



State of Idaho

DEPARTMENT OF WATER RESOURCES

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C.L. "BUTCH" OTTER
Governor

DAVID R. TUTHILL, JR.
Director

Memorandum for Record

Subject: Meeting on Power County Advanced Energy Center
Presented by Refined Energy Holdings

Date: April 18, 2008

Participants: Meeting Chair: Greg Seibert DOC
Bob Ford (Crapo's office)
John Revier (Simpson's office)
Dustin Kuck (Gov Office)
Amy Wynn (Mayor American Falls)
Rick Trembley (US DOC)
Daryl Moser (USDA)
Ramesh Raman CEO Refined Energy Holdings
Matthew Lee, VP (engineering) Refined Energy Holdings
John Burk Dir of Communications Refined Energy Holdings
Kim Clinger Community relations Refined Energy Holdings
Valerie Watkins Power Co Development Authority
Wade Povey Power Co
Don Haskin Power Co
Randy Shroll DOC
Dennis Borter DOC
Brian Dickens DOC
Suzie Davidson DOC
Bibiana Nerthey DOC
John Ireland DOC
Pat Sullivan DOC
Leandra Burns DOL
Ed Bala ITD
Mike Simon DEQ
Paul Kjellander IOER
Michele Edl IDWR
Chuck Galloway (prepared notes and probably missed a couple of attendees)

Goal: Update on project to build and operate a coal gasification plant near American Falls.

Summary:

1. Project continues forward albeit with a slightly modified scope. Project will now be constructed in two phases. Phase 1 will focus on construction of and subsequent operation of a fertilizer plant that will produce Ammonia, Urea, and UAN. The transportation fuel phase of the project will now constitute a second phase, Phase 2. The plant is located near American Falls and will occupy approximately 450 Acres that are already zoned heavy industrial. Site is near the UPRR mainline and Idaho Power substation. Plant will produce fertilizer (and ultimately transportation fuels) from a coal gasification process.

2. From a water management standpoint they have acquired access to a FMC owned ground water right for industrial use. Water Rights Section did not have well defined consumptive use records for the FMC plant. Brockway Engineering has been hired to quantify that use and to have that number available for a water rights transfer. Operation will consume approximately two (2) MGD under this water right with little residual water. Process waters will be treated and reused. The plant design will reuse process water with zero discharge as the goal. Water loss is confined to steam from processing and evaporation. Some limited surface run-off may return to the Snake River. There are no plans to inject any residual water from this operation.

3. The process of coal gasification is done in a confined reactor with operating conditions of 2000°F and 1000 PSIG. Basic components produced are CO (45%), H₂ (34%), and CO₂ (16%). These components will produce Ammonia (H₂ + N) at a rate of 500 TPD, Granulated UREA (Ammonia + CO₂) at a rate of 1,800 TPD, and Urea Ammonium Nitrate at a rate of 1,600 TPD. Byproducts include slag (usable for road sub grade material), Sulfur (planned to be manufactured into sulfuric acid), and steam. Project will consume 150 Megawatts of electricity annually for Phase 1, which will increase to approximately 350 Megawatts of electricity each year after completion of Phase 2. Coal deliveries to the plant will be via UPRR "unit trains" that will arrive every four (4) days.

4. From all indications this project is a go. Construction is expected to begin 2Q2009 and take three (3) years to complete. Construction labor force will range in size from 750 to 1350. Operating labor force will be approximately 150 resulting in a \$7.5 million annual payroll and \$6.0 million of local purchases to support operation annually. Construction is estimated at approximate \$1 billion for each of Phase 1 and Phase 2 with much of this coming from within Idaho. Clearly there are concerns with the local infrastructure. Refined Energy Holdings is seeking considerations from the state and Fed agencies for help in these necessary upgrades.

5. Attached is a fact sheet handed out during presentation.

cc: Dave Tuthill, Gary Spackman, Michele Edl