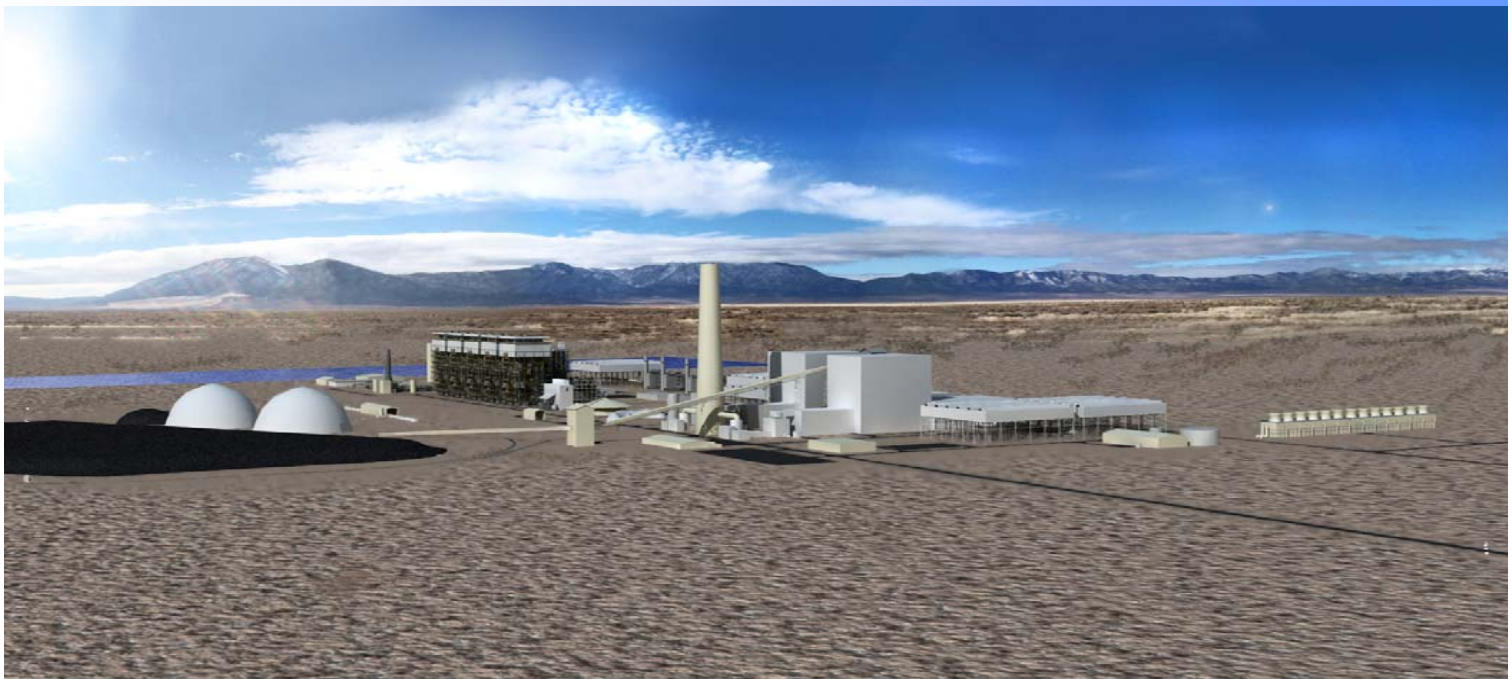
Ely Energy Center



Nevada Legislative Commission

Natural Treasures Subcommittee - Ely, Nevada

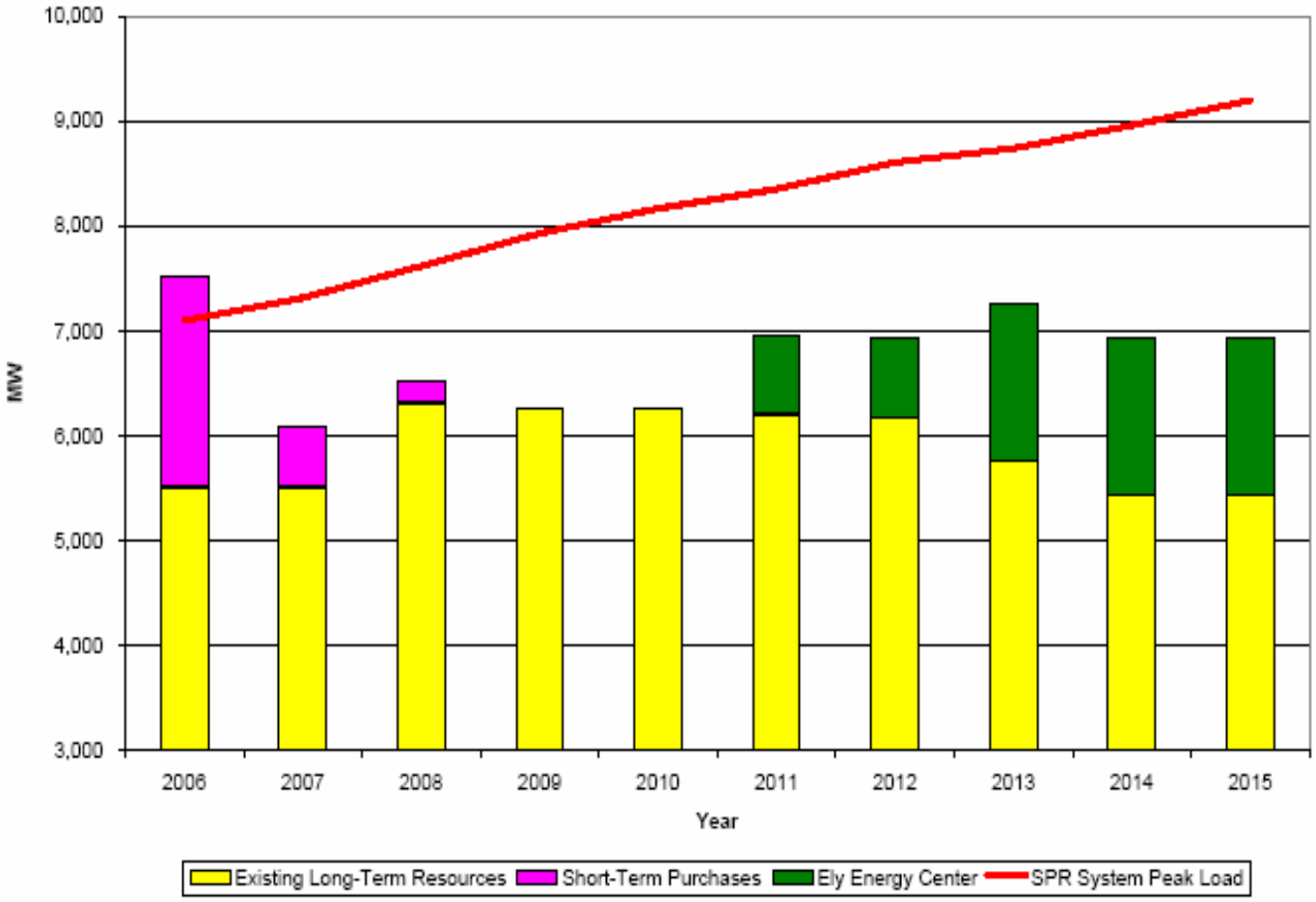
May 19, 2006

EXHIBIT G **Treasures**
Document consists of 21 slides.
Entire exhibit provided.
Meeting Date: 05-19-06

Purpose and Necessity

- Meet the Load Growth
  - Electric demand growing 250 MW/yr
- Diversify Our Energy Mix
  - Reduce reliance on volatile natural gas
  - Access remote renewable resources
- Reliability
  - Reduce imports from outside Nevada
  - Connect North/South to share resources
- Aging fleet
  - Older, less efficient assets must be retrofitted or replaced

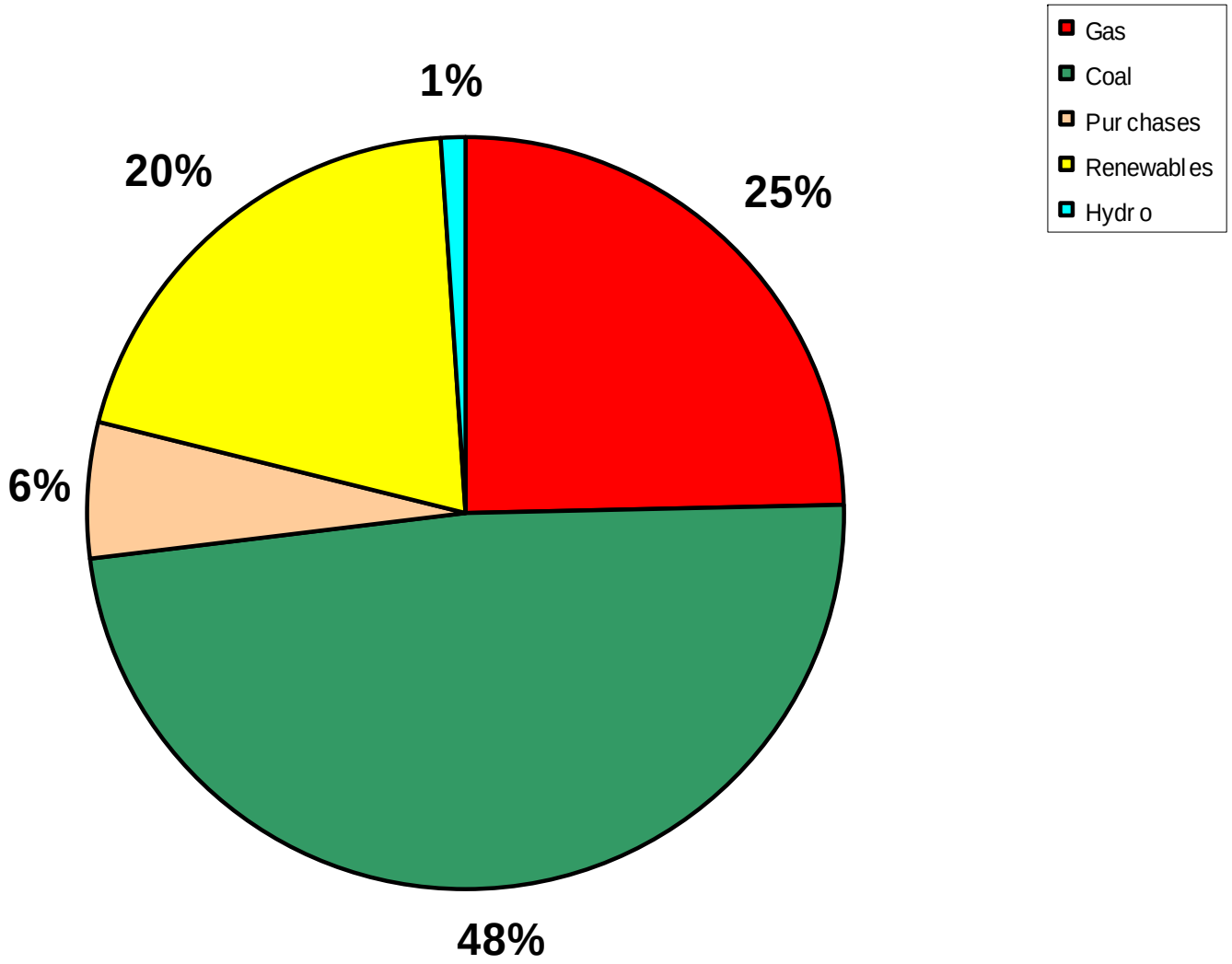
Sierra Pacific Resources
Forecast Loads & Resources



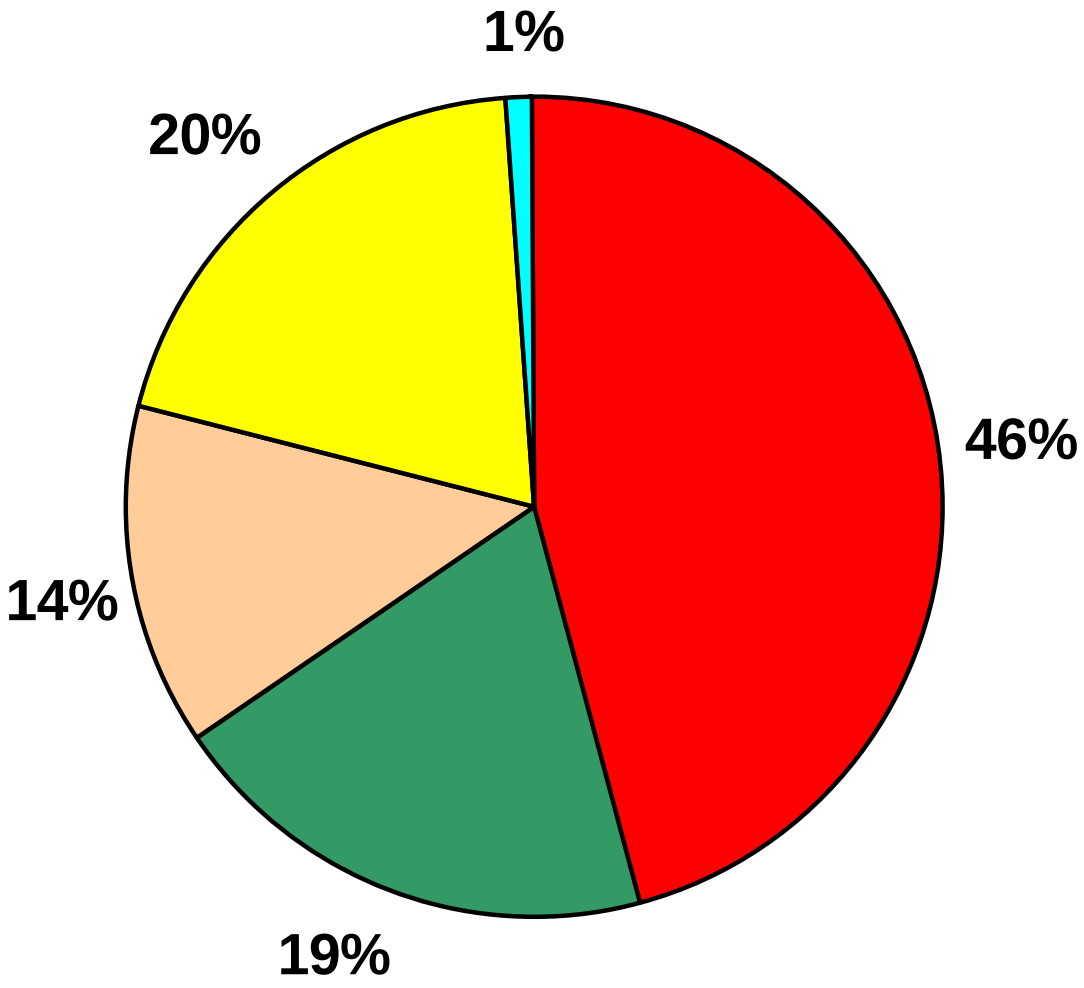
Gas-Fired Resources – Silverhawk Moapa, Nevada (Las Vegas)

Coal-Fired Resources – Valmy
Battle Mountain, Nevada

NPC & SPPC Combined System
Fuel Mix- 2015
With Ely Energy Center



NPC & SPPC Combined System
Fuel Mix- 2015
Without Ely Energy Center



Project Scope

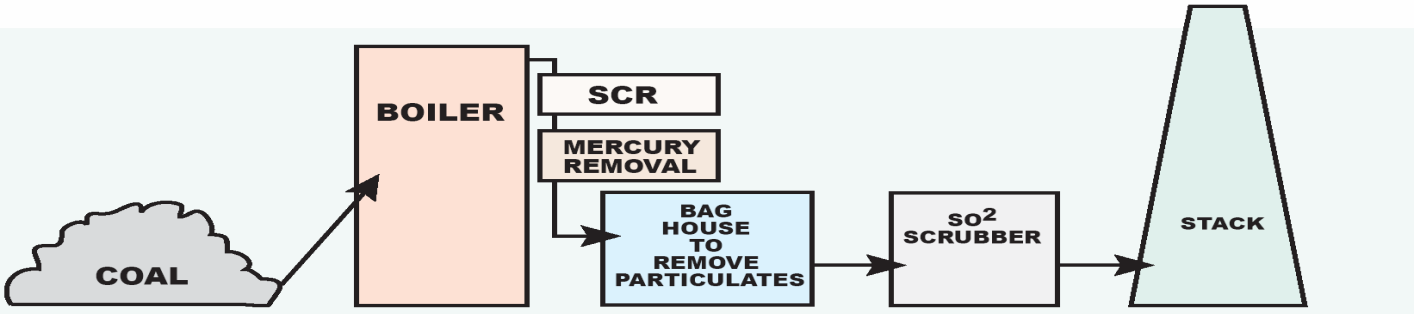
- Two Phases
  - Phase 1:
    - Two 750 MW (nominal) super-critical pulverized coal units
    - 250 mile transmission line, connecting Sierra Pacific, Nevada Power systems
    - First 750 MW unit on line late 2011
    - Second unit on-line 2013
  - Phase 2:
    - Two 500 MW coal gasification plants
    - On line when commercially viable (2015?)
- Total 2500 MW at buildout

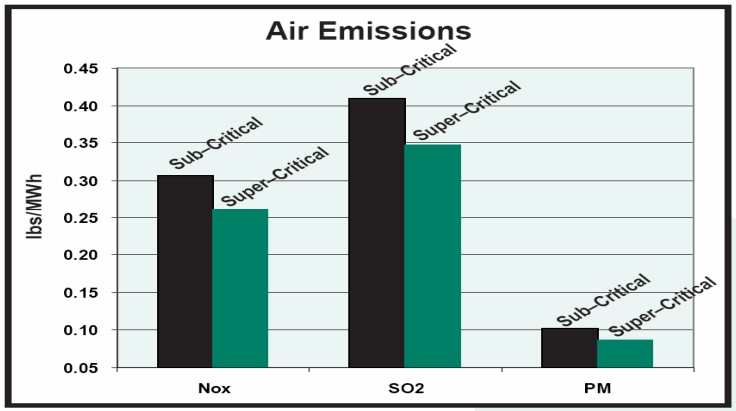
Phase One – Supercritical Pulverized Coal Technology

- Originated in Europe, Japan
- Units are 5-10% more efficient than traditional technology
- The higher the boiler pressure and temperature, the more efficient the unit is
- Each 1% improvement in efficiency yields 3% reduction in emissions per MWh
- Utilize low-sulfur Powder River Basin (PRB) coal from Wyoming

Sub–Critical versus Super–Critical Boilers

- Higher efficiencies mean less coal burned and fewer emissions.
- Super–Critical design is more efficient due to higher steam pressures and temperatures.
- Emissions cleanup equipment same for both designs.
- Net effect = less in, less out.





	Sub–Critical	Super–Critical
Steam Pressure	2400 psia	3700 psia
Steam Temperature	1000 F	1055 F
Heat Rate (Btu/kWh)	9,700	9,100

Sierra Pacific™ RESOURCES

Coal Gasification

- Chemically converts coal to a synthetic gas for gas turbine-generator
- Complex technology:
  - Gasifier(s) (multiple?)
  - Air separation (oxygen) plant
  - Combined cycle gas turbine power plant
- High reliability for chemical feedstocks
- Mixed experience in electric generation
- 3-4 plants under development in US

Sierra Pacific™
RESOURCES

Sierra Pacific Electric Service Area
Sierra Pacific Gas Service Area
Nevada Power Electric Service Area

Sierra Pacific™
We're Customers Too

Nevada Power.
We're Customers Too

Site Considerations

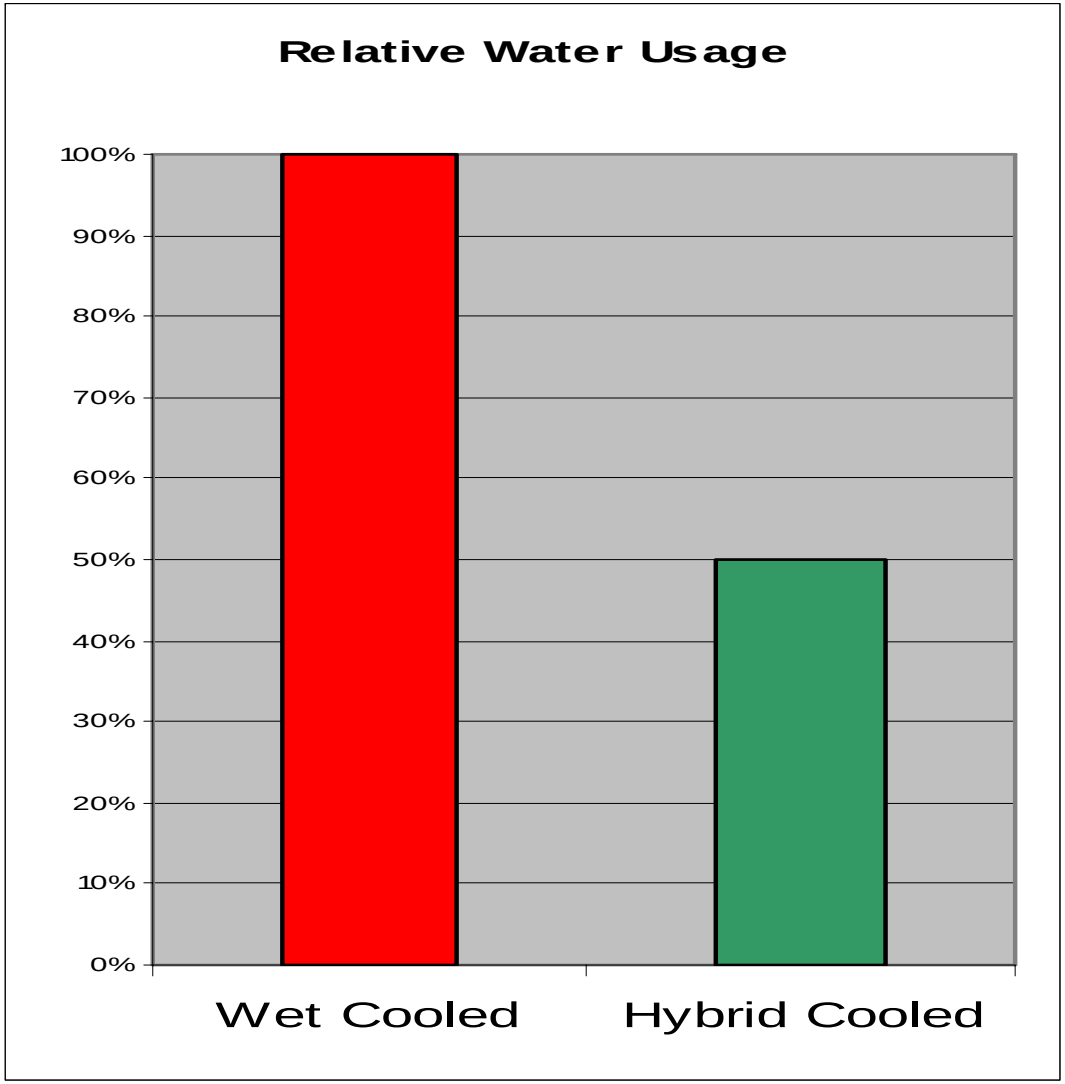
Project Siting

- White Pine County has encouraged projects
- County reserved water for power generation
- Existing Nevada Northern Railroad ROW
  - Provides access to major rail, low-sulfur coal
- Existing SW Intertie Transmission Corridor
  - Link to North via Sierra's Falcon-Gonder line
- Access to renewables in North
  - Geothermal, wind
- Sharing of resources between systems
  - Northern system: winter/summer peaks, Southern summer
  - Peaking in South can serve the North in winter
  - Share renewables between systems (solar to North)
- Close to highways, population center

Environmental - Water

- Traditional wet cooling tower would use 8,000 acre-feet/yr for 750 MW
- Replace with combination of dry (fan) and wet cooling towers, or “hybrid” cooling; cut water consumption in half
- Estimated 8,000 acre-feet per year for two IGCC units in Phase 2
- Total 16,000 acre-feet for 2,500 MW
- Applied for water rights in Steptoe, Butte, Jakes Valleys to meet project needs

Environmental - Water



Environmental - Air

- Rapid advances in emissions control:
  - Selective Catalytic Reduction – NOx
  - Wet/Dry Scrubbing – SOx (acid rain)
  - Baghouses/Fabric Filters – Particulate
- Net Result for coal plant emissions over 30 years (per NETL):
  - NOx reduced 50%
  - SOx reduced 70%
  - Particulate reduced 90%
- Higher efficiencies, advanced controls reduce emissions even further

Environmental - Air

- Air monitoring equipment being installed to measure current ambient air quality
- SODAR (Doppler radar unit) measures wind speed & direction up to 1200 feet elevation
- 50-meter tower holds instruments; height of tower required to calibrate SODAR measurements (ensure accuracy of data)
- Submit air permit application Fall, 2006
- Anticipated permit issuance end 2007

Environmental – Land Use

- Require approximately 2,500-3,000 acre site plus associated rights-of-way
- Requires Environ. Impact Statement (EIS)
- Submit Land Use Application June, 2006
- Working with BLM on schedule for EIS
- Construction begins after permits rec'd
- Assess opportunities to utilize byproducts:
  - Wet scrubbing (produce gypsum wallboard)
  - Ash recovery systems (produce material compatible with road, concrete block)

Local Benefits/Viability of Project

- 1,500 construction jobs at peak
- 150 permanent jobs at end of Phase 1
- 250 permanent jobs at end of Phase 2
- Increased property, sales taxes
- Increased local employment
- State performing study to assess economic benefit

Our Mission

- Provide reliable, low-cost energy for Sierra Pacific, Nevada Power customers
- Be good stewards of water, land and air
- Provide economic opportunity to White Pine County
- Help develop renewables in the North
- Keys to success:
  - Nevadans building the right plant for Nevadans
  - Existing customer base is in place
  - Substantial coal-fired plant construction and operation experience