



Columbia Energy Center

IRP Recommendation



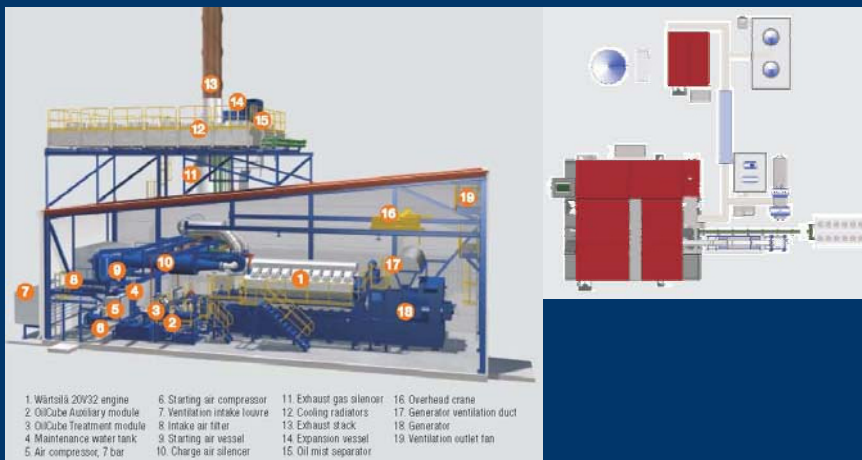
- "Prepare in early 2010 to install two engine generator sets of approximately 8 MW each for a commercial operating date of 2012."

Wartsila Engines



- Internal combustion reciprocating engines
- Designed as peaking units
- 60' x 150' footprint
- Could be installed at an existing city site

Wartsila Schematics



Columbia Energy Center



- As a result of the IRP process a very attractive alternative has been offered
- Ameren has offered 25% undivided interest in the Columbia Energy Center



Columbia Energy Center



- Consists of four simple cycle combustion turbines
- 144 MW net capacity
- Located within Columbia city limits
- Typically only dispatched during peak hours

Columbia Energy Center



- Currently the city has purchase power contracts for 50% of the output
- Contracts provide option to purchase 25% undivided interest in the project in 2010 and another 25% in 2013
- Ameren is interested in selling the remaining 50% of the project now
- Units have only been run about 400 hours since installation in 2001

Cost Comparison of Options



| Wartsilla Engines | CEC Combined Turbine |
|-------------------|----------------------|
| Two: 8.4 MW units | One: 36 MW unit |
| \$1,155/kW | \$499.72/kW |
| \$19.4 million | \$17.99 million |
| 8,642 Btu's/kWh | 12,793 Btu's/kWh |

Burns & McDonnell Financial Analysis



- Completed another run of the Strategist Power Supply Model
- Based on current conditions, the purchase would save Columbia \$6,652,000 over 20 years
- Natural gas prices have fallen since the model was rerun

Areas of Risk That Could Escalate Costs



| | <u>CEC</u> | <u>Wartsila</u> |
|------------------------|------------|------------------------|
| Inflation | NO | YES |
| Currency Exchange Rate | NO | YES (built in Finland) |
| Transportation Issue | NO | YES |
| Permitting Issues | NO | YES |
| Pipeline Construction | NO | YES |
| Construction Risk | NO | YES |
| In-service Delays | NO | YES |

CEC Summary



- Already permitted
- In service
- Natural gas supply in place
- Capable of converting to combine cycle
- No need to train employees on another generation source

Financing Options



- Missouri Public Utility Alliance: low interest loan currently at 4%
- Fund from retained earnings
- A combination of above

Conclusion



- Staff is recommending proceeding with contract negotiations to purchase 25% of Columbia Energy Center



Questions?

