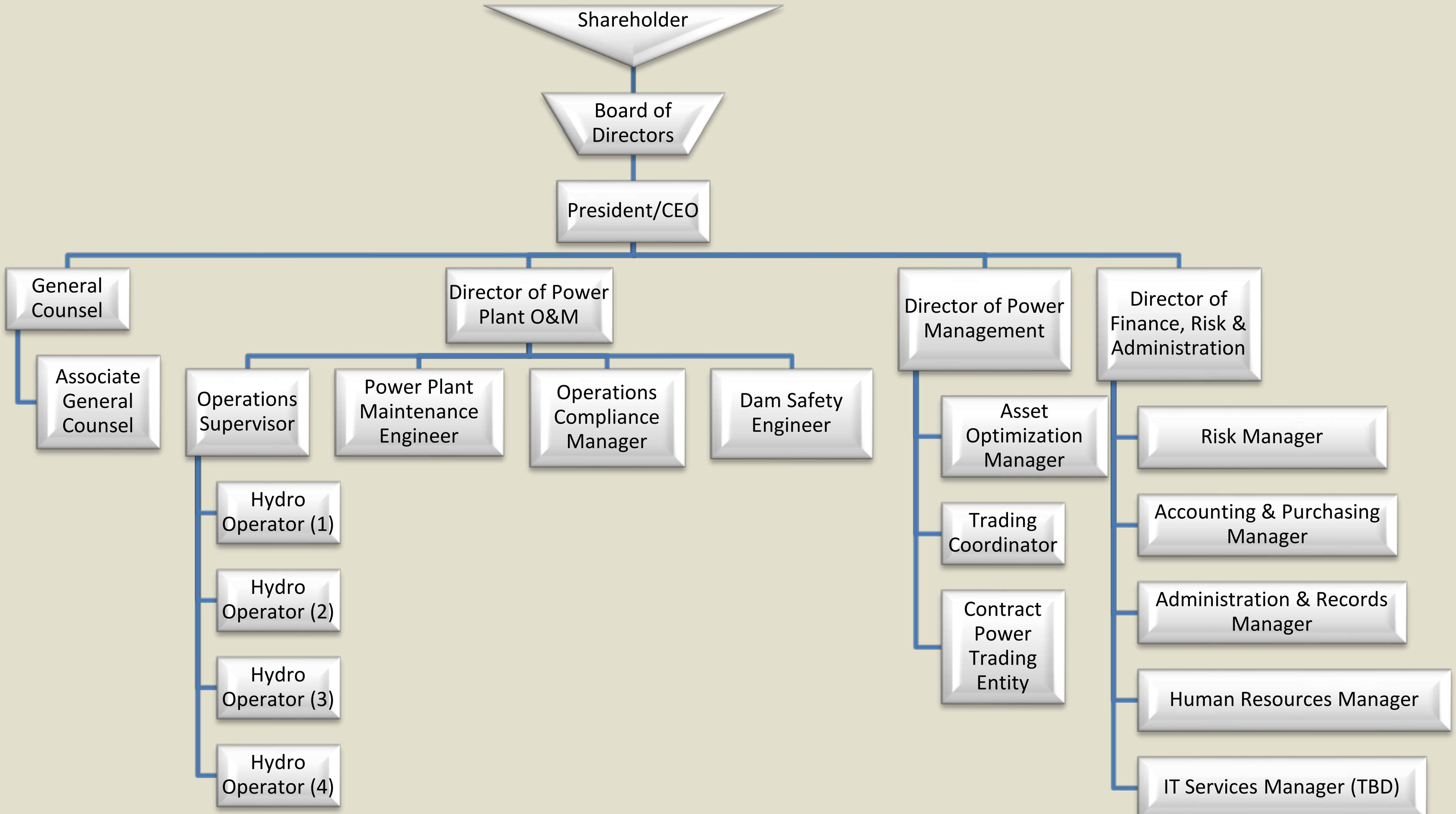
# CSKT/EKI Strategy – Wholesale Generation

- The Estimated Conveyance Price has been set at $18.3M
- CSKT has filed its notice of intent to acquire the Kerr Project on ***September 5, 2015*** consistent with the terms of the FERC license.
- CSKT, as a government, will assume licensee status before the FERC and retain ownership of the Kerr Project.
- To facilitate the relationship between CSKT and EKI before the FERC, it is planned that EKI will be co-licensee
- EKI, will assume possession and operation of Kerr and will sell the electrical output as a wholesale power generator to provide a long term stream of income to CSKT as the sole shareholder.

# EKI Governance



# Energy Keepers Inc.





Confidential - Includes business sensitive information

# Energy keepers, inc.

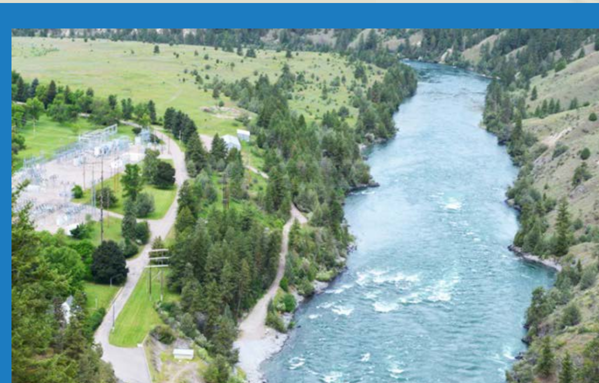
Biomass Feasibility Analysis

ENERGY KEEPERS, INC.

A CORPORATION OF THE CONFEDERATED SALISH & KOOTENAI TRIBES

Harris Group Inc.

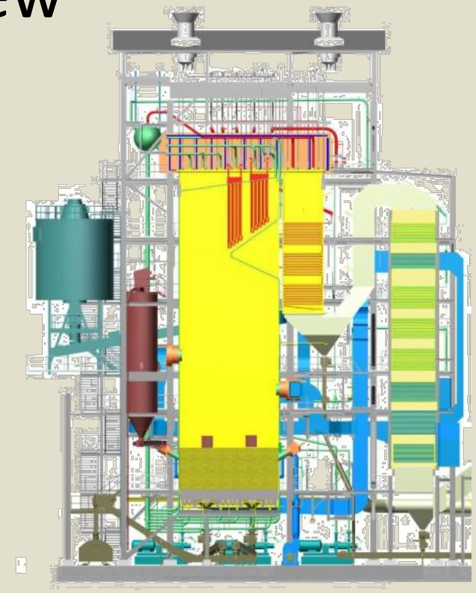
THE BECK GROUP



# CSKT's Timber Resources and Biomass Feasibility Project

- Proactive Forest Management Activities done by CSKT yields an annual timber harvest of around 18 million board feet annually. It is estimated that 17,000 bone dry tons of biomass is available from CSKT lands.
- In addition CSKT's treaty combined with other federal laws may provide avenues for access to additional biomass material.
- Our biomass project is looking at two alternatives
  - A 3MW plant utilizing the on reservation material
  - A 20 MW plant utilizing the additional material if access obtained.

# HARRIS GROUP Overview



**We are a leading engineering design firm with over 40 years of biomass combustion experience**

Employee-owned company founded in 1975

Multidisciplinary team with strong in-house process expertise

Experienced engineers in design of high pressure steam systems, feed water treatment, boilers, turbine generators, and biomass receiving, handling, and distribution

# The beck group overview

**Forest products planning and consulting firm serving the forest products industry for more than 30 years**

Wide range of services

- Biomass – Cogeneration & Pellets, Fiber Supply and Demand, Fiber Procurement, Industry Benchmarking, Capital Project Planning, Feasibility Studies, process expertise

Wide geographic area

- Based in Portland Oregon
- Work Experience in the: Inland West, Pacific Northwest, Southeast, Canada and South America

# OUR PROJECT APPROACH



# Project Approach-Task 1

## Assessment of Fuel Availability and Cost

### Supply cost curve

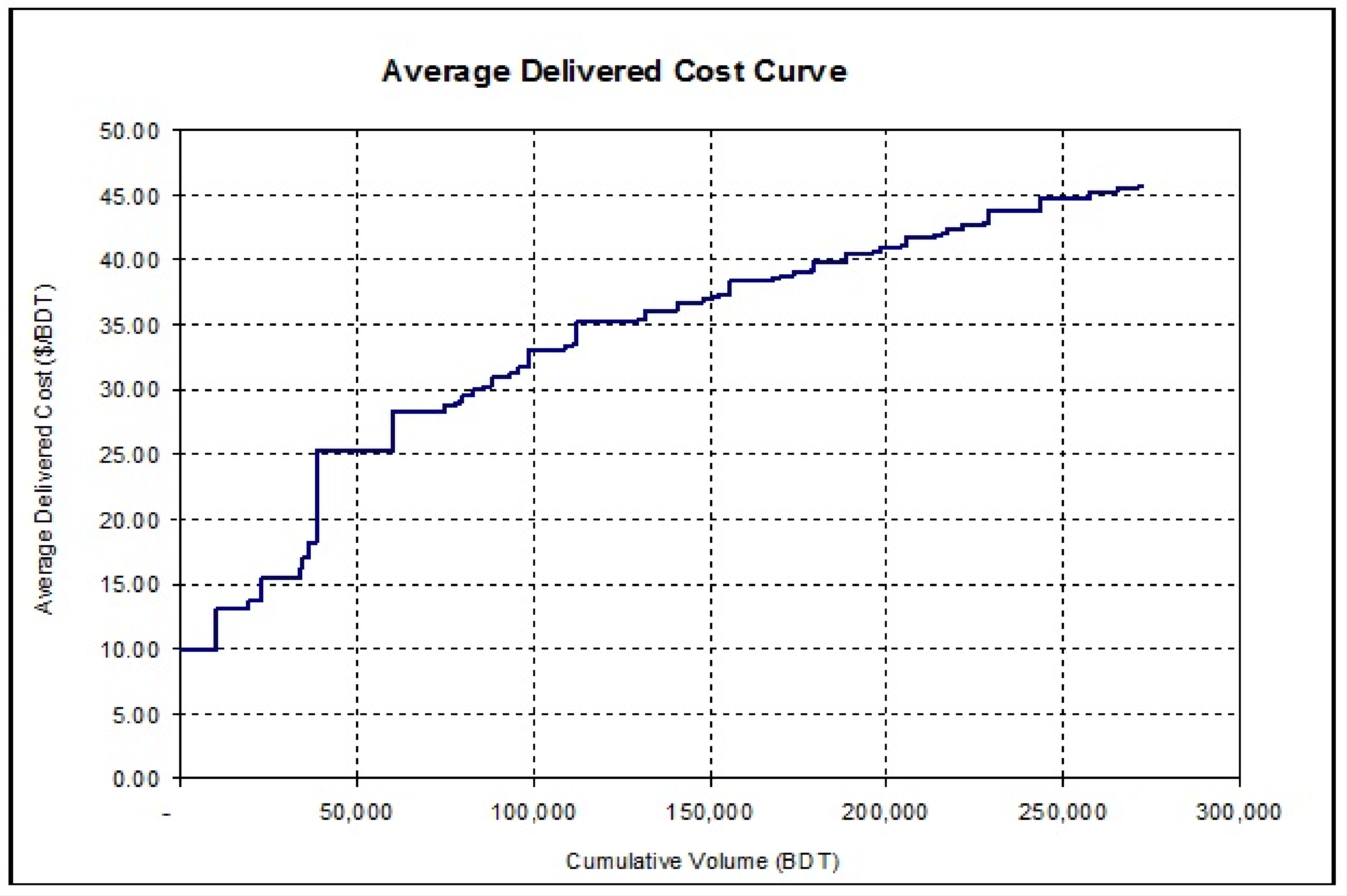
- Review previous studies and CSKT forecast of 17,000 tons per year
- Estimate volume available from logging slash *(price on cost basis: G, P, T)*
- Estimate volume available from thinning *(price on cost basis: G, P, T)*
- Estimate volume available from mill residues *(price on market basis: M, P, T)*
- Estimate volume available from urban wood waste and other sources *(potentially price both)*

### Demand estimate

- Identify existing and planned biomass users
- Identify and estimate sources of fuel for each
- Estimate volume consumed annually by each

### Supply Demand Balance

# Risk Mitigation - #1 Overall Fuel Supply



# Fuel operating cost model

Tool to model volume and delivered cost from all sources

**Biomass Hauling Cost**

blue cells are user inputs

| | | |
|---|---|---|
| | 60 | Average Hauling Distance (miles) |
| | 35 | Average Hauling Speed (mph) |
| | 1.7 | one way travel time (hours) |
| | 3.4 | round trip travel time (hours) |
| | 1.00 | load/unload time (hours) |
| | 4.4 | total round trip time |
| $ | 62.00 | Truck operating cost ($/hour not including finance cost) |
| | 19.1 | Average payload per truck (BDT) |
| **$** | **12.76** | **Average Hauling Cost per TL ($/BDT)** |

Average payload calculations Lodgepole

| | |
|---|---|
| 25% | average moisture content (%) |
| 18,000 | tractor weight (lbs.) |
| 13,240 | Trailer weight (lbs.) |
| 80,000 | Legal weight limit (lbs.) |
| 31240 | Tare weight (lbs.) |
| 48760 | Payload weight (lbs.) |
| 4,003 | Trailer capacity (cubic feet) |
| 0.41 | Specific Gravity of Lodgepole |
| 25.6 | bone dry weight of solid wood per cubic foot (lbs./cuft) |
| 2.40 | Solid Wood to Compacted chips/fuel Expansion Factor |
| 10.7 | Bone dry weight per cubic foot of chips/fuel (lbs./cuft) |
| 14.2 | Green weight of chips/fuel per cubic foot at given Moisture Content (lbs./cuft) |
| 3431 | Cubic Feet of Green chips/fuel to get to maximum allowable weight |
| 18.3 | Average BDT/Truckload |
| 60% | Percent of all fuel from Lodgepole |
| **19.1** | **Weighted Average BDT/TL** |

# Project Approach-Task 2


## Tribal Energy Usage Assessment

- Confirm energy use
  - Current facility use
  - Current facility future use
  - Planned new facilities future use
- 30 year annual energy forecast use and cost
  - Determine which energy needs can be met with steam
  - Which uses cannot change due to use or physical location
  - Energy use increases
  - Escalation of energy costs
- Alternative methods of energy use

# Project Approach-Task 3

Preliminary System Design and Technology Selection

- Dependent on information available from Tasks 1 and 2
- Primary technology assessment and selection
- Mass and energy balance, preliminary flow diagrams
- Prepare budget specifications and send to suppliers
- Preliminary design of steam distribution system
- Preliminary meetings held to determine disposal of ash, waste water, electrical interface, traffic etc.
- Preliminary site layouts
- Preliminary capital cost estimates and design, construction and commissioning schedule forecast

# Project Approach-Task 4

- Preliminary Site Assessment
  - In conjunction with Task 3 efforts, analyze project specific regulations and best available control technologies (BACT):
    - New source review (NSR) air emission limits for biomass boilers
    - Waste water treatment processes
    - Solid waste and hazardous waste management requirements
  - Control technology assessment and preliminary selection
  - Evaluate the suitability of the Plum Creek site based on the technology selected, control equipment required, physical parameters, utility access, easements and right of ways
  - Evaluation of the environmental history and prior use of Plum Creek site
  - Capital cost estimates for the development of the site

# Project Approach-Task 5

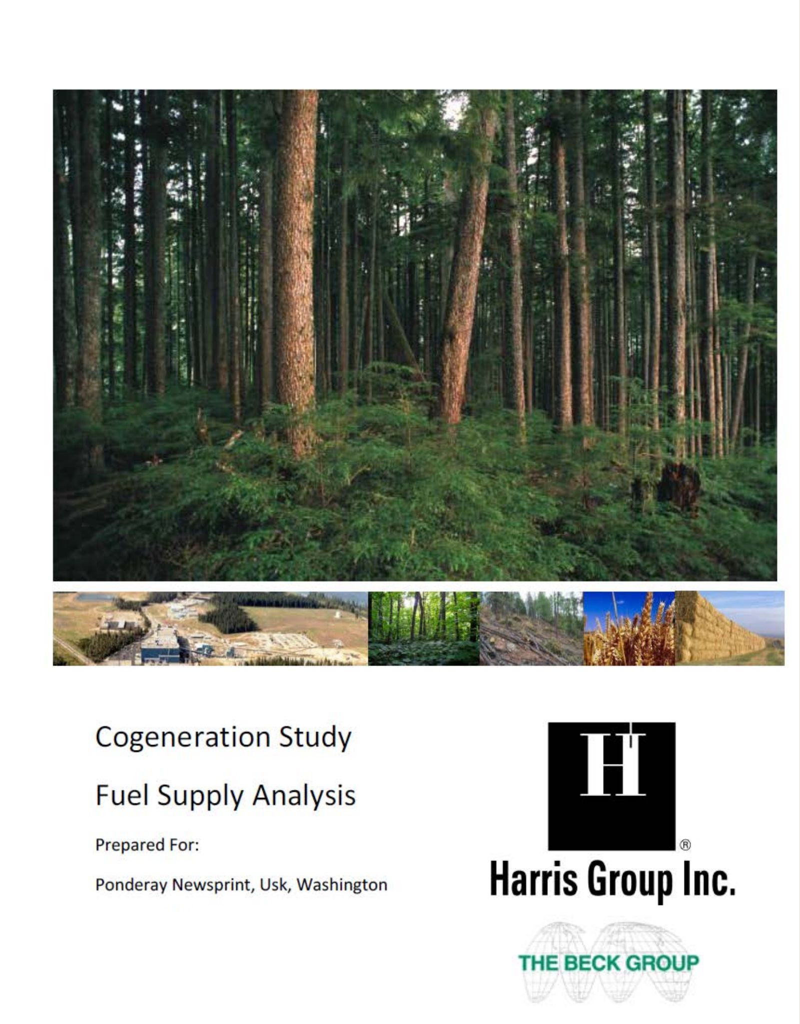
- Long Term Operating and Maintenance Plan
  - Facility operating and maintenance requirements
  - Commercial contractor economic proposals
  - Staff plan and organizational chart
  - Identification of operating personnel essential skills and abilities
  - Consumable spare parts estimate
  - Major capital renewal projects cost estimate

# Project Approach-Task 6

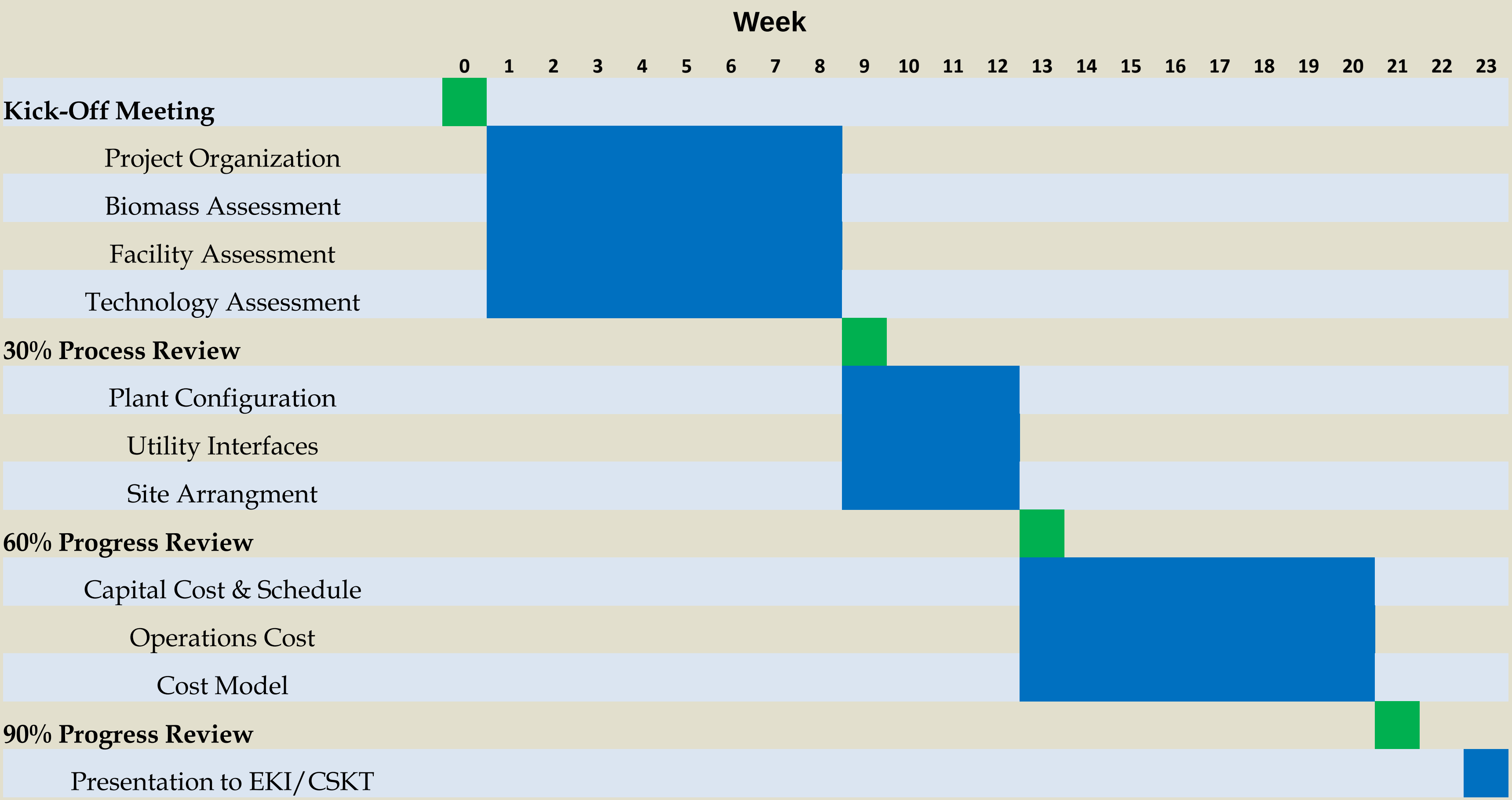
- Economic Analysis of Project
  - Develop option 1 and 2 fuel supply, start-up and operating cost model
  - Forecast energy usage, production and saleable electricity surplus; utilize data developed in Tasks 1-5 to provide other economic model input and assumptions
  - Develop clear assumptions for the capital and financing structure and projected financing costs
  - Develop economic model considering the operating and financial performance of the project and model the annual results over the 30 year expected life.
  - Prepare sensitivity cases that will analyze potential project performance risks and impacts on financial performance
  - Project development plan, EPC, design, agreements and permits

# Project Approach-Task 7

- Presentation of Results
  - Highly interactive project, sharing of ideas, questions and concerns
  - Three on-site project update meetings with EKI staff in Polson at 30%, 60% and 90% project completion
  - Development and presentation of the final report to EKI and CSKT staff
  - Presentation of final report to U.S. DOE



# Project Schedule



# Contact Information

Brian Lipscomb, CEO
Energy Keepers Inc.
110 Main, Suite 304
Polson, MT
406-883-1113
email: brian.lipscomb@energykeepersinc.com
website: energykeepersinc.com