#### Mission Statement:

The UTC protects consumers by ensuring that utility and transportation services are fairly priced, available, reliable, and safe.



## Washington Utilities and Transportation Commission

Issues facing the WUTC

Prepared for: The Kyrgyz Republic SEA

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#### Presentation Order



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## Washington is a Hydroelectric Region



- Region includes the Columbia River system that crosses four states and Canada.
- High cost to disturbing the flow of this water system ----fisheries, farming, recreation and municipal water supply.
- System became run-of-river, without much storage.
- Dispatch system for water management and daily peak load-shaving, not hourly marginal cost.

### Weather Issues



- Rain and snowfall vary output of the system can vary greatly. Shortfalls covered by purchases from thermal plants.
- Causes large changes in the prices or costs which consumers face year-to-year.
- Changes can bring real economic disruption, consumer irritation, and political consequences for decision-making.

## Fuel Prices Driving Issues at WUTC

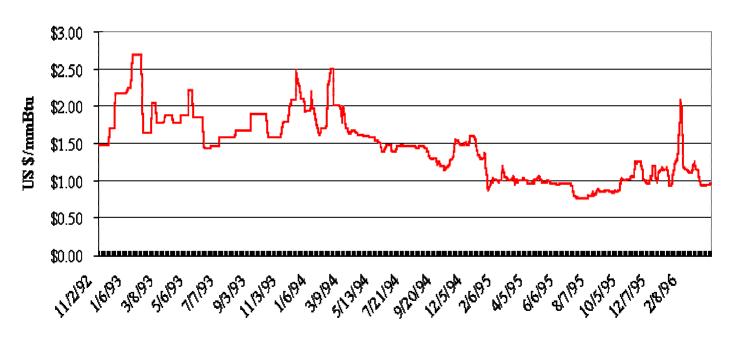


- Gas is is mined in Canada, the Rocky Mountains, the Gulf Coast and other parts of the USA.
- Pipelines deliver to other states.
- Washington buys in the national market.
- Heating use causes the seasonal price pattern underlying the commodity price of gas.
- Month-to-Month and Day-to-Day gas price variations cause variations in average costs.

## Fuel Prices Driving Issues at WUTC



#### **Gas Daily Sumas Index**

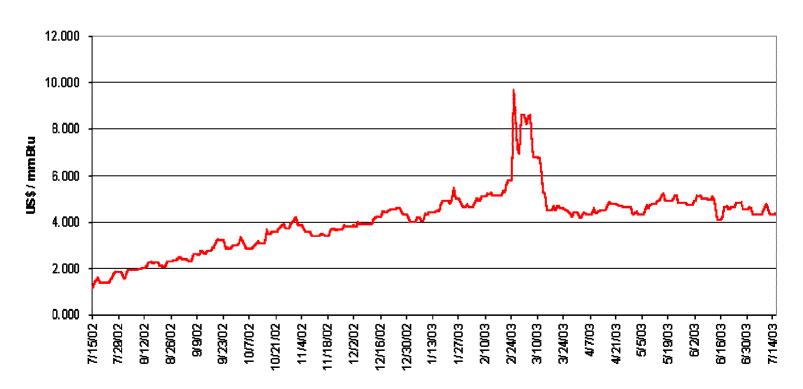


Natural Gas prices declined after FERC deregulation

## Fuel Prices Driving Issues at WUTC



#### Surnas Gas Daily Prices 7-2to 7-03



### Fuel Impact on Rates



- Dual goals of "price signal" and rate stability.
- Utility is a buffer between consumer and market sources.
- For the electric company, this has been tried with Power Cost Adjustment devices.
- For gas utilities, the Purchased Gas Adjustment is used.

# Bonneville Power Administration (Bonneville) Resource Benefit Sharing



- Federal organization Bonneville uses hydro natural resources with local environmental impact.
- Physical power sold to public power companies, not regulated utilities.
- Equity for customers of regulated utilities comes from cash transfer from Bonneville to regulated utilities to reduce power costs.
- Socialized public system shares with regulated monopoly system.

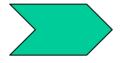
## BPA Residential & Farm Energy Exchange Benefit Example



## Puget Sound Energy Residential & Farm Service Rate Schedule 8

All energy @ 6.621 cents / kWh

Exchange Credit @ 1.74 cents / kWh



26.28 % discount to bill

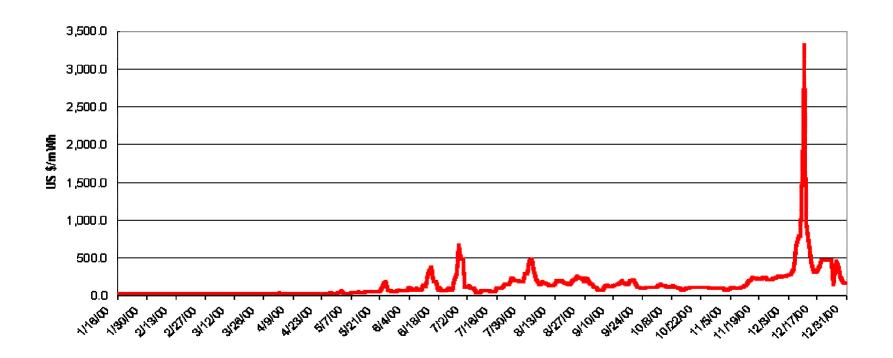
## Western Power Disturbance 2000 to 2001



- May 2000 to May 2001 energy market disturbance.
- California Restructuring harmed western market.
- Consensus on causes:
  - Capacity shortfall
  - Poor day-ahead market design
  - No alternatives to the daily market
  - Poor hydro conditions.
- Dishonest marketing and bidding made severe problem worse. Some government lassitude too.

### Dow Jones Index: Mid-C





Market disruption in the year 2000 which damaged Washington

# January 2001 FERC response to Western Electricity Price Market: sleeping on the job





- drawing by Stephen B Samerjan iii

### Western Power Markets



- Year- long disruption brought several issues to the WUTC and continues to do so.
- PSE Lawsuit, which ended in a settlement, created a small set of industrial customers with direct access to wholesale power markets.
- Regulated utilities were damaged directly or indirectly by the extreme wholesale prices of this period and filed for significant rate cases.

# Renewed Interest in Resource Planning



- One cause of the Western Power Market problem was inadequate capacity. Highlights value of vertical integration & resource planning.
- Resource Plans include study of the adequacy of capacity and energy.
- Mix of conservation and supply.
- Diversity of fuel and technology type to provide stable, low-cost, long-term power supply.

### 2001 Demand Response



- Customer Buyback Programs
   ⇒ Total of 758,986 MWh curtailed
- Industrial Curtailment Programs
   ⇒ Total of 12,928 MWh curtailed
- Irrigation Buyback Programs
   ⇒Total of 28,076 MWh curtailed
- Time-of-Use Program
- Conservation Programs
  - ⇒ Puget Sound Energy = 107,321 MWh saved
  - ⇒Avista = 143,246 MWh saved



### Resource Planning



- Retreat from restructuring has placed renewed interest on Integrated Resource Planning.
- Resource Planning was codified in Washington in mid-1980s—then known as Least Cost Planning.
- "Each electric utility has the responsibility to meet its load with a least cost mix of generating resources and improvements in the efficient use of electricity." WAC 480-100-238(1)

### WUTC's Resource Planning Rule



- Company must file a plan every 2 years.
- Plan must include:
  - Forecasts of demand (20-year)
  - Assessment of demand-side potential
  - Assessment of generating technologies
  - Integration of demand forecast with cost-effective resource opportunities
  - Short-term (2-year) action plan
  - Progress report from last plan
- Public involvement in creation of plan is required.

# Stakeholders Involved in Resource Planning



- WUTC Staff
- Public Counsel
- Industrial customer representatives
- Environmentalists
- Low-income advocates
- Washington Energy Policy Office
- Northwest Power Planning Council

### Current Issues in Planning



- De-emphasis of reliance on day-ahead market
- Ensuring resource adequacy for core customers
- Minimizing exposure to fuel price volatility (risk mitigation)
  - Hedging
  - Demand-side resources
  - Renewable resources
- Integration of demand-side resources with supplyside in models
- Recognizing externalities
- Hydro re-licensing

### Use of Resource Plans



- Commission acknowledges plans—does not approve them.
- Plans provide strategic direction for long-term planning.
- Planning is a dynamic process.
- Plans identify key factors and analytical methods for making resource additions.
- Plans do not commit utilities to acquisition of specific resource types.

### Resource Bidding Rule



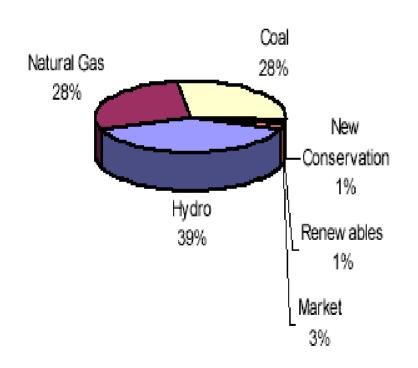
- Commission administers a Federal law for small power sellers and observes acquisition of resources.
- Filing of Resource Plan mandates filing Request For Proposals.
- Request For Proposals attracts bids using Resource Plan data.
- Bids evaluated on objective basis.
- Resources outside of bidding process considered.
- Company has no obligation to accept any bid and bidders have no claim to a contract.

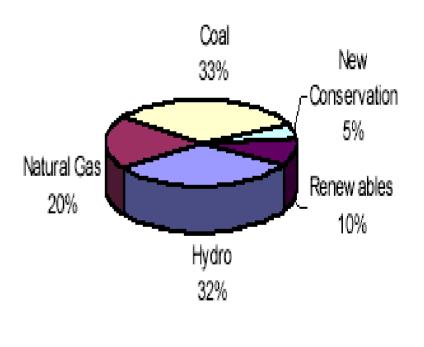
### Puget Sound Energy Supply Mix



#### Estimated Annual Energy Resource Mix, 2003

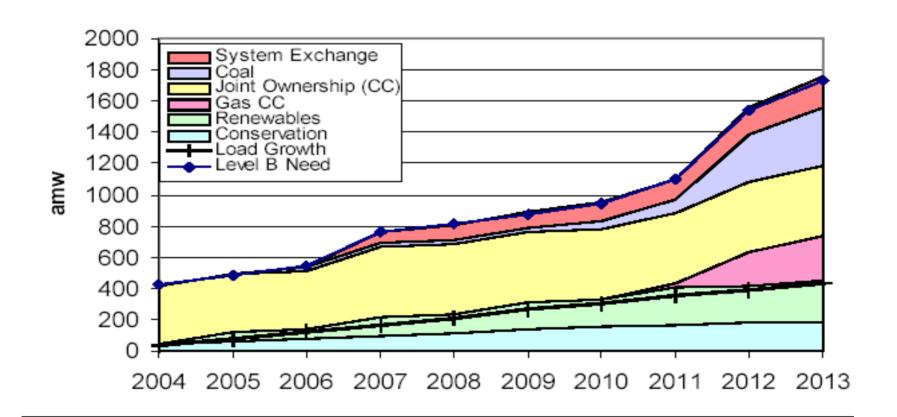
#### Estimated Annual Energy Resource Mix, 2013





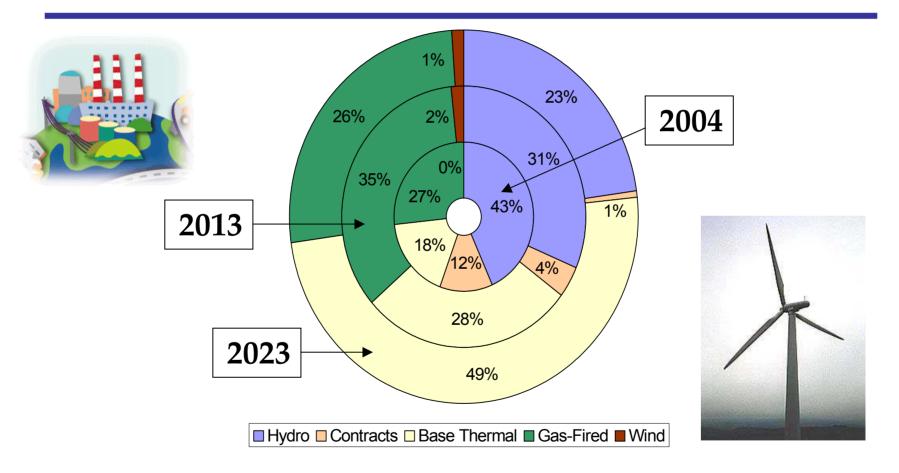
### Puget Sound Energy Preferred Resource Strategies





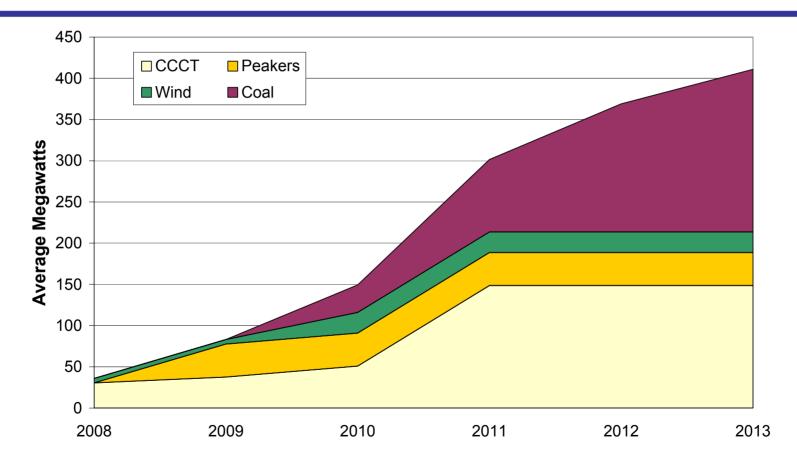
### Avista Supply Mix





### Avista Resource Strategy





# Current and Up-Coming Regulatory Proceedings



- Commission currently reviewing resource planning rule
- Request For Proposals review and publication
- Rate case for resource acquisition
- New filings for demand-side programs
- Purchase Cost Adjustments
- Purchase Gas Adjustments