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# Webbers Falls Major Rehab Update



## Southwestern Regional Hydropower Conference

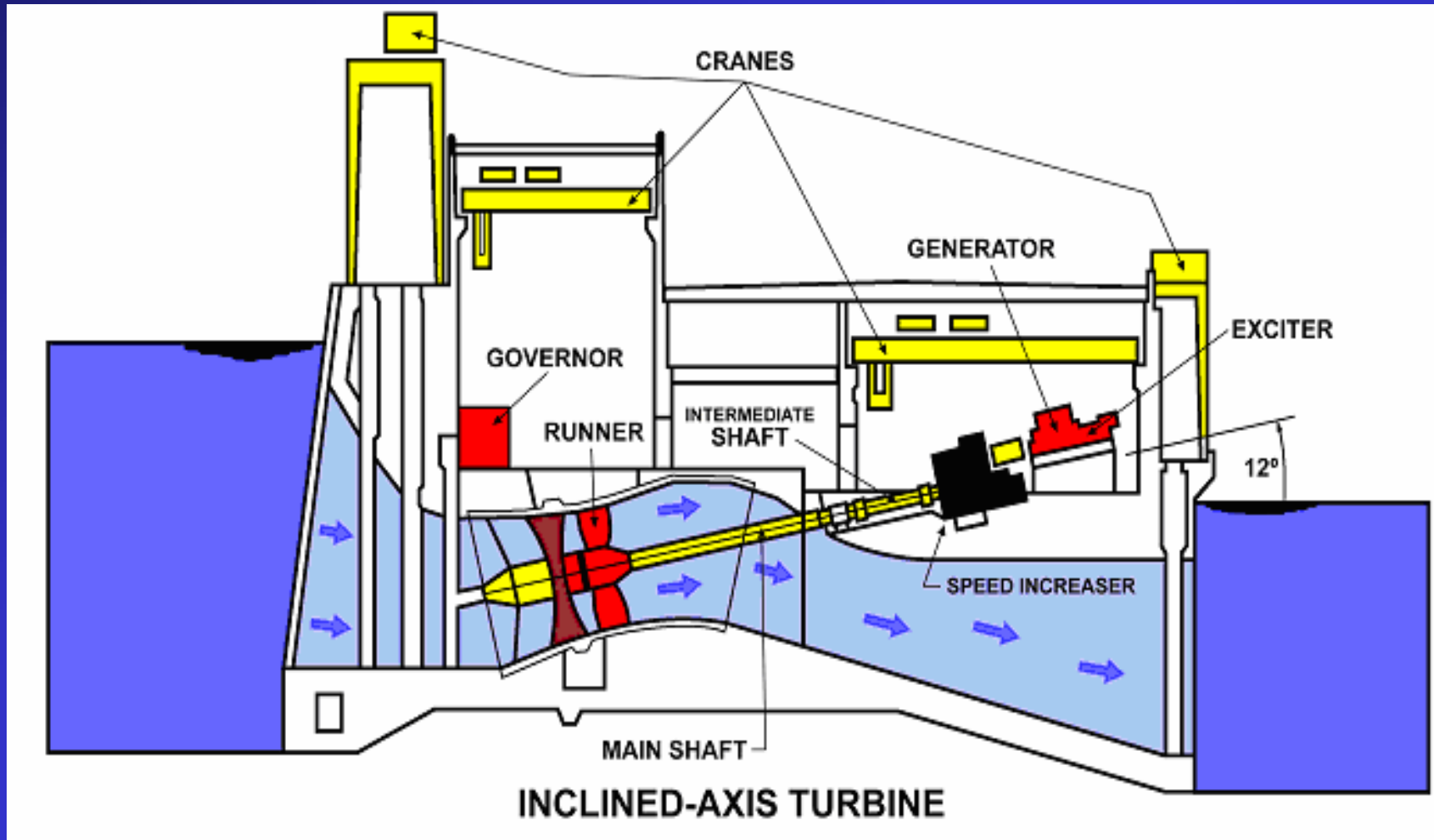
13 June 2007



# Webbers Falls Major Rehab



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6/19/2007

Webbers Falls Major Rehab



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# Webbers Falls Major Rehab Situation



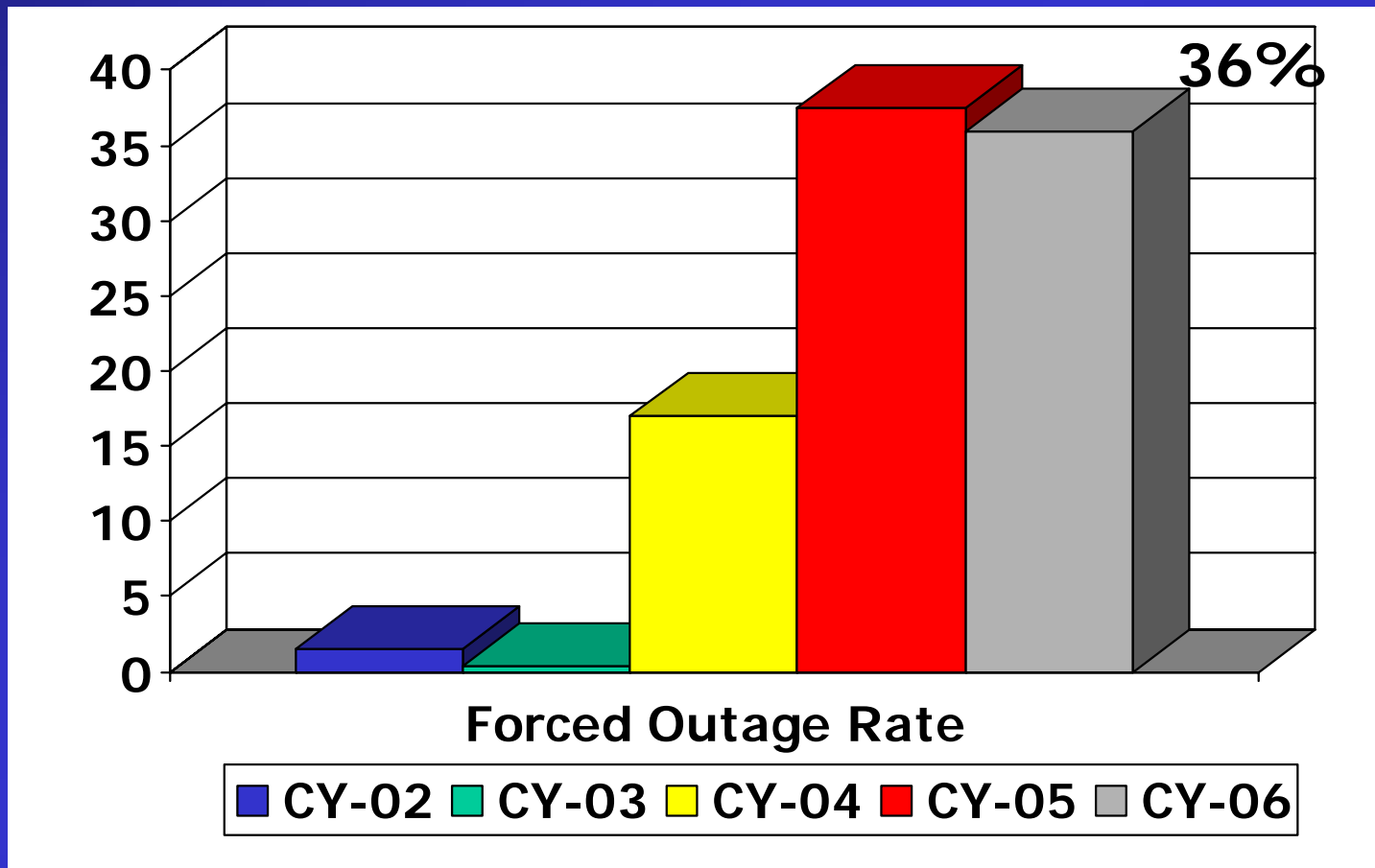
- **Situation - Unit 3 not operational with a cracked shaft. Units 1 and 2 not operational due to shaft movement.**
- **No appropriated dollars to date in FY07 or FY08**
- **In FY06 the powerhouse availability was 62%.**



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# Webbers Falls Major Rehab Forced Outage Rates (OMBIL Data)





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# Webbers Falls Major Rehab



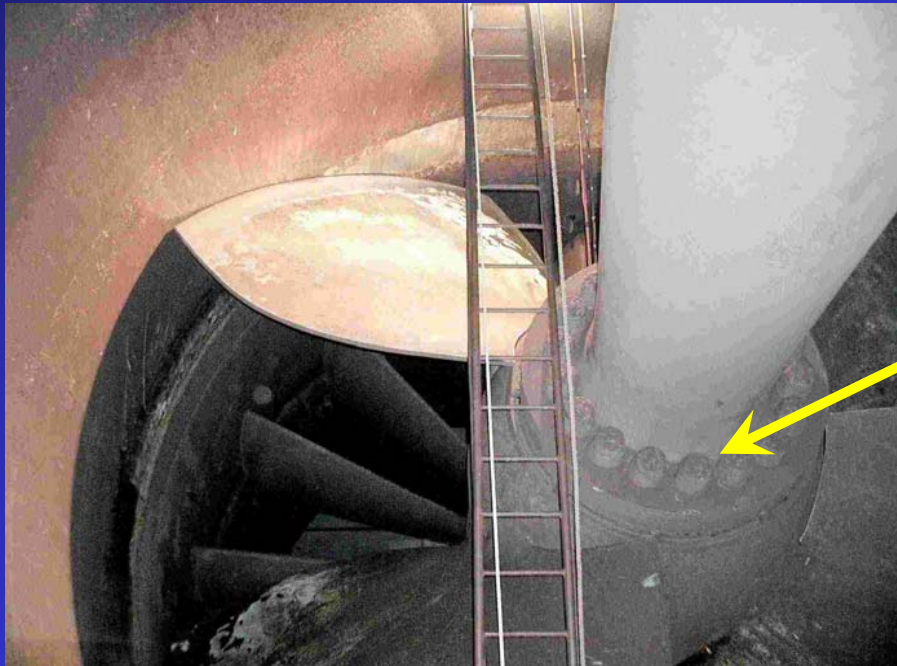
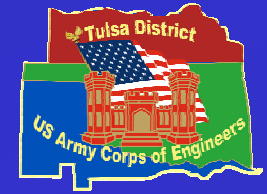
## Background

- **Webbers Falls powerhouse unscheduled major breakdowns:**
  - **9/77-3/79 - generator failure – Unit 3**
  - **4/80-2/83 - cracked main shaft – Unit 1**
  - **6/80-9/83 - cracked main shaft – Unit 2**
  - **1/81-12/84 - cracked main shaft – Unit 3**
  - **5/96-12/99 - speed increaser gear – Unit 1**
  - **7/04 – Present - cracked main shaft – Unit 3**



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# Webbers Falls Major Rehab Turbine Failures



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# Webbers Falls Major Rehab Rehabilitation Report



- Major Rehabilitation Evaluation Report approved for Plan "D" in July 2001.
- Plan "D" - Replaces the turbine runners, rewinding the generators and performing other technological improvements.
- 2 MW per unit (8.5%) increase by up-rating.
- Plan "D" BCR – 2.13 (2001 Rehab Report)



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# Webbers Falls Major Rehab Project Status



- **Webbers Falls Turbine Replacement included as a contract option under the Ozark contract.**
- **\$5 Million savings (2001) by combining Webbers Falls and Ozark turbine replacement under one contract.**
- **Webbers Falls Turbine options currently un-awarded - expires May 08.**
- **To be submitted in the FY08 budget using updated BCR of 2.3.**





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# Webbers Falls Major Rehab

## Project Status – Sub Agreements



- The City of Jonesboro has agreed to fund the first two units of Webbers Falls using customer funding.
- Sub agreement 1 for \$19.5M includes turbine replacement unit 3, contingency and S&A. Sub agreement 1 is currently being routed to HQUSACE for signature by the ASACW.
- Sub agreement 2 for \$15.5M is for turbine replacement unit 2 and is currently being prepared.



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# Webbers Falls Major Rehab Project Status (Cont.)



- **Completed Activities to Date:**
  - Excitation System Replaced
  - CO2 System Replaced
  - Generator Air Coolers Replaced
- **FY07 Activities:**
  - \$2.3M – Rehab Bridge Cranes
  - \$550K – Replace Cooling Water Piping
  - \$16.2M – Award Option 1 Turbine Replacement
- **FY08 Activities:**
  - Disassemble unit 3
  - Manufacture turbine runner unit 3
  - Manufacture wicket gate assembly



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# Webbers Falls Major Rehab

## Project Status Rehab Total Cost Breakdown

- 2007 Current Cost Est. - \$65.2M
- Turbine Rehab Cont. - \$45.7M
- Generator Rewind Cont - 4.0
- Low Speed Gears - 5.0
- Intake/Draft Tube Cranes - 2.3
- Misc. Electrical Mech. - 2.5
- S&A/Contingency - 5.7
- Total - \$65.2M



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# Webbers Falls Major Rehab Conclusion



- **One unit down permanently with two units down temporarily**
- **Funding – Is not in the FY07 President's Budget.**
- **USACE will continue to budget for this project.**
- **Option 1 appears to be scheduled for award in FY07 using customer funds.**
- **Webbers Falls' Options Expire May 08.**