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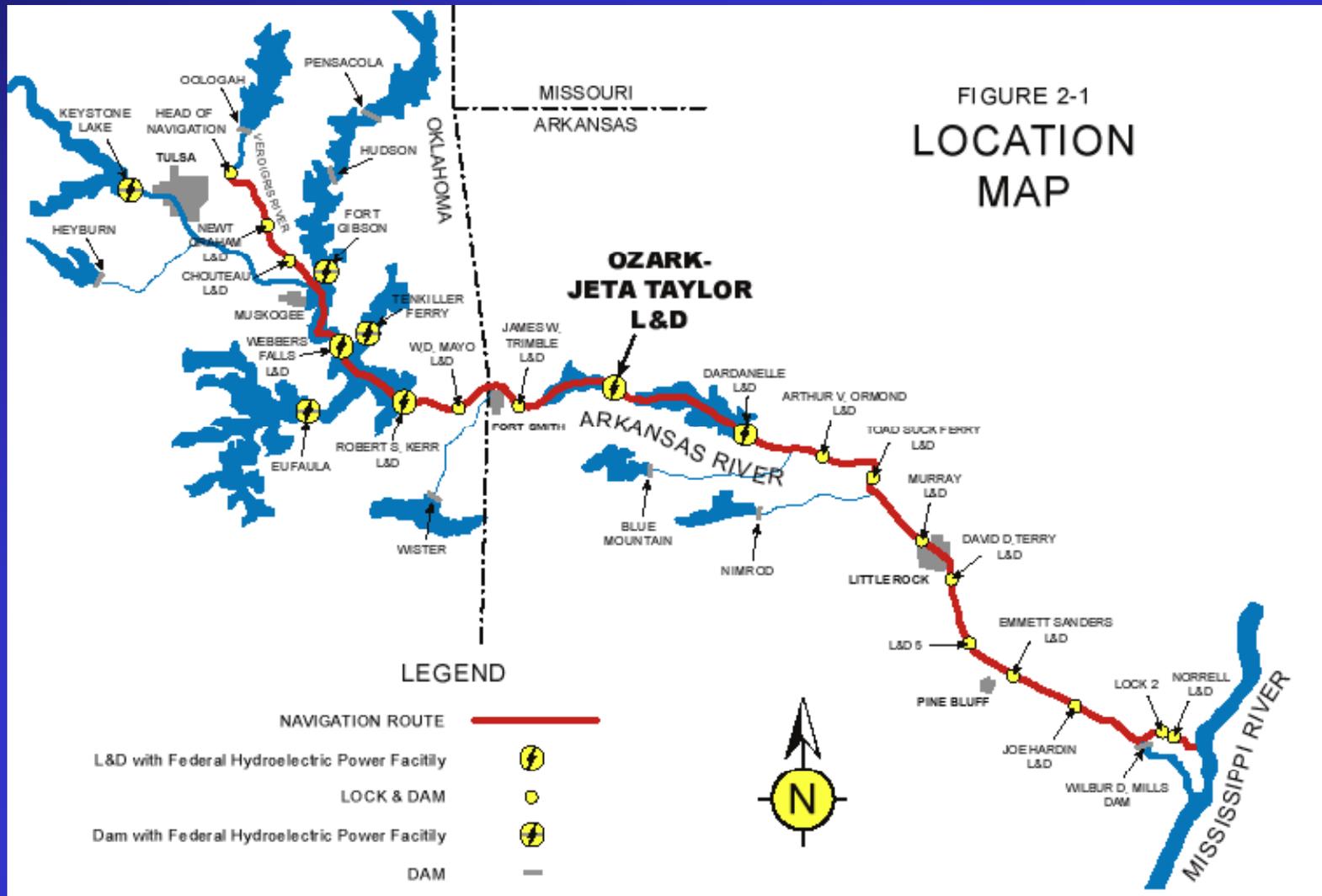
***OZARK MAJOR
REHABILITATION PROJECT***

June 9, 2010



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McClellan-Kerr Navigation Project





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*Ozark Jeta Taylor
Lock, Dam and Powerhouse*



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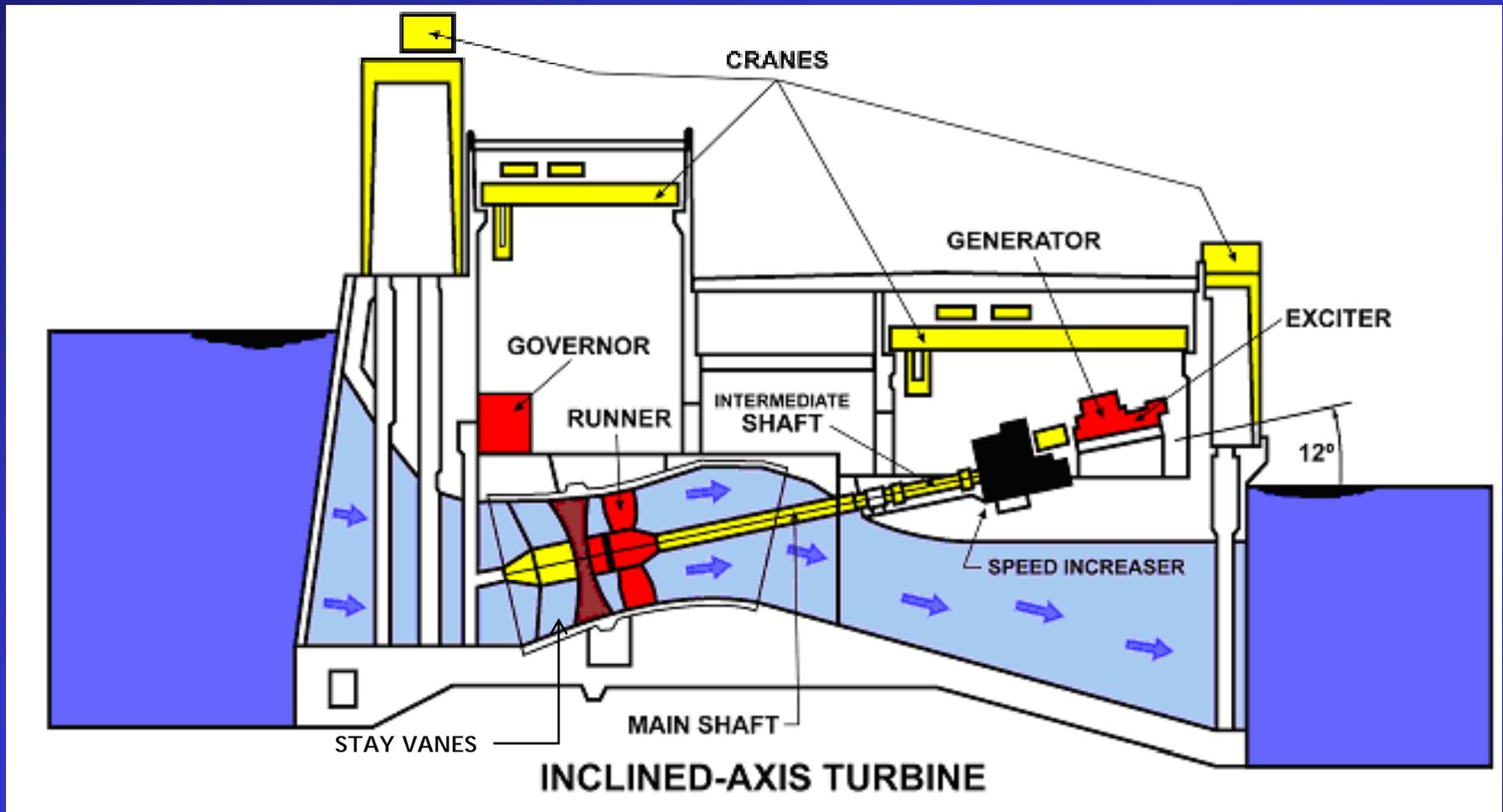
Ozark Basics

- 5 Generating Units @ 23 Megawatts
- Placed in Service 1972-1974
- Average annual energy production of 429,000 Megawatt-hours
- Run-of-River Operation (No significant storage)
- Unique Slant-Axis Design



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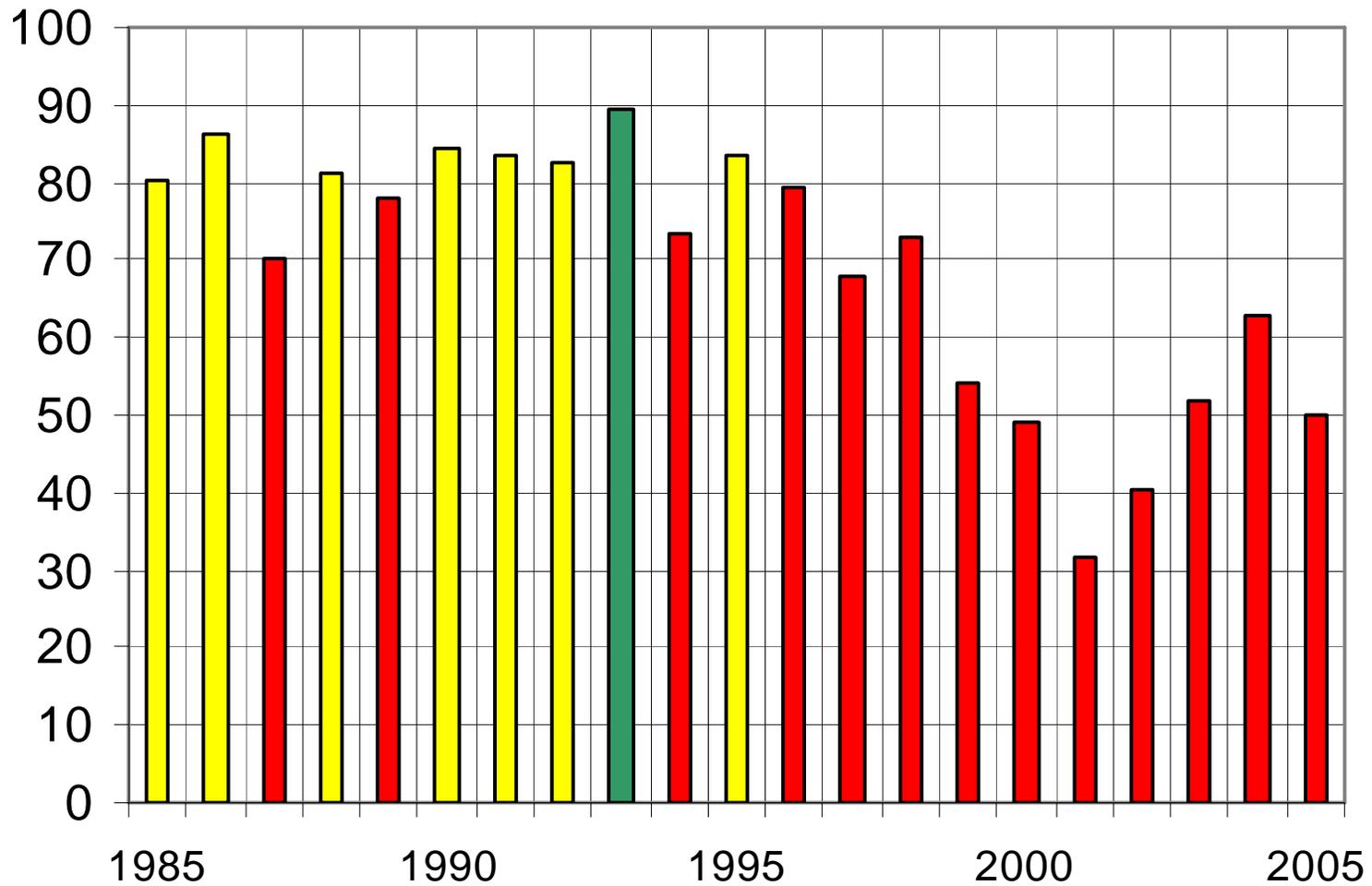
Ozark/Webbers Falls Plant Cross-Section





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Ozark Total Plant Availability 1985 to 2005





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Impact of Pre-Rehab Plant Condition

- FY 2007- 82,420 MWh lost, valued at \$5,100,000
- FY 2008- 153,550 MWh lost, valued at \$9,500,000
- FY 2009- 188,930 MWh lost, valued at \$11,700,000
- 2-3% Efficiency Loss Due to Corrosion and Cavitation
- The Energy Not Generated at Ozark Can't be Saved- Ozark is a Run-of-River Plant.



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Turbine Replacement Contract

- Contractor- Andritz Hydro Corp
- Current Contract Value (Ozark)- \$88.3 Million
- Payments to Date- \$44.2 Million
- Replace all 5 Turbines, Replace Unit 5 Low Speed Gear, and Provide 2 Spare Low Speed Gear Sets
- Notice to Proceed Issued- July 2005
- Current Contract Completion Date- February 2014



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Project Status

- **Components completed**
 - 2nd Unit- Lower Shaft, Stub Shaft, Wicket Gates
 - 3rd Unit- Lower Shaft, Stub Shaft, Wicket Gates
 - 4th Unit- Lower Shaft, Stub Shaft
 - 5th Unit- Lower Shaft, Stub Shaft, Low Speed Gear
- **Ongoing Manufacturing-**
 - 2nd Unit- Runner 63% complete
 - 3rd Unit- Runner 60% complete
 - 4th unit- Runner 55%, Wicket Gates 91% Complete
 - 5th unit- Runner 44%, Wicket Gates 32% complete



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Project Status

- **Onsite Work-**

- Preparing to Install 1st Unit (Unit 4) Runner
- Installing New Unit Governor
- Sandblasting 2nd Unit Stay Vanes for inspection and repair



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First Unit Recent Completion Milestones

- Discharge Ring repair Complete September 2009
- Stay Vane Painting Complete February 2010
- New Lower Main Shaft Installed March 2010
- Wicket Gate Assembly Installed May 2010
- Unit 4 Reassembly Complete (projected) October 2010



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Unit 4 Discharge Ring Boring Bar Setup





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Unit 4 Discharge Ring Repair





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Unit 4 New Shaft Installation





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Unit 4 New Shaft Installation





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Unit 4 Wicket Gate Barrel Painting





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Unit 4 Outer Wicket Gate Barrel





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Unit 4

Wicket Gate Installation





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Unit 4

Wicket Gate Assembly





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Unit 4

Wicket Gate Installation





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Unit 4

Wicket Gate Installation





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Unit 4 New Runner Assembly





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Project Issues

- **Unit 4 As-Found Conditions-**
 - Discharge Ring Was Out-of-Round
 - Wicket Gate Barrels Were Mis-Aligned
 - Stub Shaft Bearing Housing Was Mis-Aligned
 - Extensive Stay Vane Cracking
- **Contractor Learning Curve**
 - Slow Disassembly
 - Problems with Boring Bar Setup
 - Alignment and Measurement Issues



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Project Solutions

- **Joint Little Rock/Tulsa Management Team**
- **Enhanced Partnering Commitment and Communication with Contractor**
- **Expanded Project Work Hours**
- **Work on Multiple Units Simultaneously**
- **Intensive Schedule Milestone Management**



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Project Funding Status

- **Ozark Rehab Project Estimate - \$115.3M**
 - Cranes, Gates, Generator Coolers, Plant Prep- \$3.2M
 - Turbine Contract - \$88.3M
 - Engineering, Project Support, Contract Mgmt- \$8.5M
 - Contingency \$15.3M

- **Funding Received to Date- \$79.8M**
 - Regular Appropriations- \$44.6M
 - Recovery Act Funding \$15.1M
 - Customer Funding \$20.1M

- **Balance To Complete- \$35.5M**



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Project Funding Status

- **FY 11 Funding-**
 - \$0 in President's Budget
 - Several Member's Requests for Congressional Earmarks are Pending
 - No Budget Likely Until the November Elections



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Ozark Major Rehabilitation

Questions?