



Electricity: Perspective and Outlook

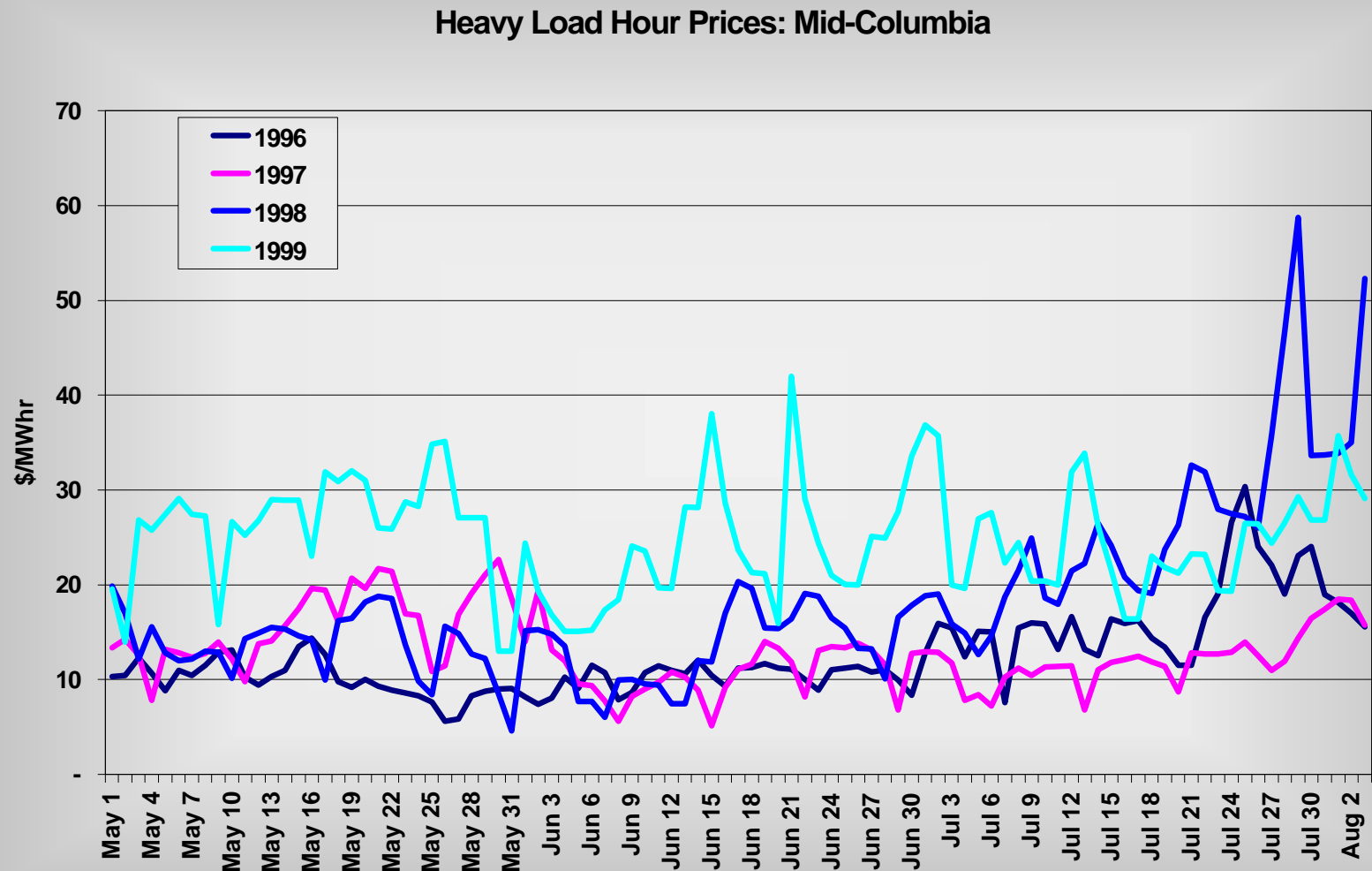
Presented to NCCC
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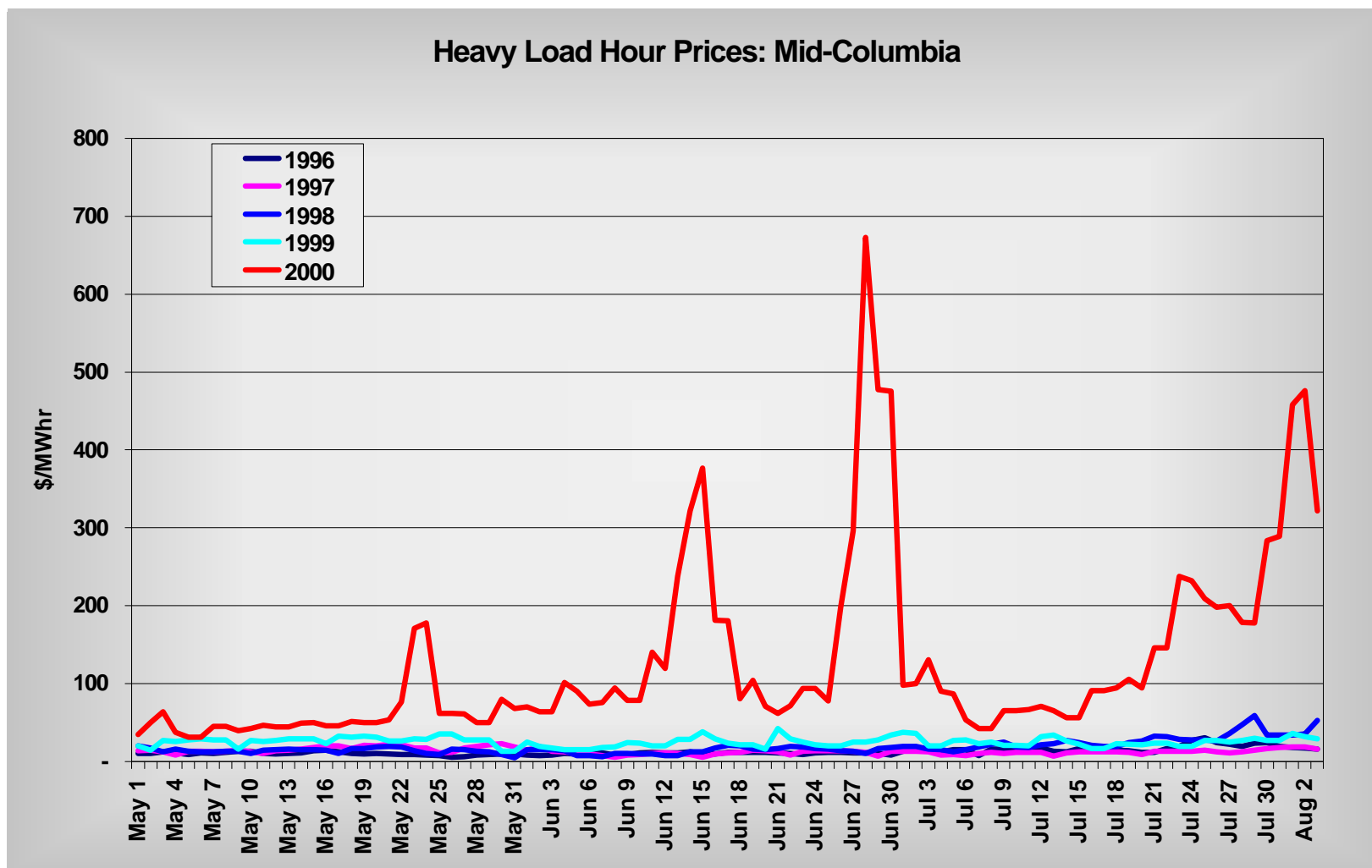
Leading up to the Crisis

- March 2000 analysis said region faces increasing probability of being unable to fully meet needs -- 24% by winter of 2003
- ***Equivalent*** of 3000 MW required to bring probability down to 5%
- Market prices unlikely to support development of new generation until 2003-2004
- Need voluntary, economic load reduction

Prices Before Summer 2000



Summer 2000 Prices



The "Perfect" Storm

Poor Hydro
Conditions

Tightening
Supplies &
Higher Gas Prices

Environmental
Constraints

Under-
investment in
Generation,
Efficiency

Limited Price
Response

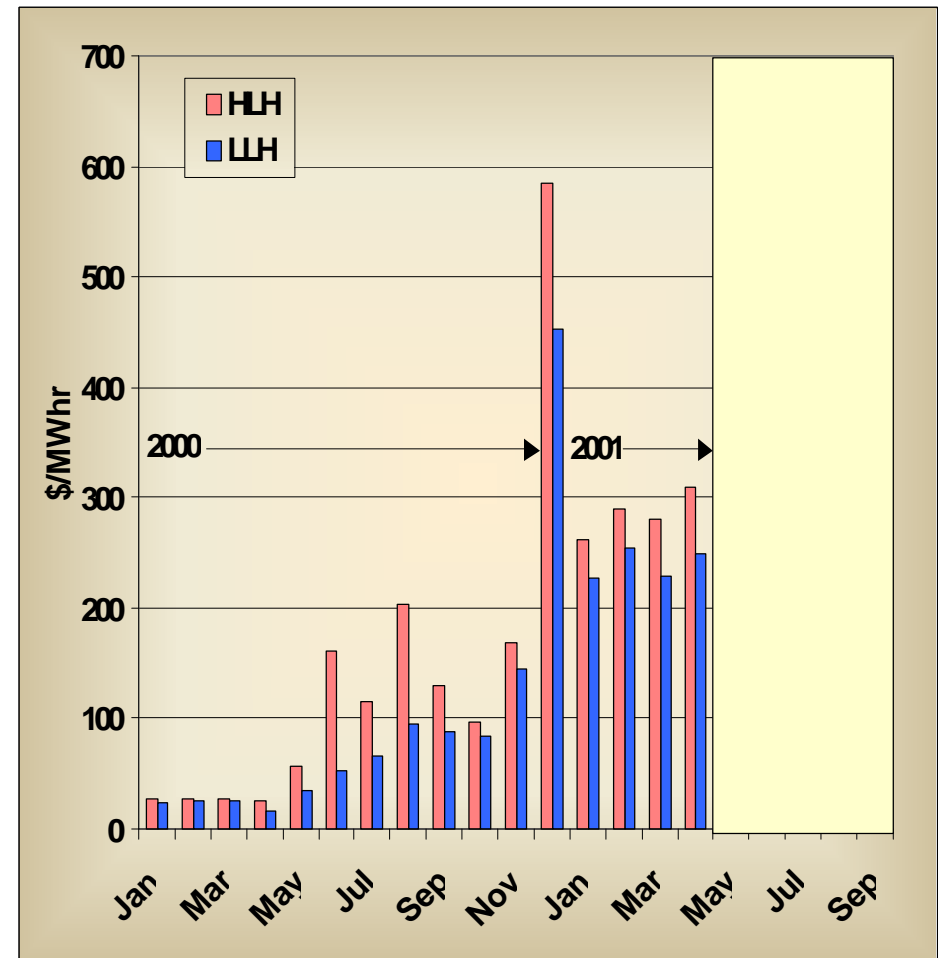
Rapidly
Growing
Demand

**Unprecedented High
Wholesale Power Prices,
Risk of Curtailment**

Dysfunctional
California
Market

Fall and Winter 2000-2001

- Second driest water year on record
- A struggle to deal with shortages and high prices
 - Demand reduction programs
 - Short-lead-time generation
 - Emergency hydro operations



Market was Responding to High Prices

- New power plant siting and construction
- Natural gas pipeline expansions and drilling
- Innovative emergency supply alternatives
- Innovative demand management programs
- Stimulation of renewable and distributed generation alternatives
- Reduced consumption and economic activity

Looking Ahead to Summer 2001

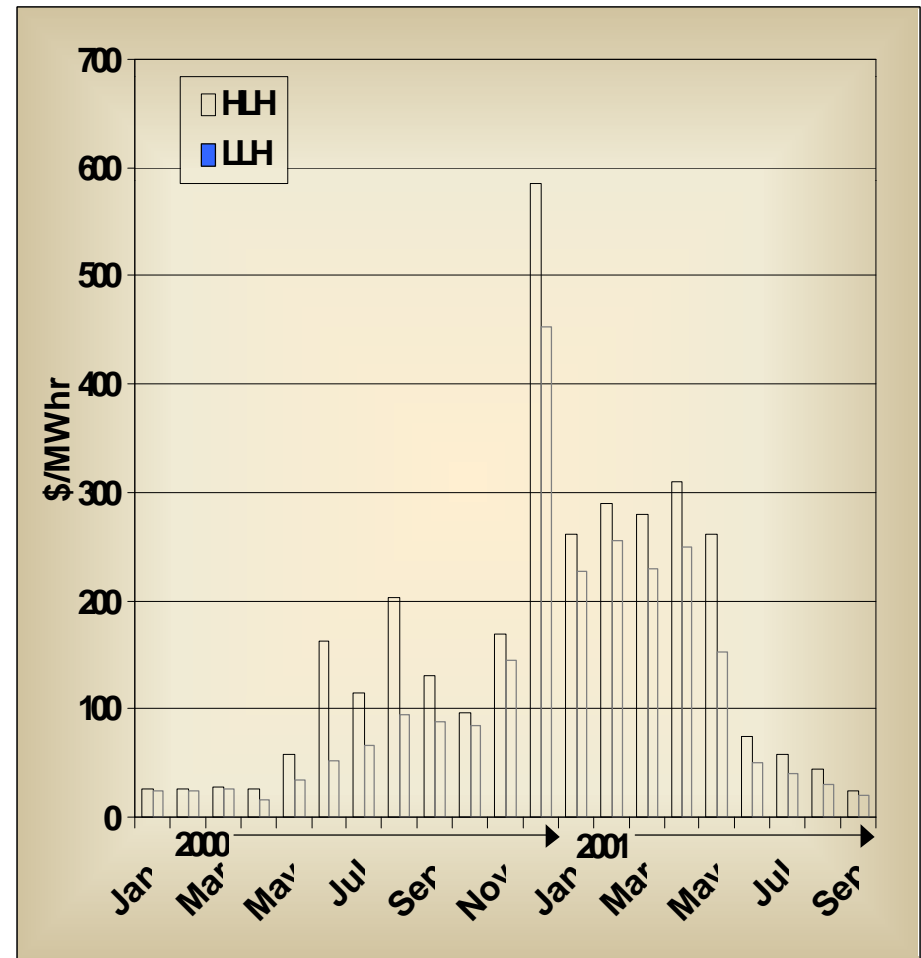
- In spring 2001 Council evaluated outlook for summer and coming winter
 - Between driest and second driest year in the 60-year record
 - Extraordinary actions needed to make it through the summer
 - Reservoir refill critical to winter conditions, even with refill 20% probability of shortage this winter, without refill could be 45% LOLP

Recommended Actions

- Emergency hydro operations and spill reduction
- Facilitate additional generation capacity
 - Emergency citing and permitting
 - Lift environmental operating restrictions
- Reduce consumption through:
 - Conservation programs
 - Load buyouts and interruption agreements
 - Appropriate price signals to consumers
- Store additional water in Canadian reservoirs

What Happened in Summer 2001?

- We made it through summer, filled reservoirs and stored additional water in Canadian reservoirs
- Wholesale prices collapsed during the summer



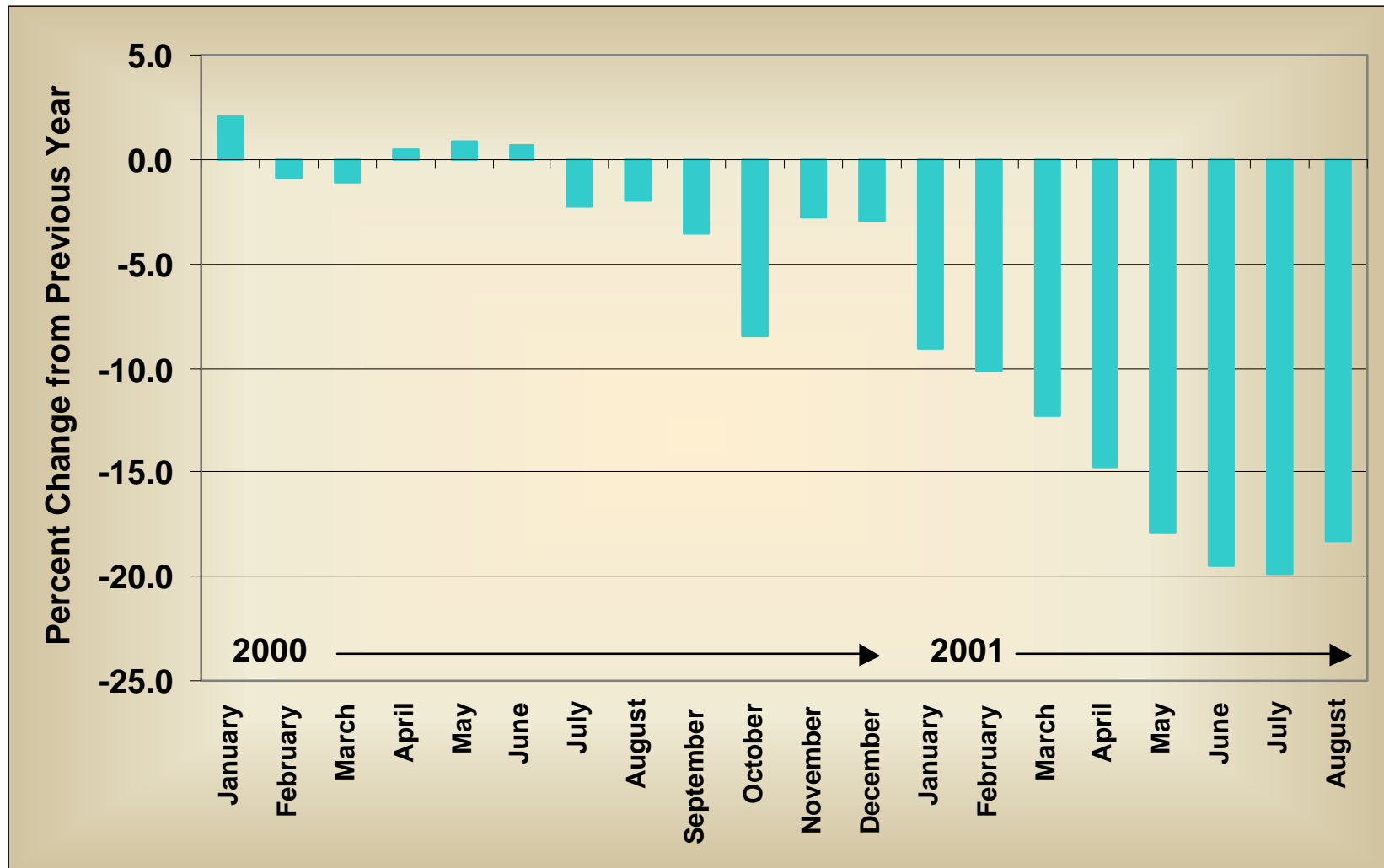
The Current Winter Outlook

- Looking ahead for this coming winter the Council now sees a very low probability of shortages, less than 5% probability.
- What happened?
 - Warnings a cry of “wolf!”?
 - Policies saved the day?
 - A recession saved the day?
 - Lucky?

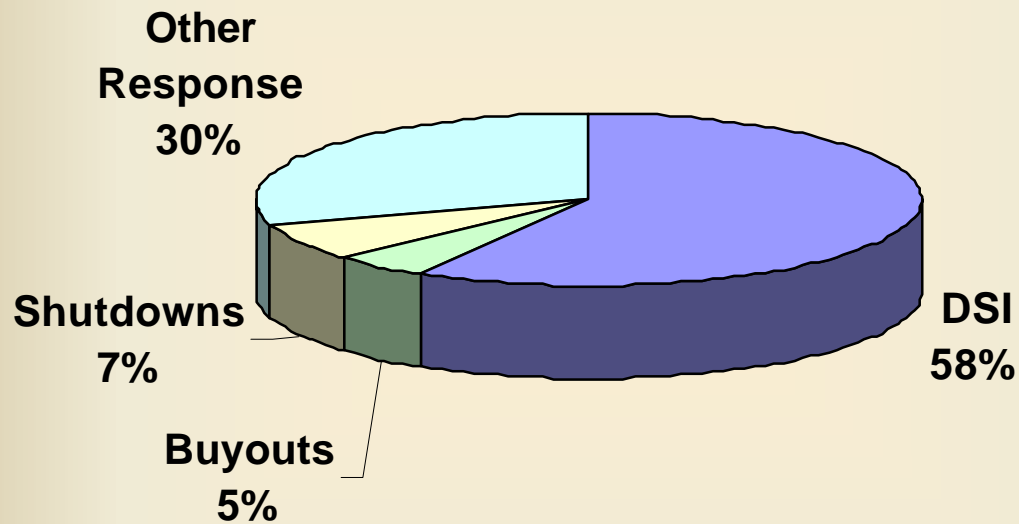
Reasons for Improved Outlook

- Reduced demand
- Added generation
- Emergency hydro operations
- Mild summer weather
- Filling reservoirs and storing additional water in Canada
- More flexibility in use of Canadian storage
- Improved outlook for availability of imports from California

Monthly Load Change from Previous Year



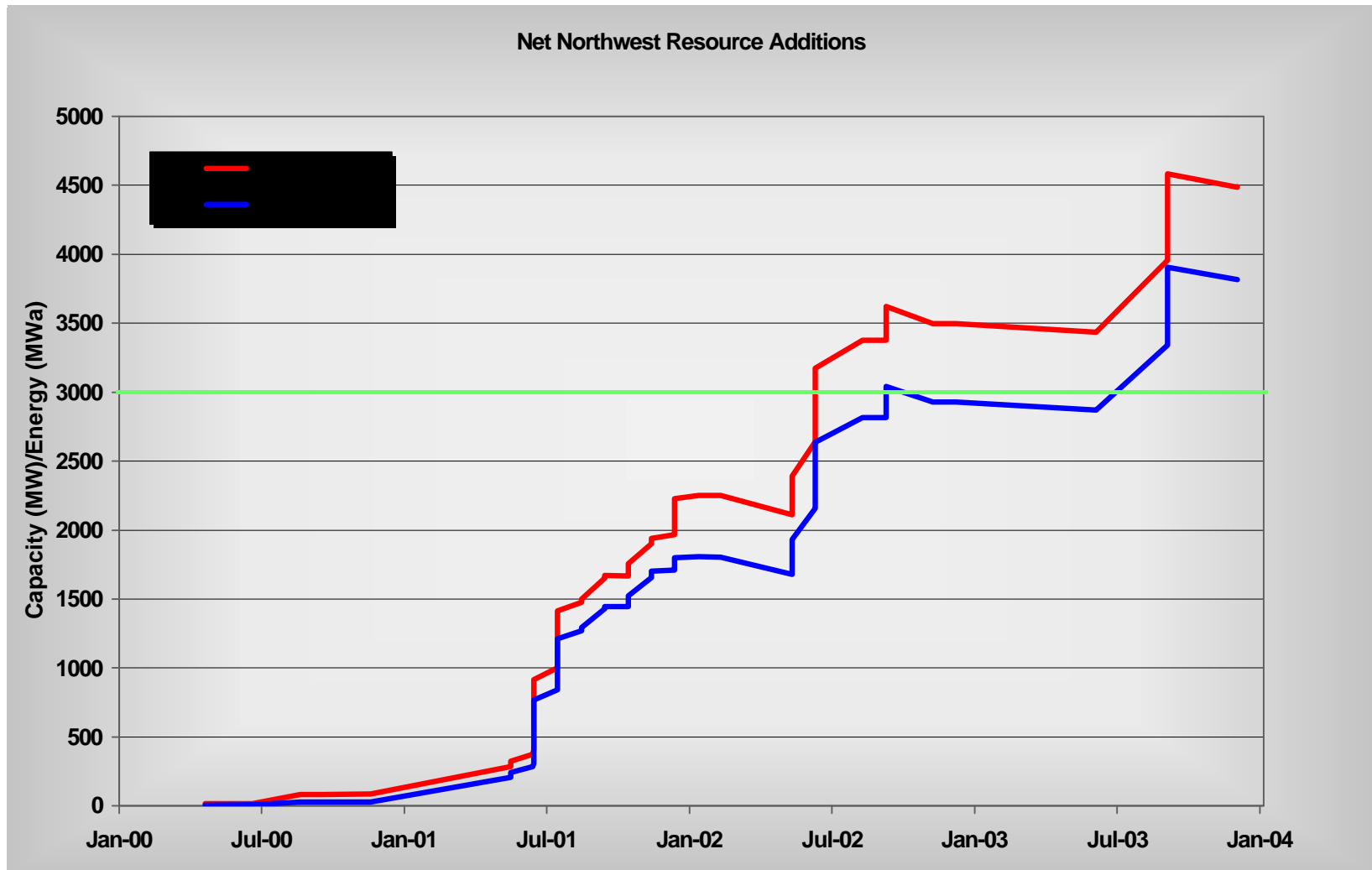
Composition of July 2001 Load Reduction



Generating Resource Prospects for Winter 2001 - 02

- On net, about 2180 MW of new generation is expected to have entered service during 2001.
 - About 1650 MW of this is permanent.
 - About 530 MW of this operates under temporary permits.
- Some additional temporary projects may be removed from service, but some unverified capacity may be available for service.

New resource expectations



www.nwccouncil.org

DATE	TITLE	NUMBER
March 2000	Northwest Power Supply Adequacy/Reliability Study	2000 - 4
October 2000	Study of Western Power Market Prices: Summer 2000	2000 - 18
March 2001	Northwest Electricity Markets in 2001: Status and Proposed Actions	2001 - 5
April 2001	Analysis of the 2001 - 2002 Power Supply Outlook	2001 - 7
October 2001	Readiness Steering Committee report Coping with the 2000 - 2001 Energy Crisis	www.pnucc.org
November 2001	Analysis of Winter 2001 - 2002 Power Supply Adequacy	Slide show