

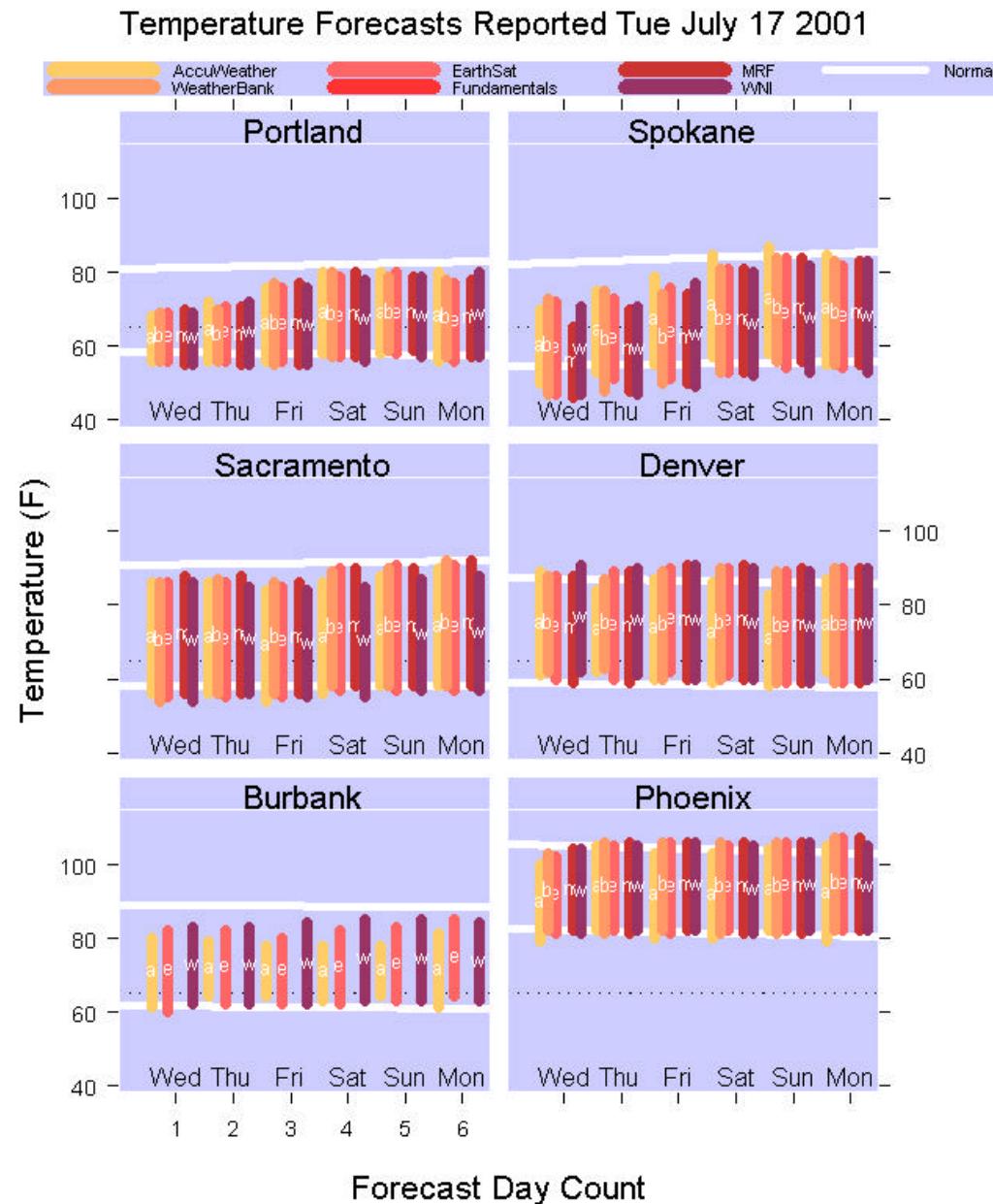
WEST POWER FUNDAMENTALS BRIEFING

7/17/2001

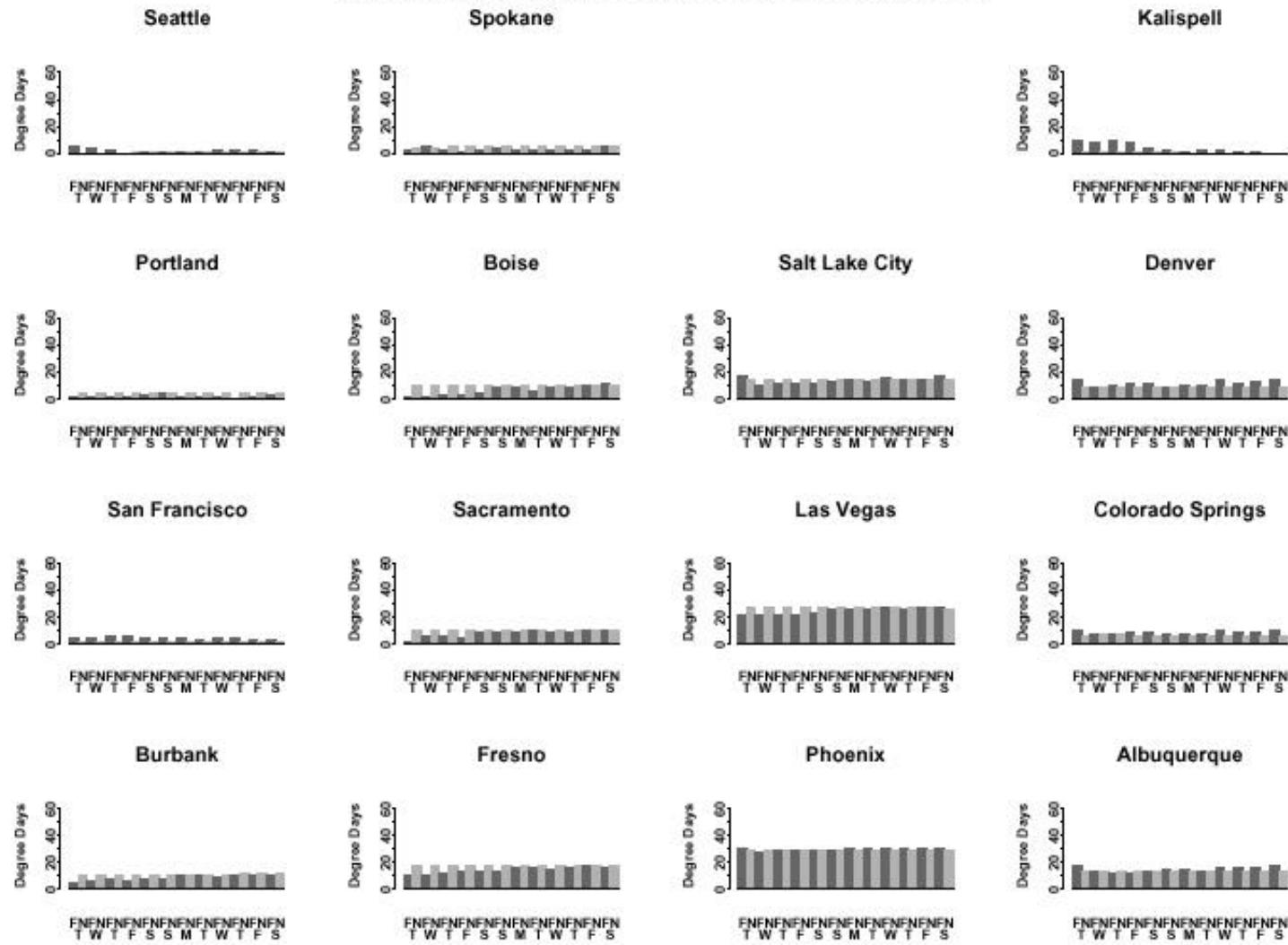
Mild Weather, Light SW Loads Dominate L/R Balance

PLEASE PROVIDE ANALYSIS CRITERIA							
Start Date	7/17/2001	Increment	1 Week	Hour Type	6x16 Peak		
Relative	<input checked="" type="radio"/>	Absolute	<input type="radio"/>	Rows In Chart	7	Assumed Forced Out	5 %
Get Balance Sheet							
Date		PNW	DSW	CA	RM	All Regions	
Tue Jul 17	Load	(29,668)	(15,550)	(35,060)	(6,922)	(87,201)	
	Hydro Generation	10,761	1,848	5,489	351	18,449	
	Thermal Outages	(1,164)	(692)	(4,117)	(130)	(6,103)	
Mon Jul 23	Load	(386)	(480)	(2,830)	(88)	(3,785)	
	Hydro Generation	23	0	0	0	23	
	Thermal Outages	(453)	(400)	1,105	(203)	49	
	Total	(817)	(880)	(1,726)	(291)	(3,713)	
Mon Jul 30	Load	(338)	(333)	(2,456)	52	(3,075)	
	Hydro Generation	165	21	(351)	(43)	(209)	
	Thermal Outages	(88)	(392)	1,364	(198)	686	
	Total	(261)	(704)	(1,443)	(190)	(2,598)	
Mon Aug 6	Load	(386)	(148)	(2,495)	166	(2,862)	
	Hydro Generation	236	31	(527)	(65)	(325)	
	Thermal Outages	(6)	(382)	1,623	(194)	1,042	
	Total	(157)	(497)	(1,399)	(92)	(2,145)	
Mon Aug 13	Load	107	160	(1,581)	213	(1,101)	
	Hydro Generation	(70)	31	(527)	(65)	(631)	
	Thermal Outages	23	(386)	1,847	(191)	1,312	
	Total	60	(176)	(261)	(43)	(420)	
Mon Aug 20	Load	239	91	(1,444)	225	(888)	
	Hydro Generation	(375)	31	(527)	(65)	(936)	
	Thermal Outages	52	(370)	1,965	(191)	1,456	
	Total	(84)	(248)	(6)	(31)	(368)	
Mon Aug 27	Load	495	166	(1,647)	325	(661)	
	Hydro Generation	(72)	2	(708)	(78)	(856)	
	Thermal Outages	106	(309)	2,041	(186)	1,652	
	Total	529	(141)	(313)	60	135	

Distinct Lack of Cooling Degree Days at Most Major Load Centers

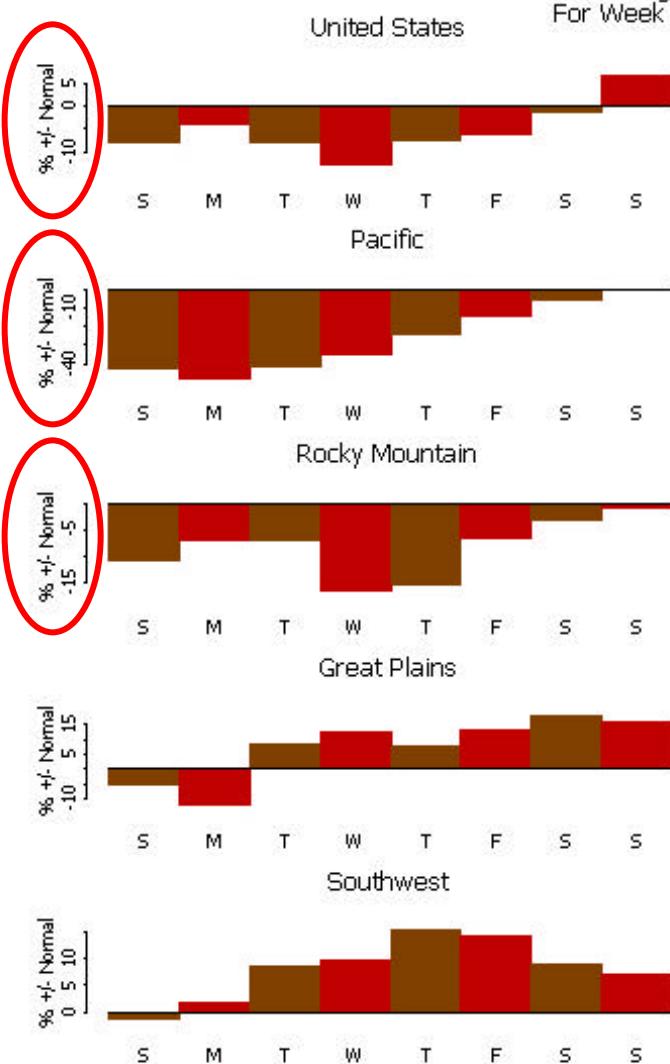


Earth Satellite Forecast & Normal Degree Days: Period Beginning Jul 17

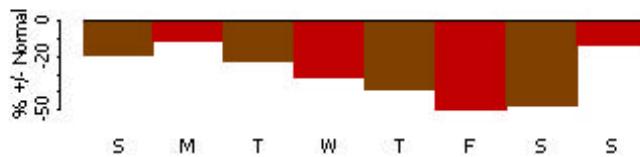


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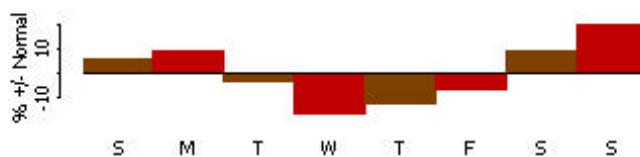
CNG Regional Energy Indices
For Week Beginning 07/15/01



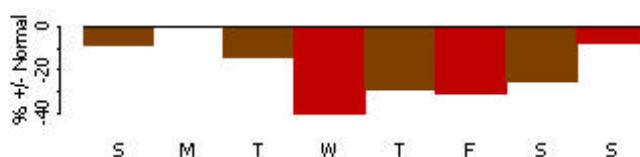
New England



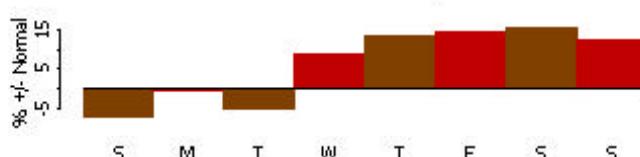
Great Lakes



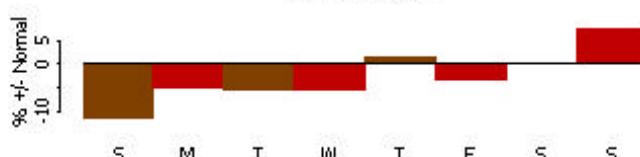
Mid Atlantic



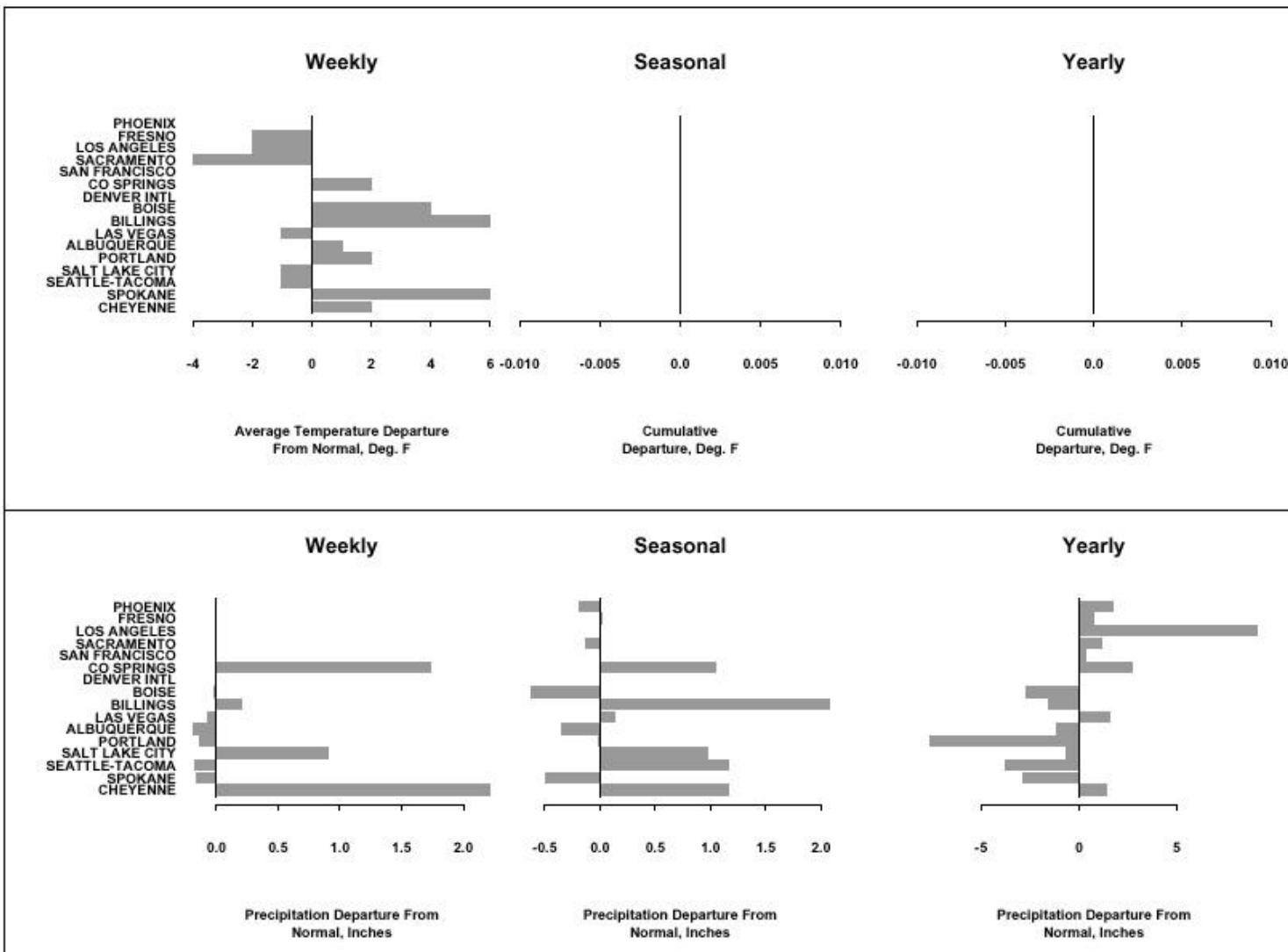
Lower Mississippi



South Atlantic



NWS Temperature & Precipitation Summaries for Week Ending 7/15/01



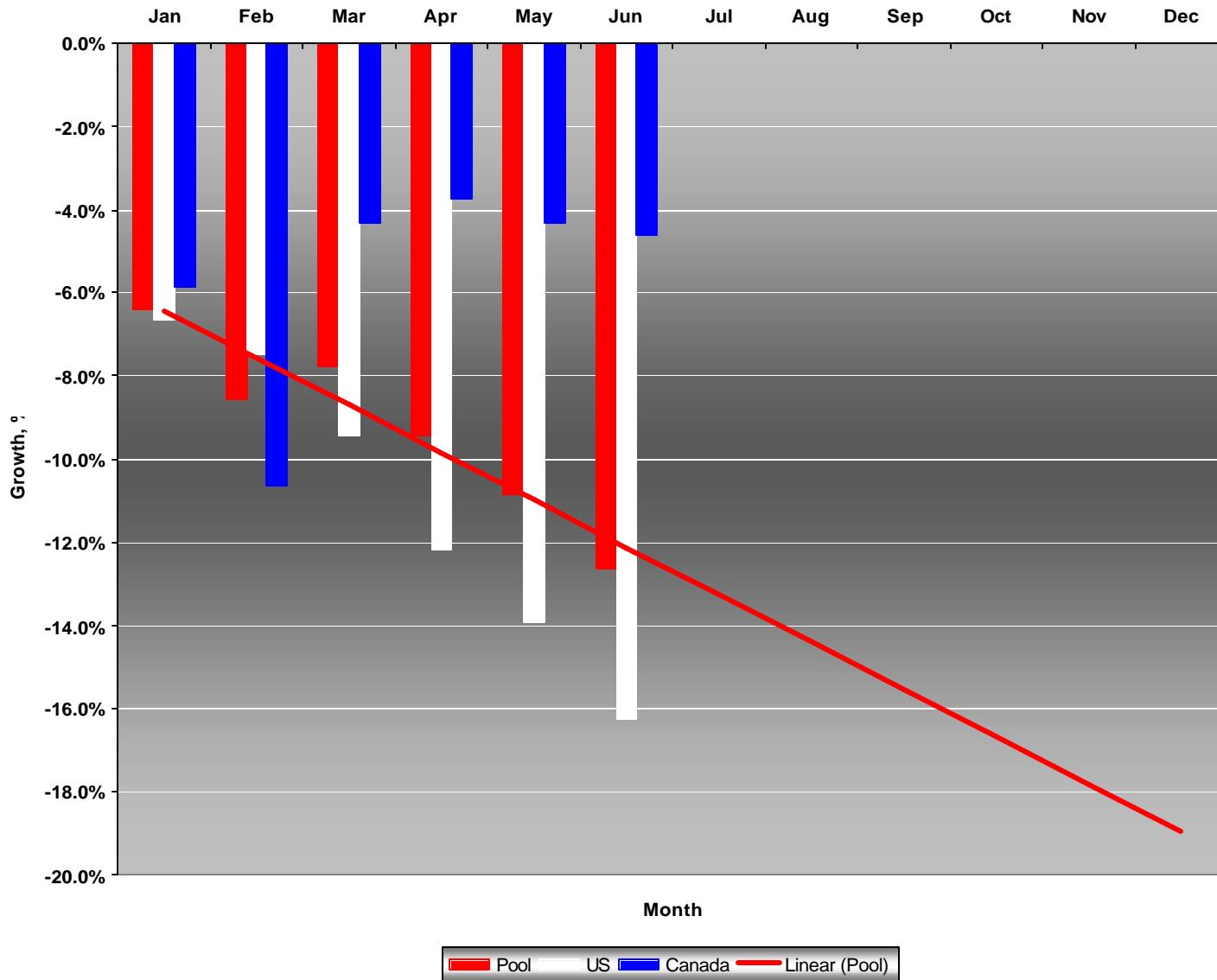
Confidential

Dave Ryan in PDX August 16-17

- # Watching Coming Rainy Season
- # El Nino – La Nina Influences
- # Internal Long Lead Outlook
- # Fire Season Issues
- # Hurricane Season Issues
- # Other Topics?

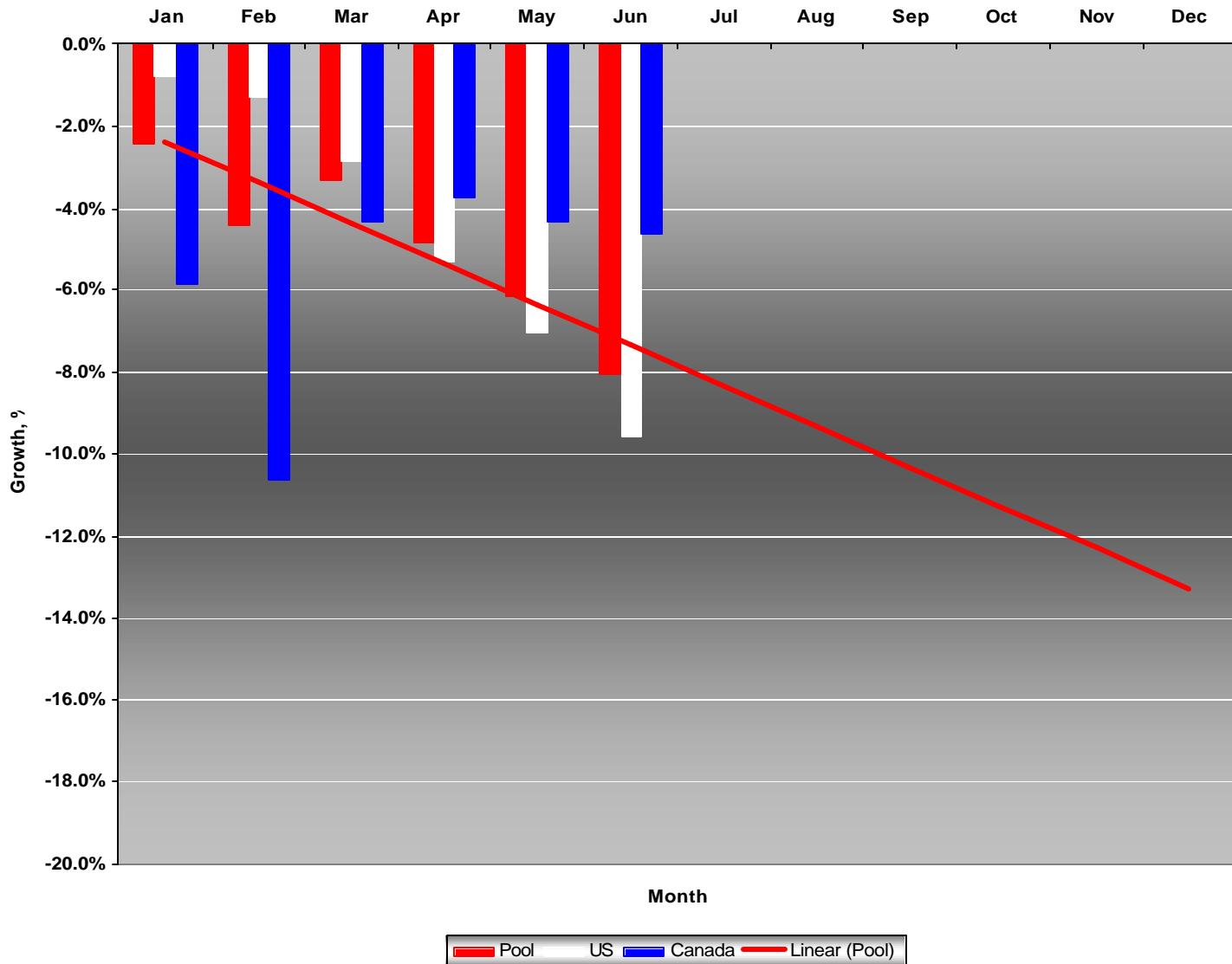
NWPP Conservation Reaches 12%

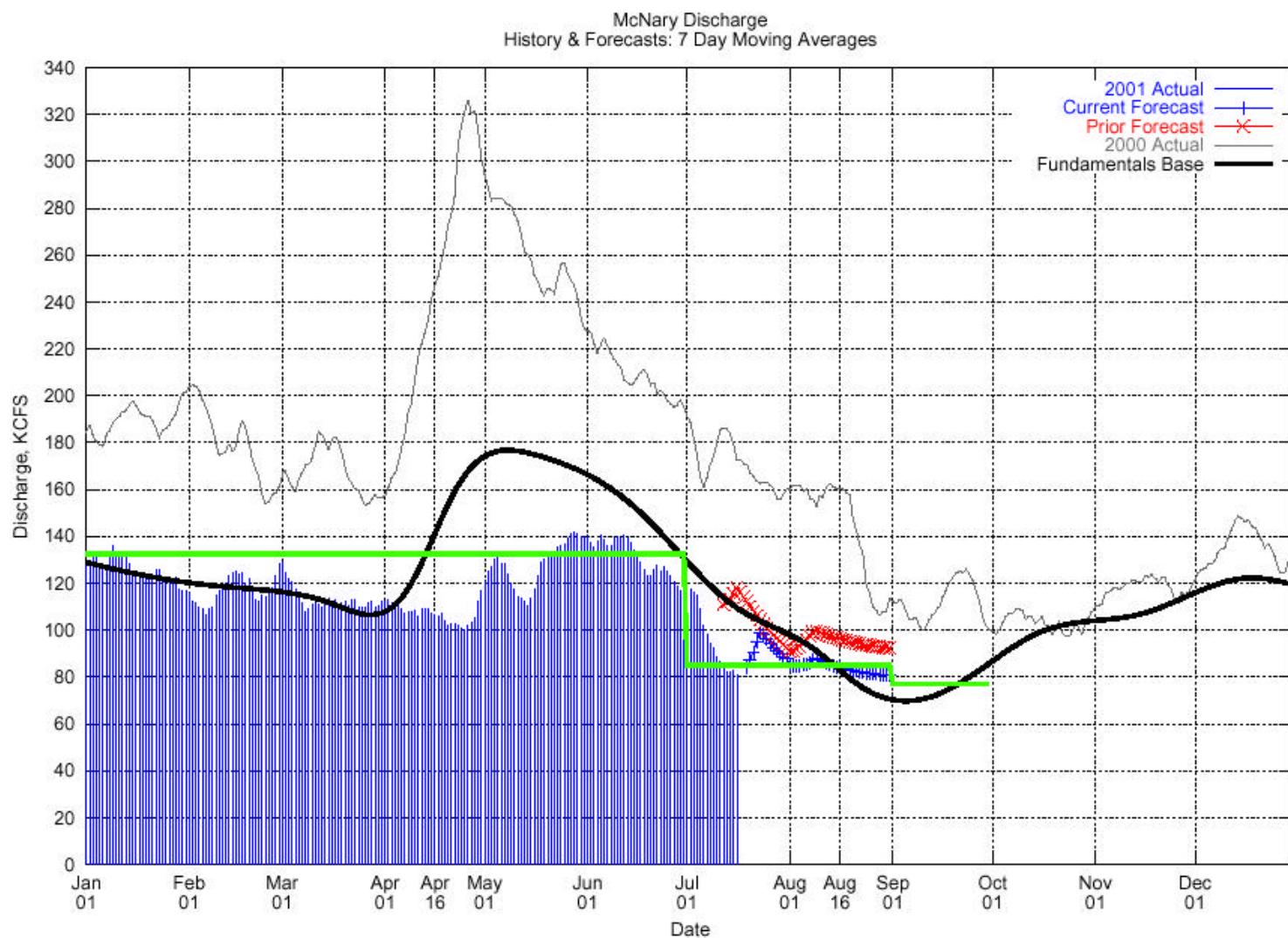
NWPP Total 2001 Loads vs 2000 Loads, Temperature Adjusted



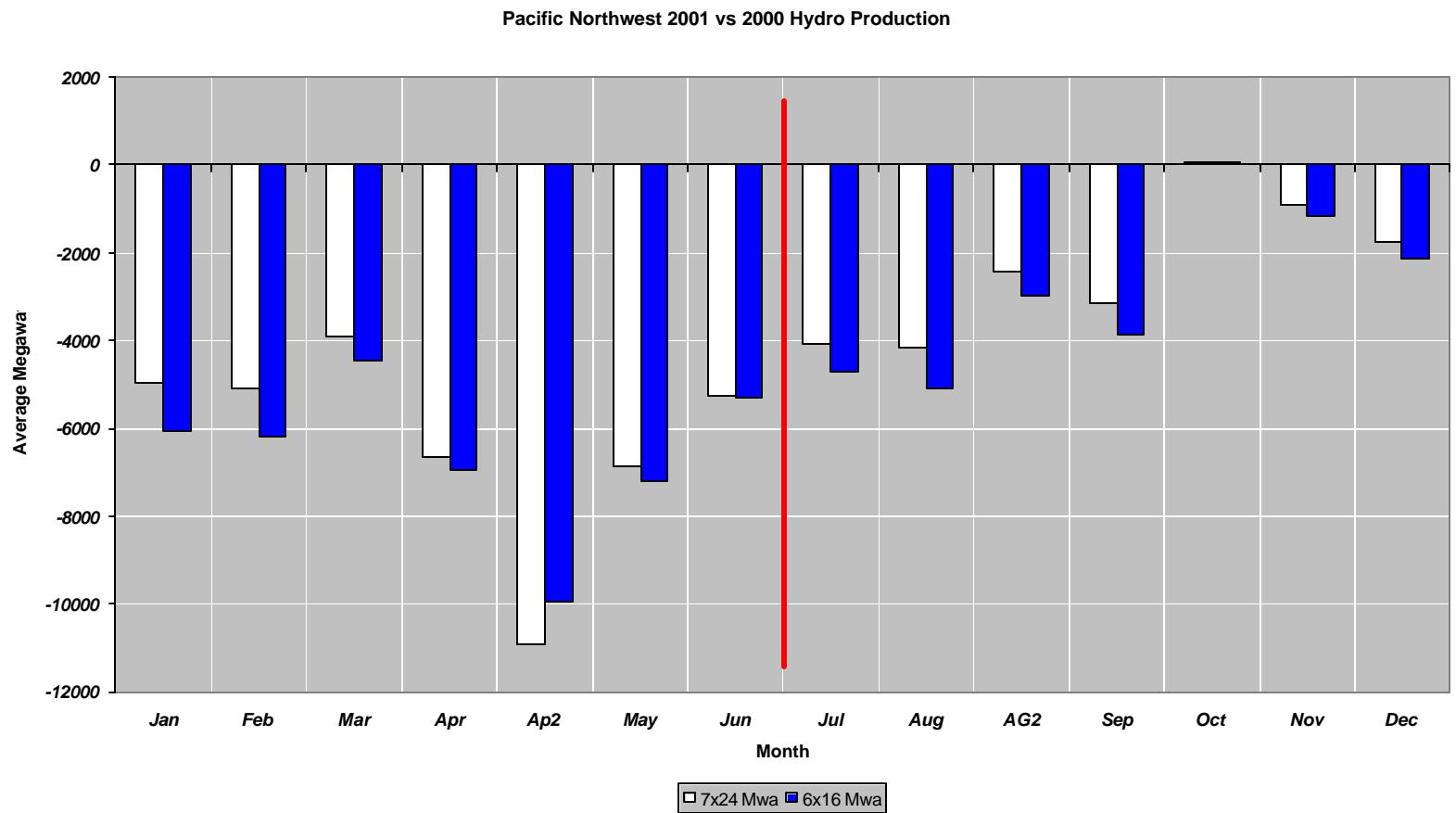
Non-DSI Conservation Reaches 8% Total , 10% US

NWPP Non-DSI 2001 Loads vs 2000 Loads, Temperature Adjusted





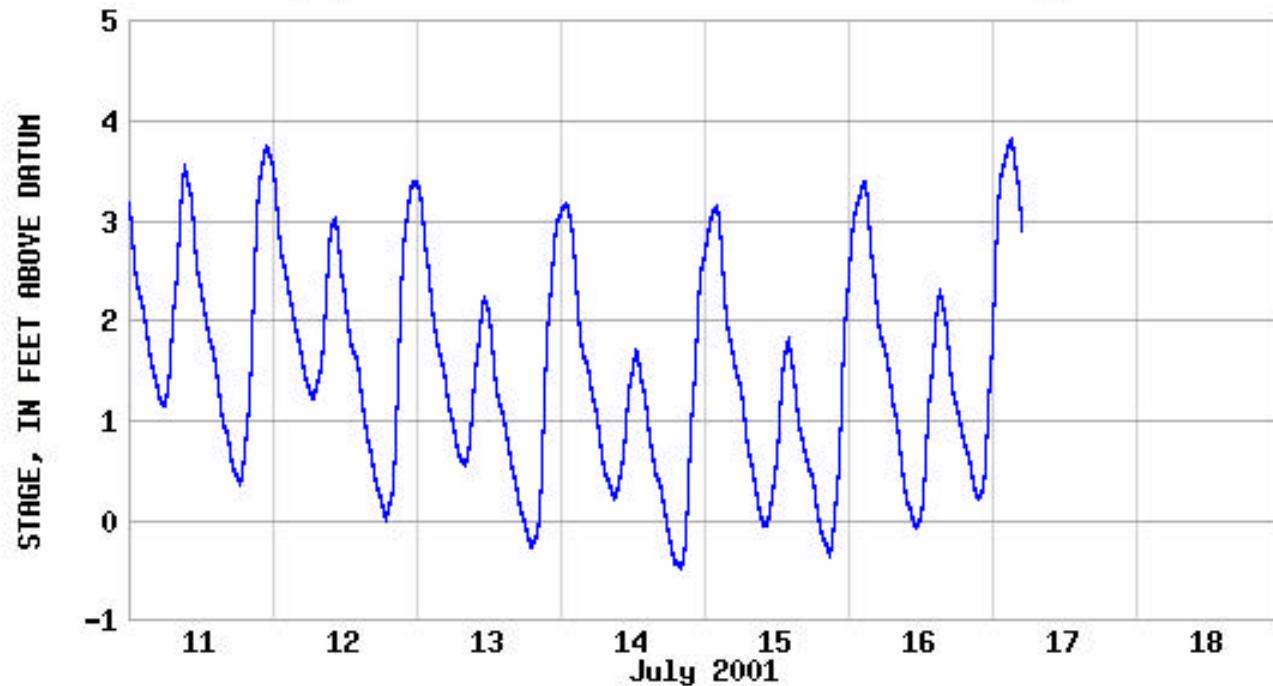
July, August Hydro Shortfall Is Like June, Balance of Year Lower



FYI: Local Conditions



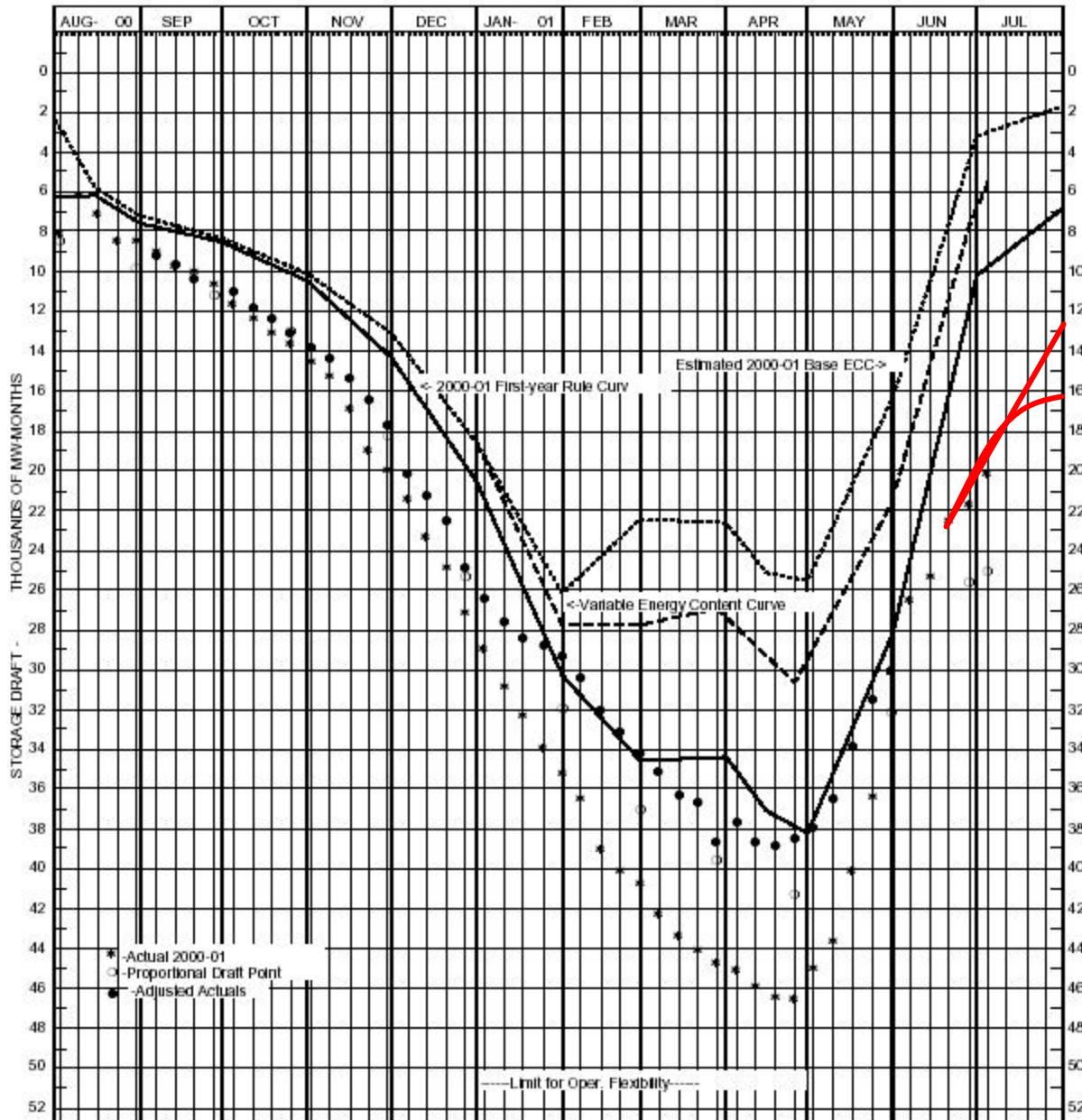
14211720 WILLAMETTE RIVER AT PORTLAND, OR

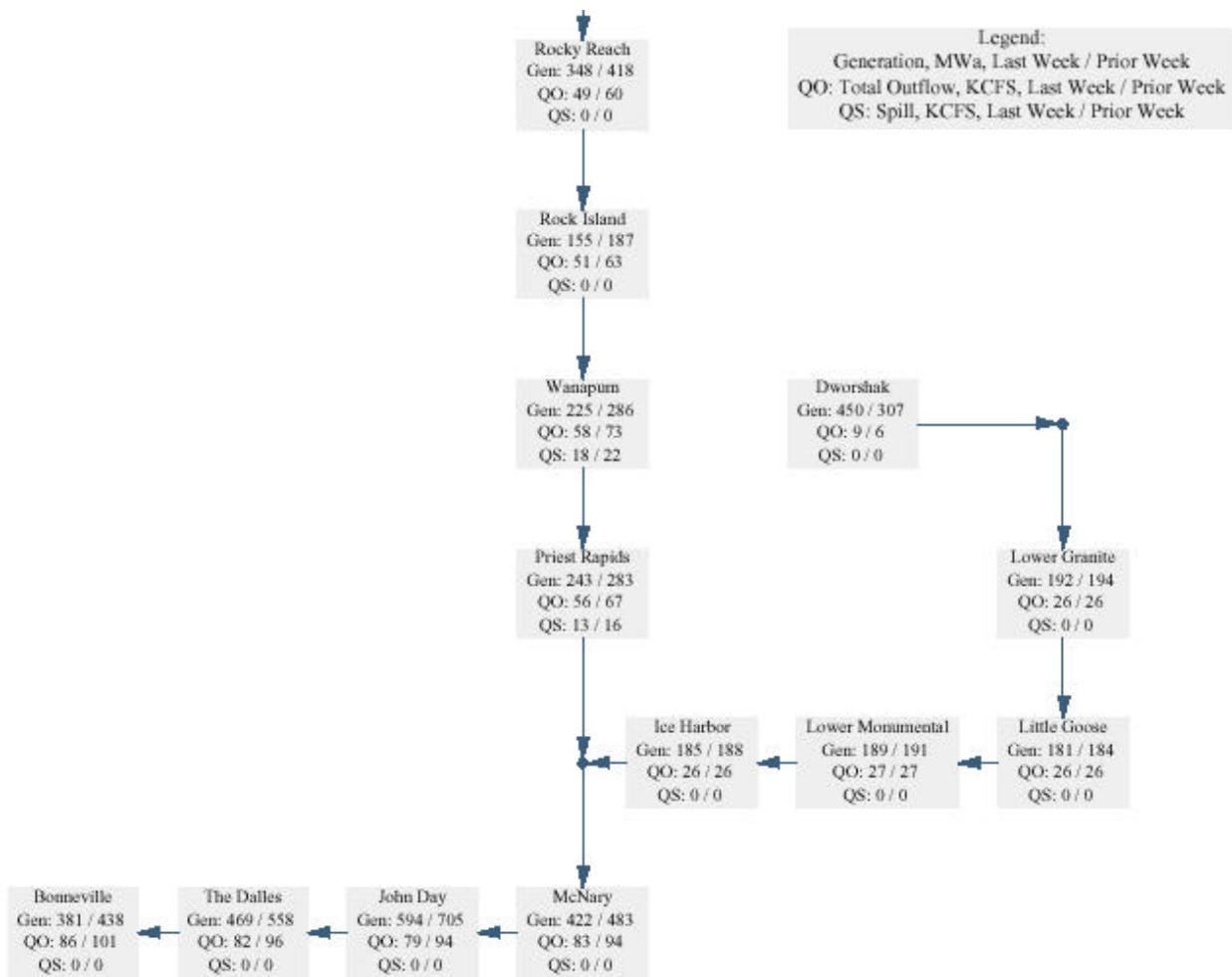


Tue Jul 17 05:00 2001

— STAGE, in feet above datum

NW Storage
Ends Year
13K – 16K
MW-Mo Low

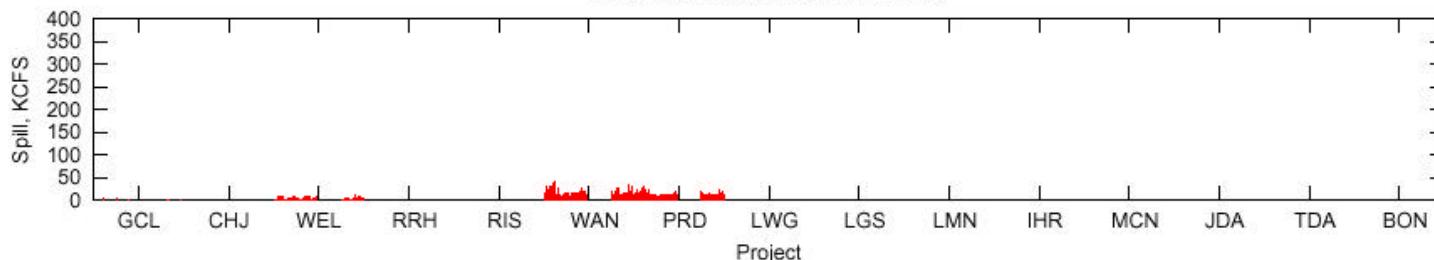




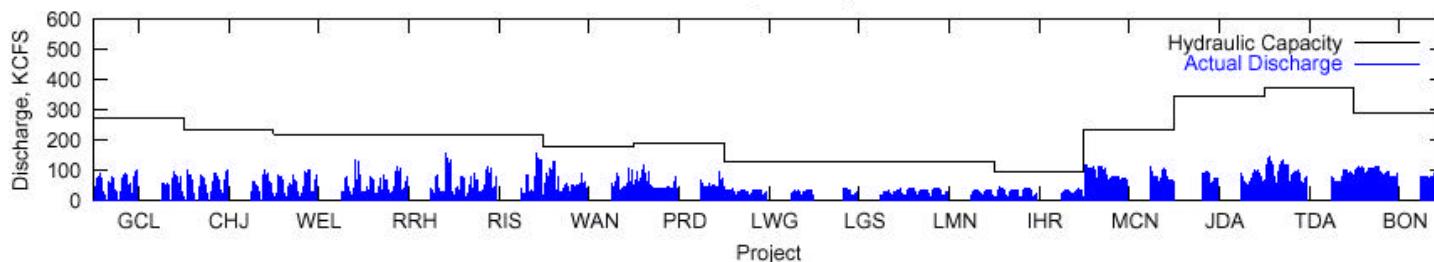
Columbia River and Snake River
Hydroelectric Plant Operations
7 Day Averages
July 17, 2001

Columbia & Lower Snake River Hourly Operations

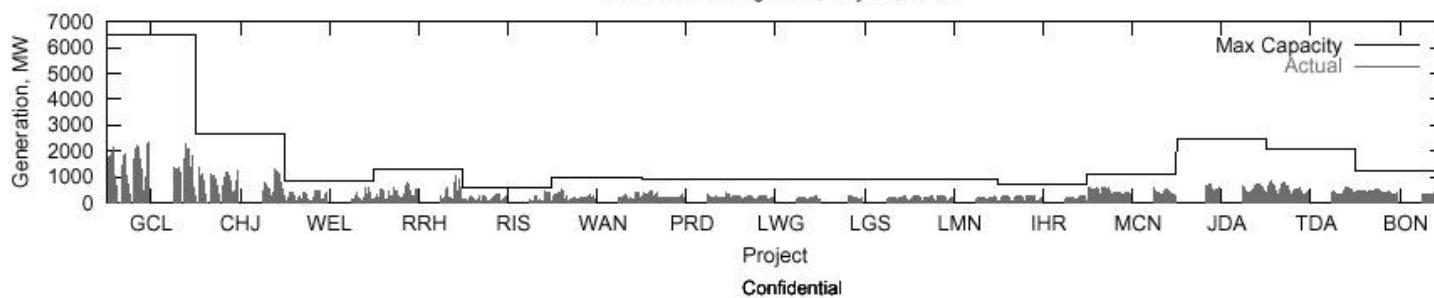
Spill
168 Hours Ending 0300, July 17, 2001



Total Discharge
168 Hours Ending 0300, July 17, 2001

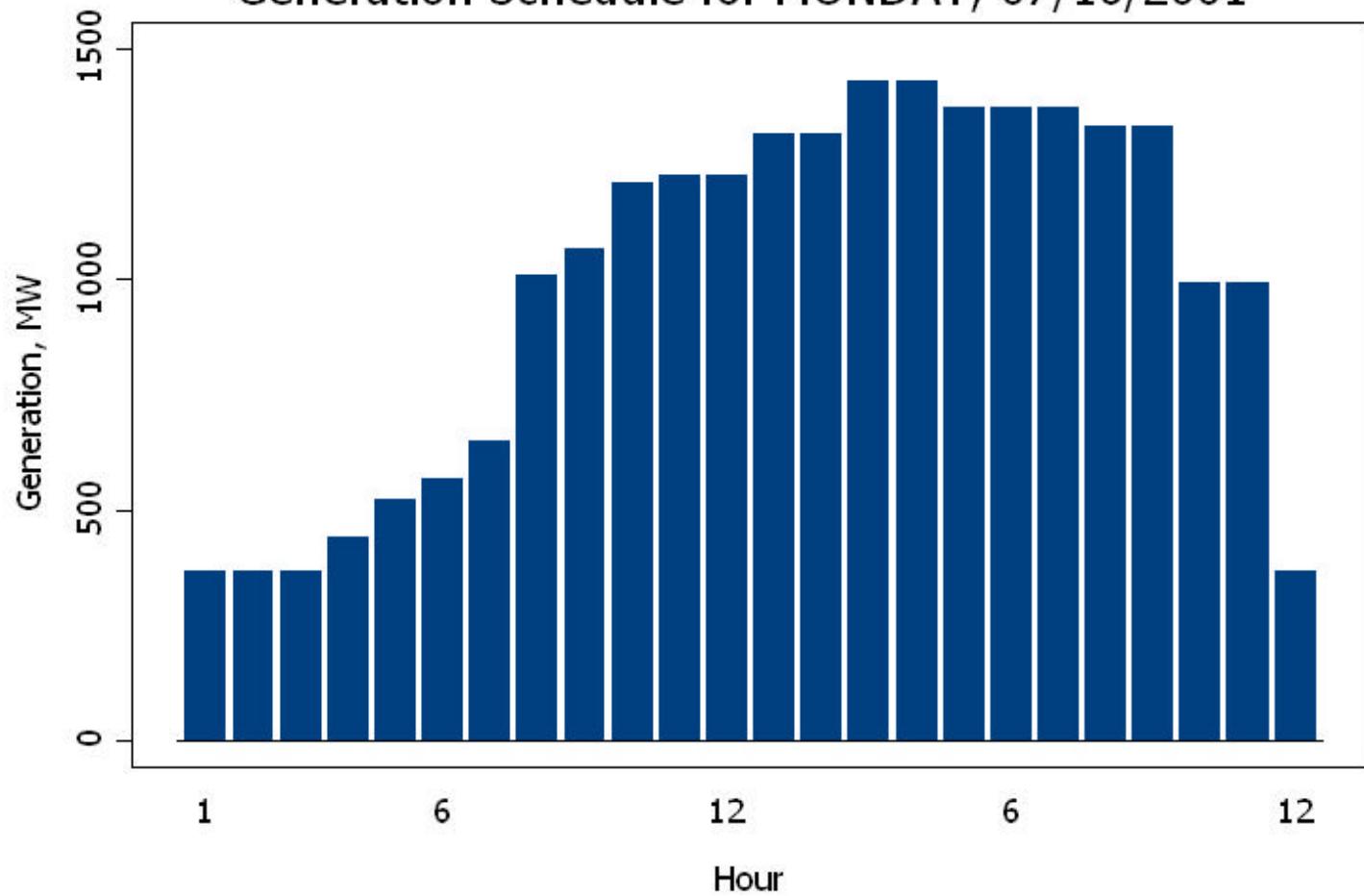


Generation
168 Hours Ending 0300, July 17, 2001

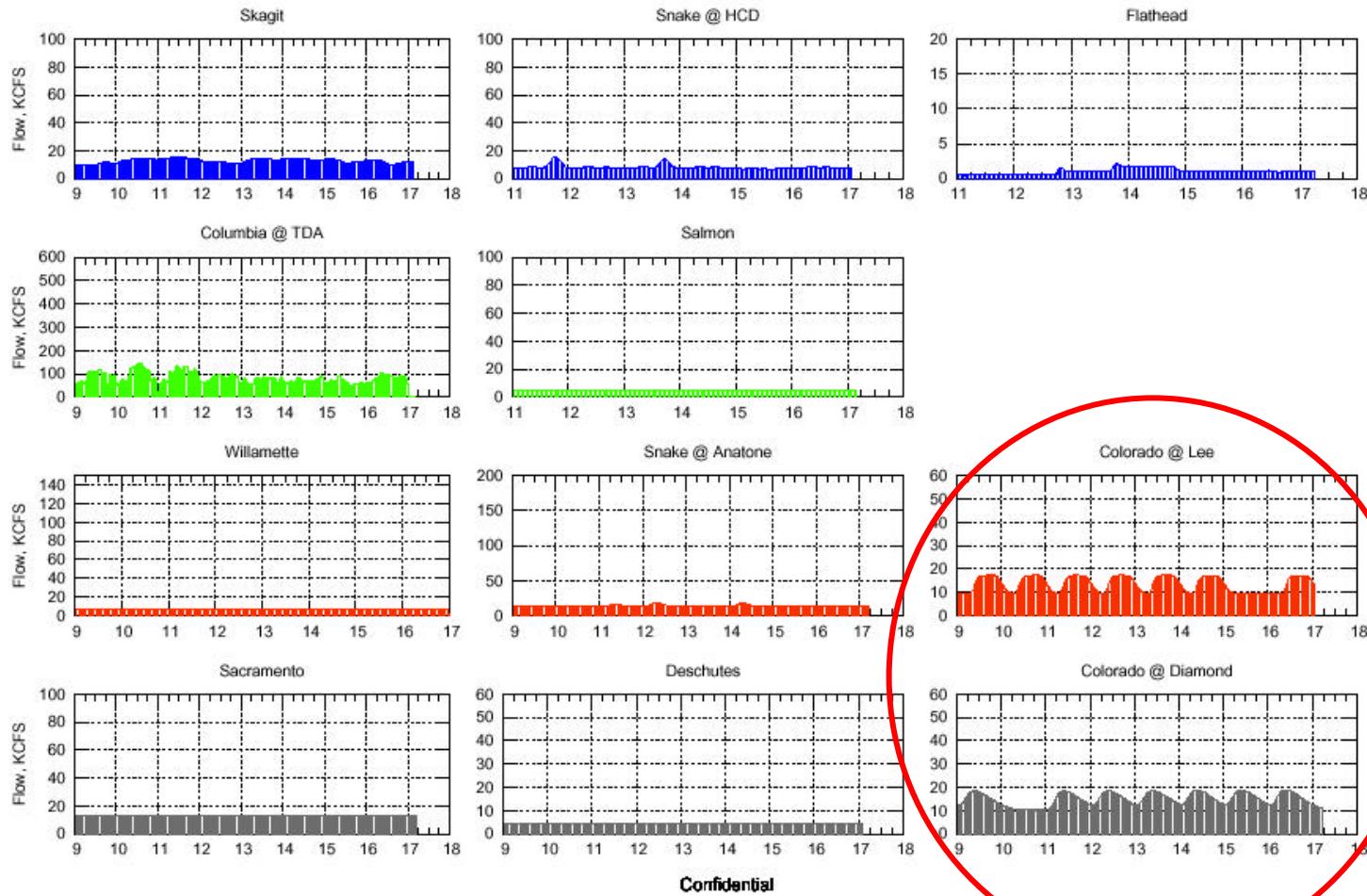


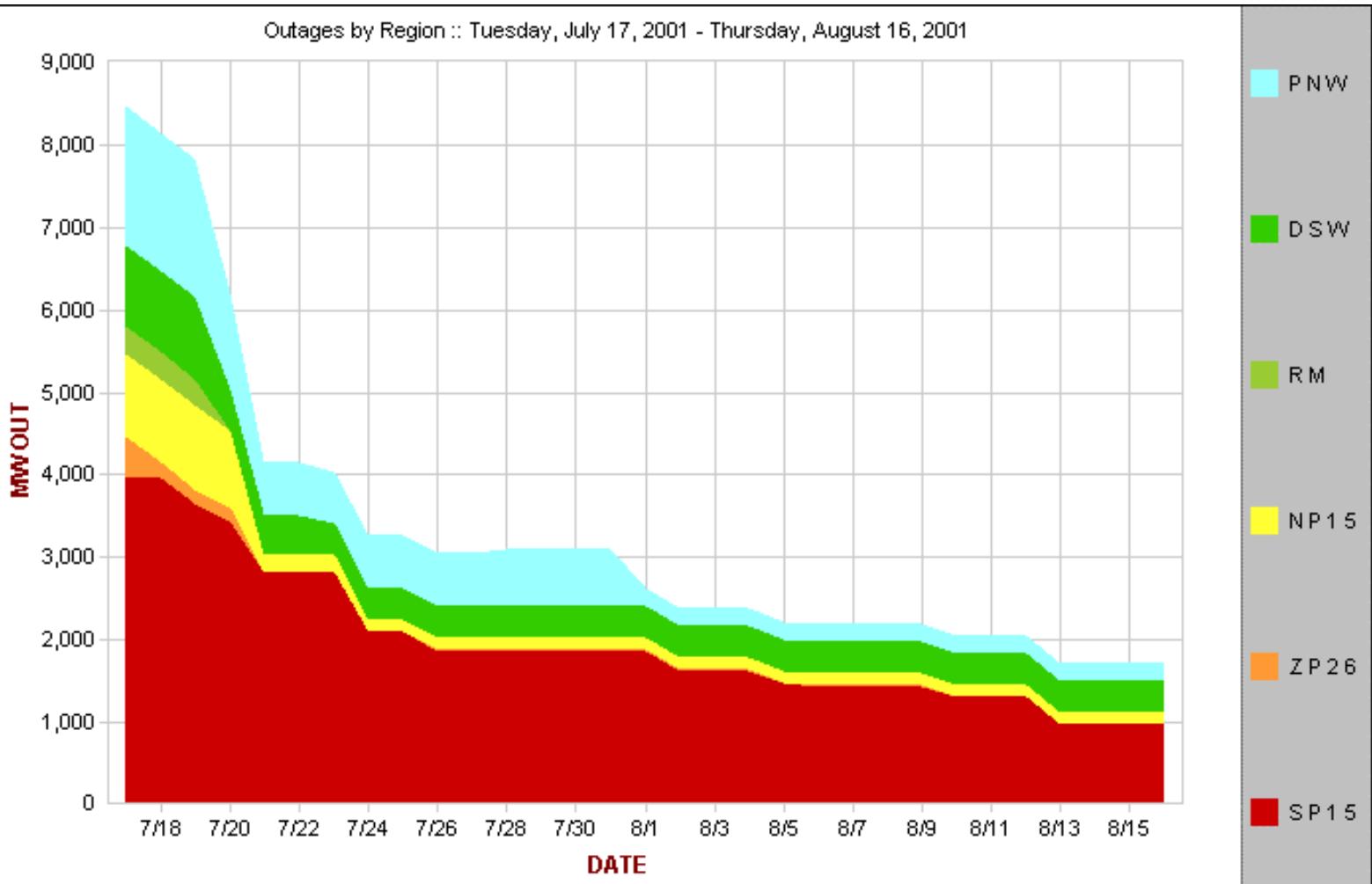
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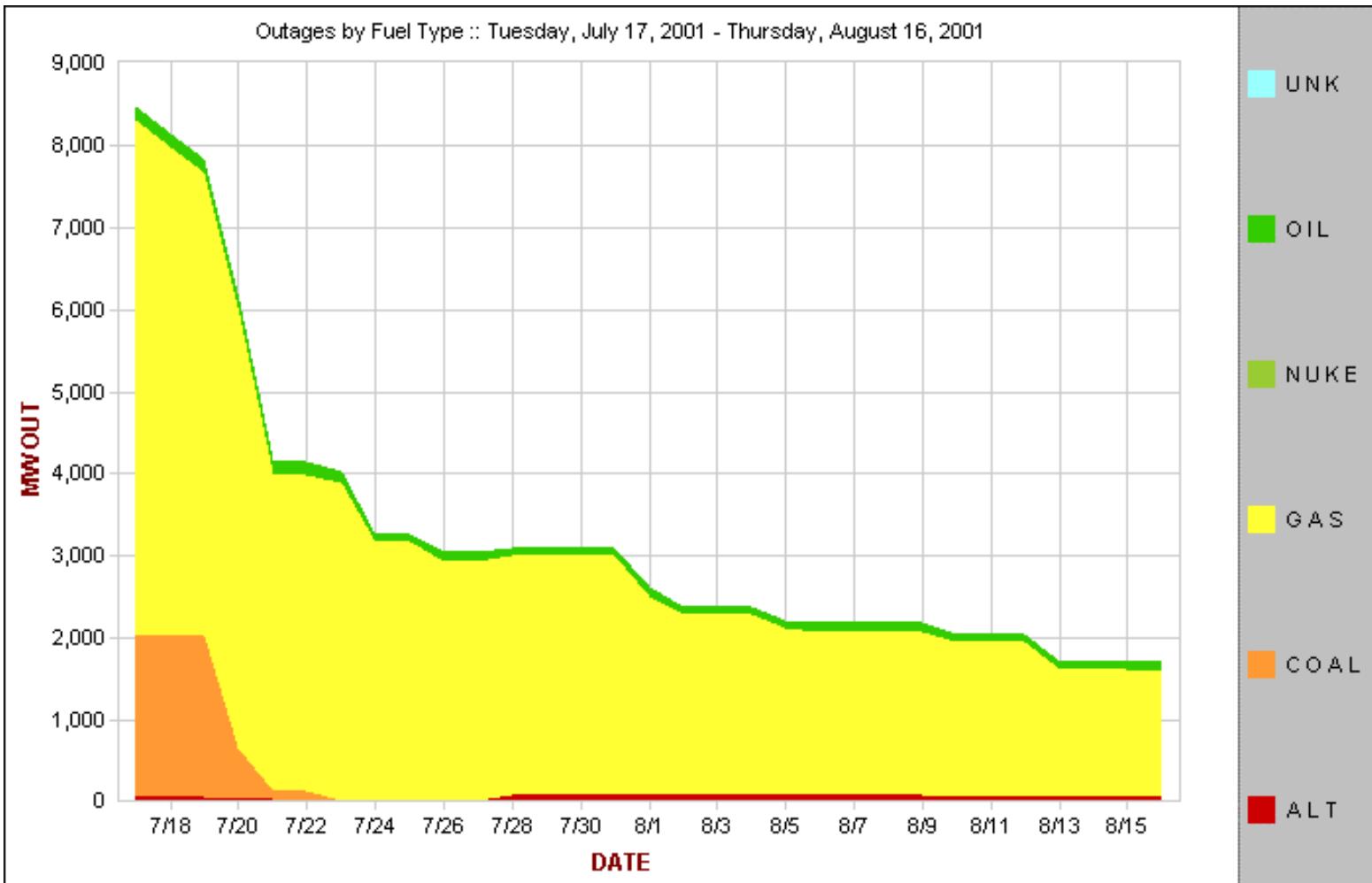
Central Valley Project
Generation Schedule for MONDAY, 07/16/2001

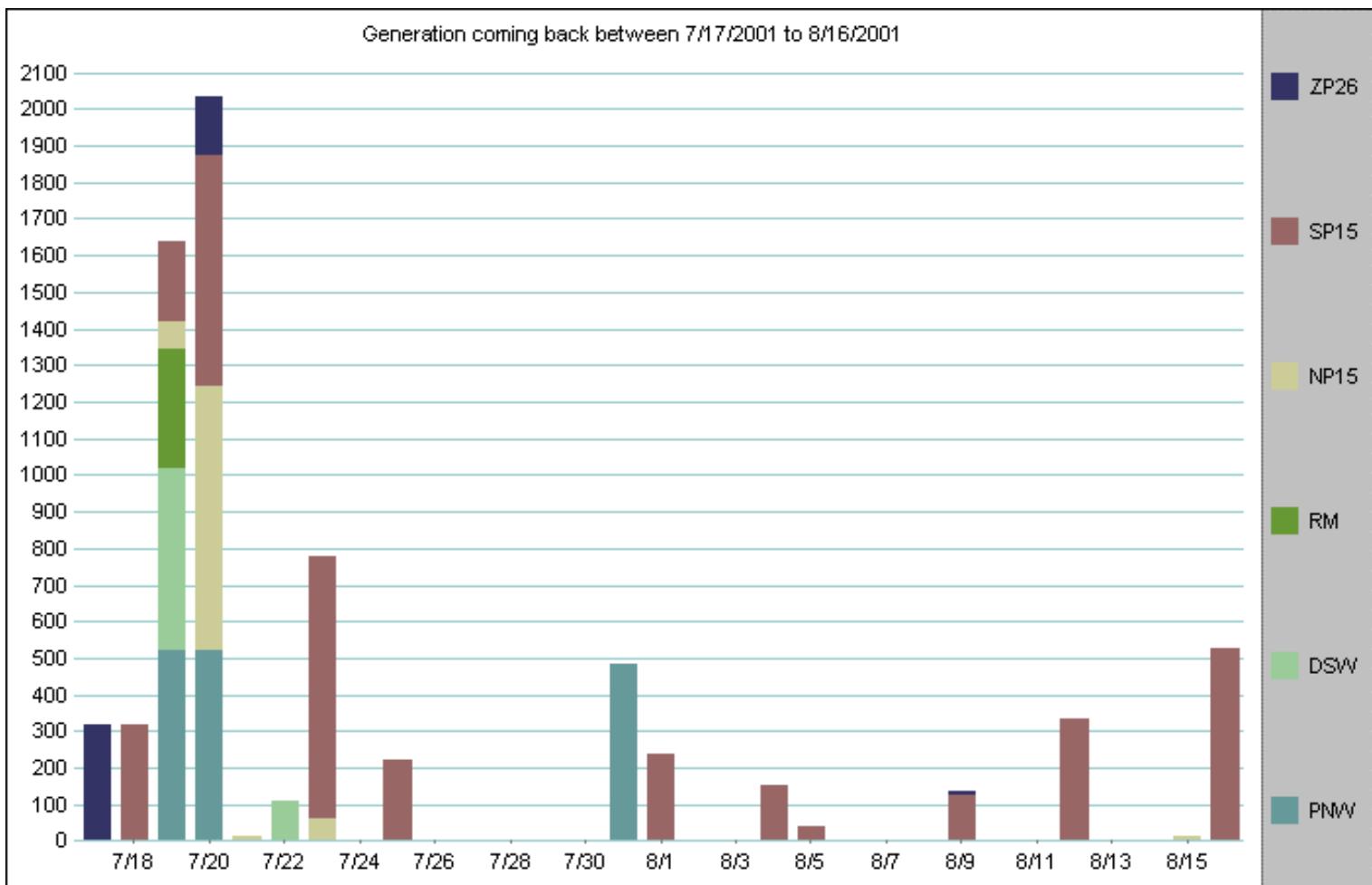


USGS Western Daily River Summary

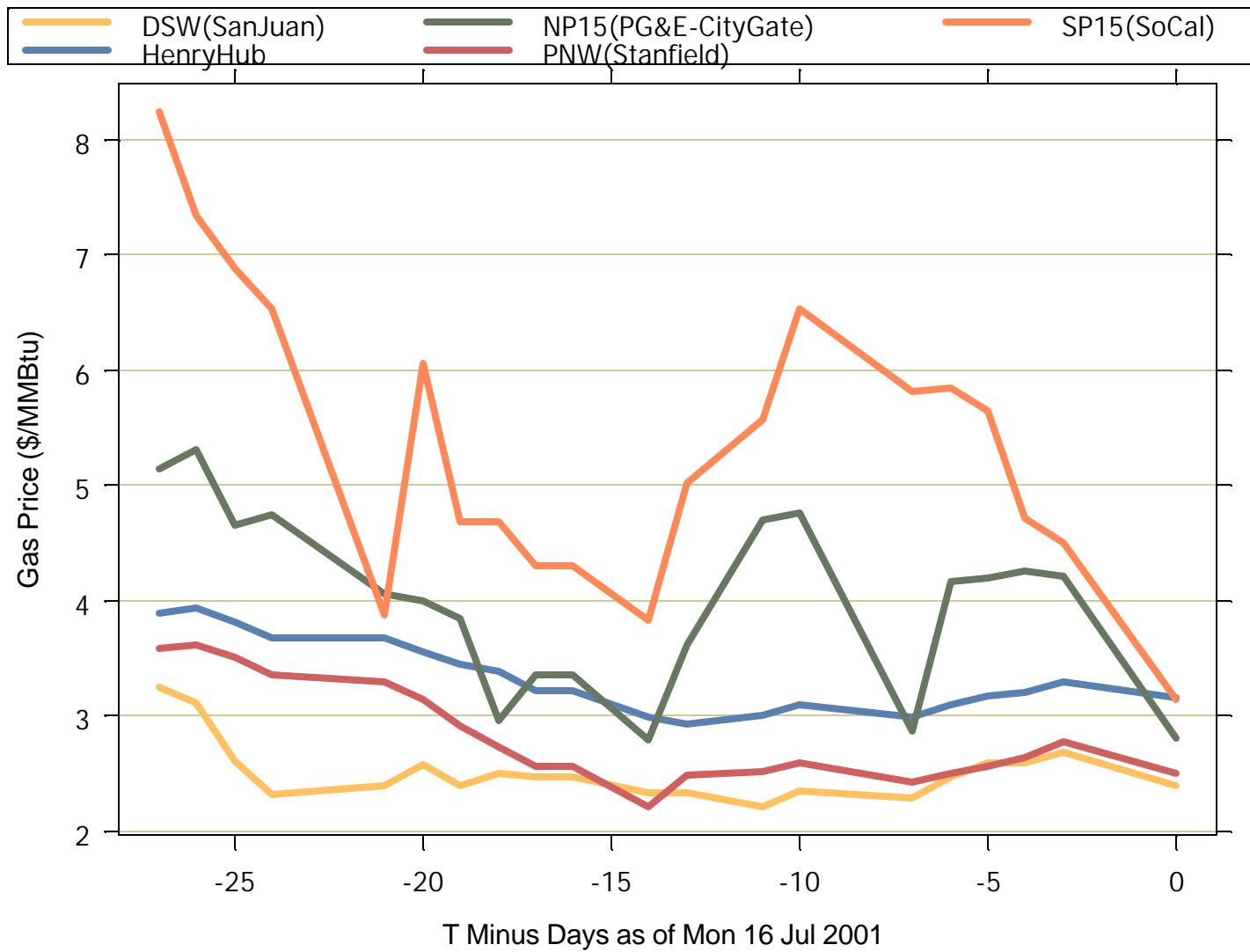




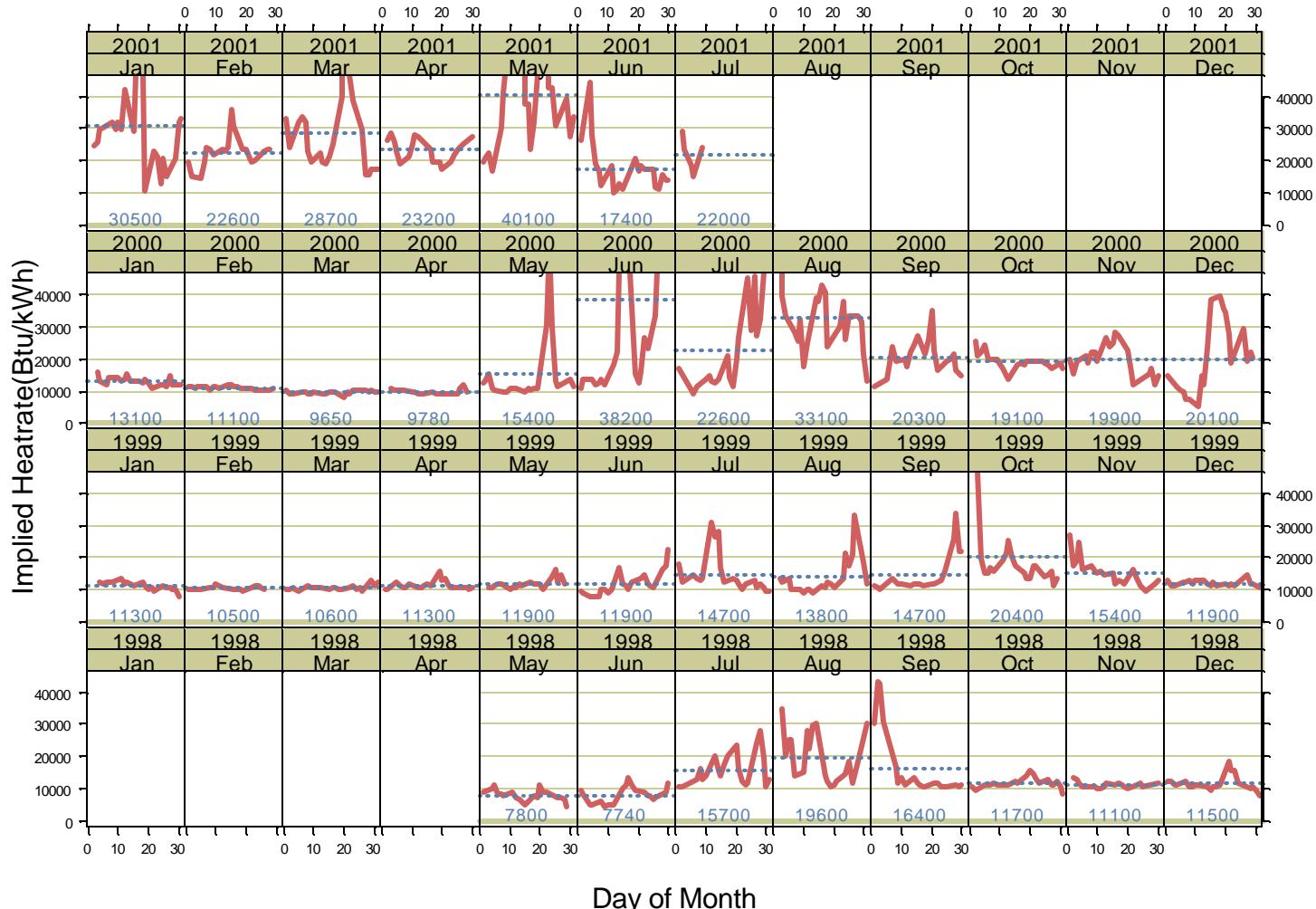




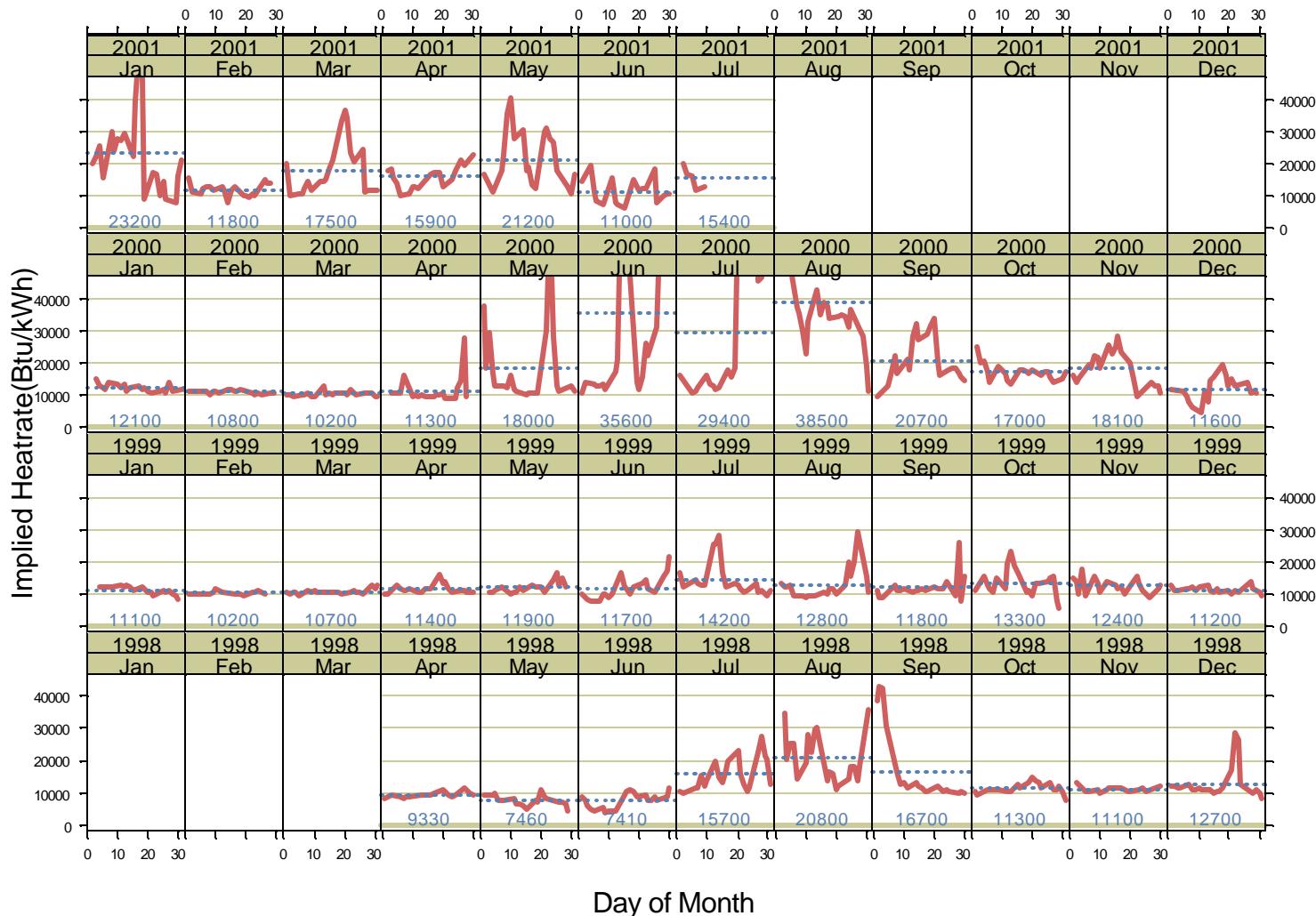
Daily Gas Prices -- Last 28 Days as of <Mon 16 Jul 2001>



ied Gas Heatrate - NP15 (PG&E Citygate Gas Price, PX Peak *DJ Price after 1/29/2001* NP15 Elec Price, Elec O&M = \$0.75, Gas T

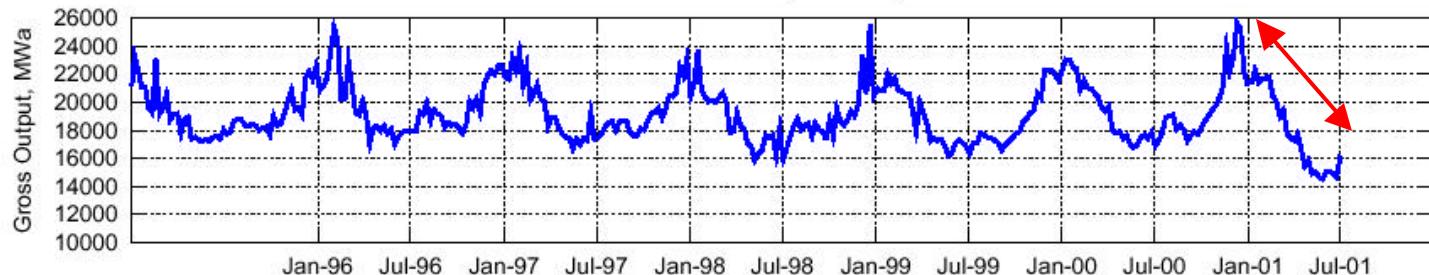


Implied Gas Heatrate - SP15 (Cal Border Gas Price, PX Peak *DJ Price after 1/29/2001* SP15 Elec Price, Elec O&M = \$0.75, Gas Tran =



EEI Output Statistics
1995 - 2001

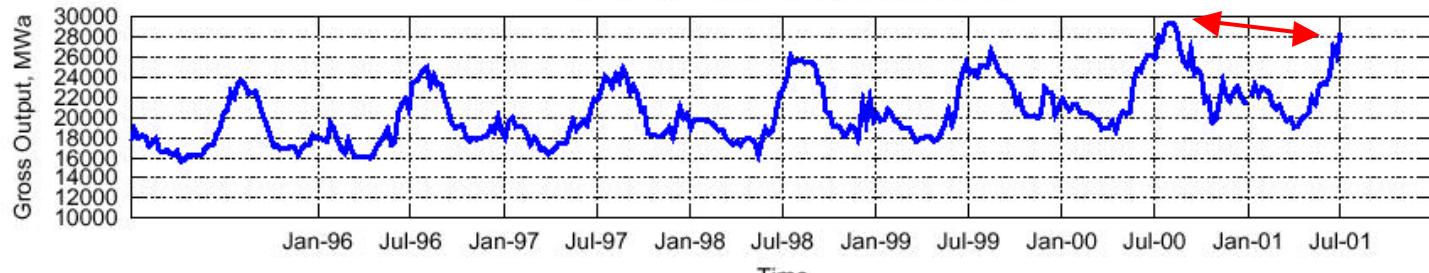
Pacific Northwest Weekly Electricity Production



Pacific Southwest Weekly Electricity Production



Rocky Mountain Weekly Electricity Production

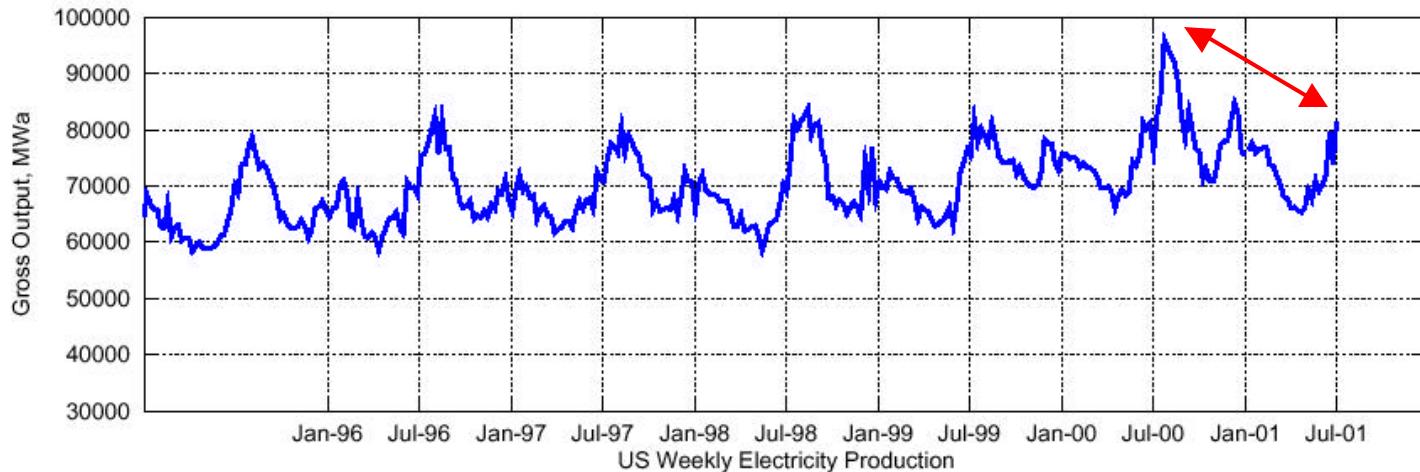


Time

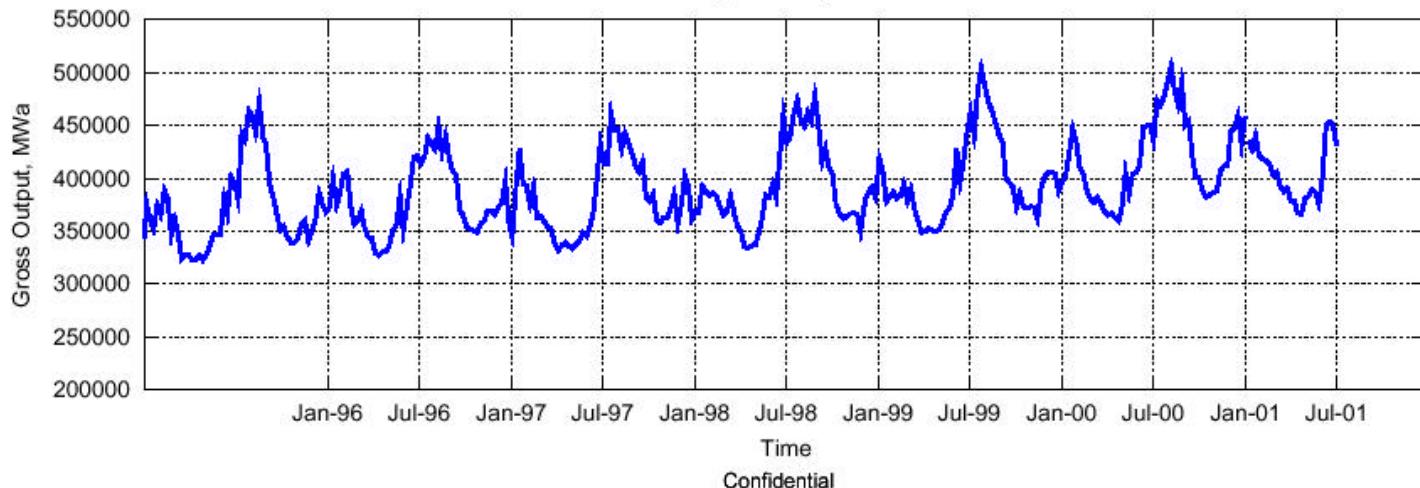
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EEI Output Statistics
1995 - 2001

WSCC Weekly Electricity Production



US Weekly Electricity Production

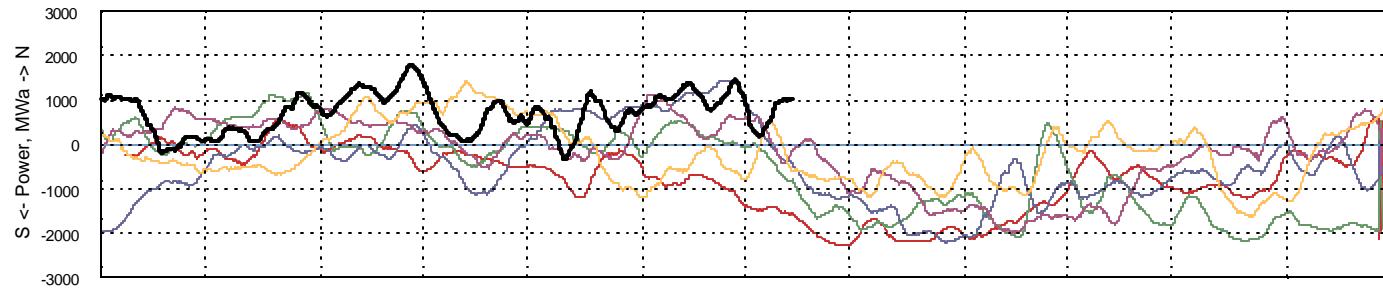


2001

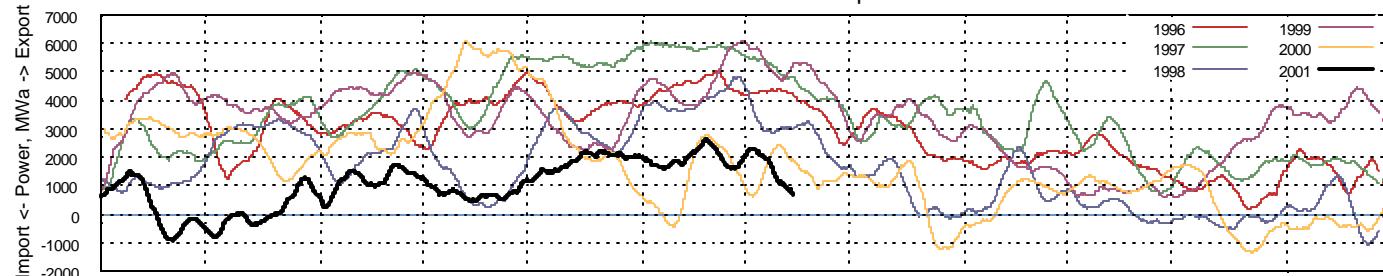
Time

Confidential

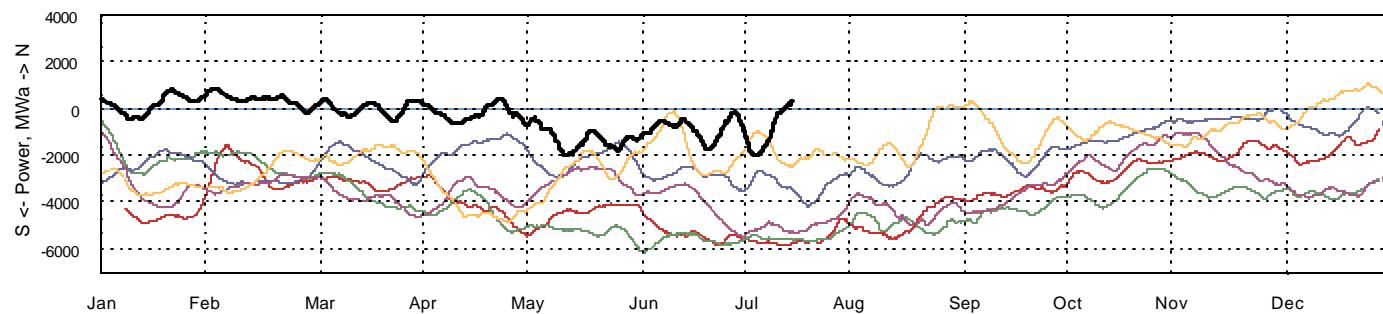
Pacific Coast Intertie Status Northern Intertie



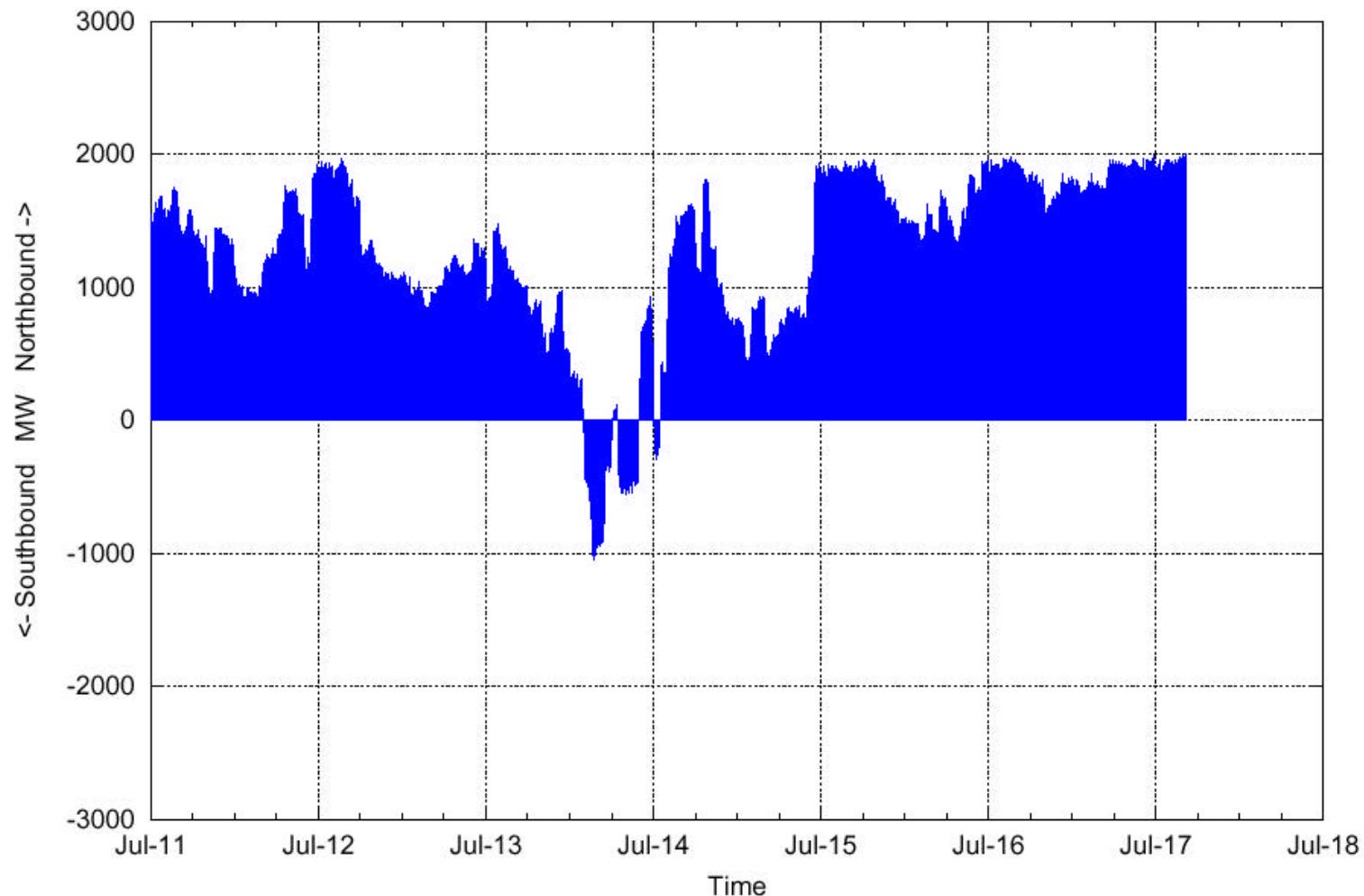
Pacific Northwest Net Exports



PNW / PSW Intertie



Northern Intertie: Actual Flow



Large Incident Locations 07/17/2001



100 0 100 200 300 Miles



WASHINGTON	Number of Fires: 2	Acres: 10,500	New Fires: 0	Fires Contained: 2
Thirty Mile #103 (Okanogan National Forest): 10,000 acres at 35 percent contained. Fire is 20 miles north of Winthrop.				
Information: Call 509-996-2118 or visit this web site: www.thirtymilefire.com				
Dog Creek (Wenatchee National Forest): 500 acres at 0 percent contained. Fire is 11 miles southwest of Clifdell.				

OREGON	Number of Fires: 1	Acres: 1,600	New Fires: 0	Fires Contained: 2
Bald Peter (BIA Warm Springs Agency): 1,600 acres at 60 percent contained. Fire is 12 miles northwest of Camp Sherman.				

UTAH	Number of Fires: 4	Acres: 22,282	New Fires: 3	Fires Contained: 2
Fort Ranch (BIA Warm Springs Agency): 15,000 acres at 20 percent contained. Fire is north of Promontory Mountain. Golden Spike Monument was evacuated and structure protection actions were initiated.				
NEW Keg Mountain (BLM Richfield Field Office): 1,000 acres at 0 percent contained. Fire is 35 miles northwest of Delta.				
NEW Beef Hollow (Northwest State Lands): 5,000 acres at 70 percent contained. Fire is south of Bluffdale. The fire moved towards residences and structure protection is in place. Also, numerous military ordinances were detonated throughout the fire.				
NEW Sandy (Northwest State Lands): 1,282 acres at 80 percent contained. Fire is west of North Promontory Mountains.				

Incident Name	State	Unit	Size	Percent Contained	Estimate of Containment	Personnel	Structures Lost
<i>Northwest Area</i>							
Libby South	WA	NES	3,830	100	--	976	0
Thirty Mile #103	WA	OKF	10,000	35	UNK	975	0
Bald Peter	OR	WSA	1,600	60	7/18	774	0
Rock Creek	OR	PRD	7,500	100	--	0	0
Starvation Ridge	OR	PRD	1,300	100	--	2	0
Dog Creek	WA	WEF	500	0	UNK	402	0
<i>Eastern Great Basin Area</i>							
Fort Ranch	UT	NWS	30,600	25	7/20	58	0
Main Heglar	ID	SID	5,500	100	--	63	0
Thiokol	UT	NWS	3,000	100	--	10	0
Jones Hollow	ID	SID	2,000	100	--	145	0
Black Mountain	UT	RID	800	100	--	58	0
Sand Hollow	ID	BOD	2,174	100	--	0	0
Keg Mountain	UT	RID	1,000	0	UNK	70	0
Beef Hollow	UT	NWS	5,000	70	7/18	69	0
Sandy	UT	NWS	1,282	80	7/18	28	0
<i>Southwest Area</i>							
Horse Canyon	NM	LCD	1,623	100	--	3	0
<i>Southern Area</i>							
Webb	OK	OKS	900	70	7/17	15	0



Software ♦ Consulting ♦ e-Business

Henwood Power Market Advisory Service

Western Energy Roundtable

**WSCC: Road to Recovery?
A Short-Term Power Market Outlook**

July 2001



And Some took Action to Improve Summer Outlook in WSCC

PNW Reservoirs filling faster than expected

Aggressive Load Reduction in PNW

BPA Power Purchases

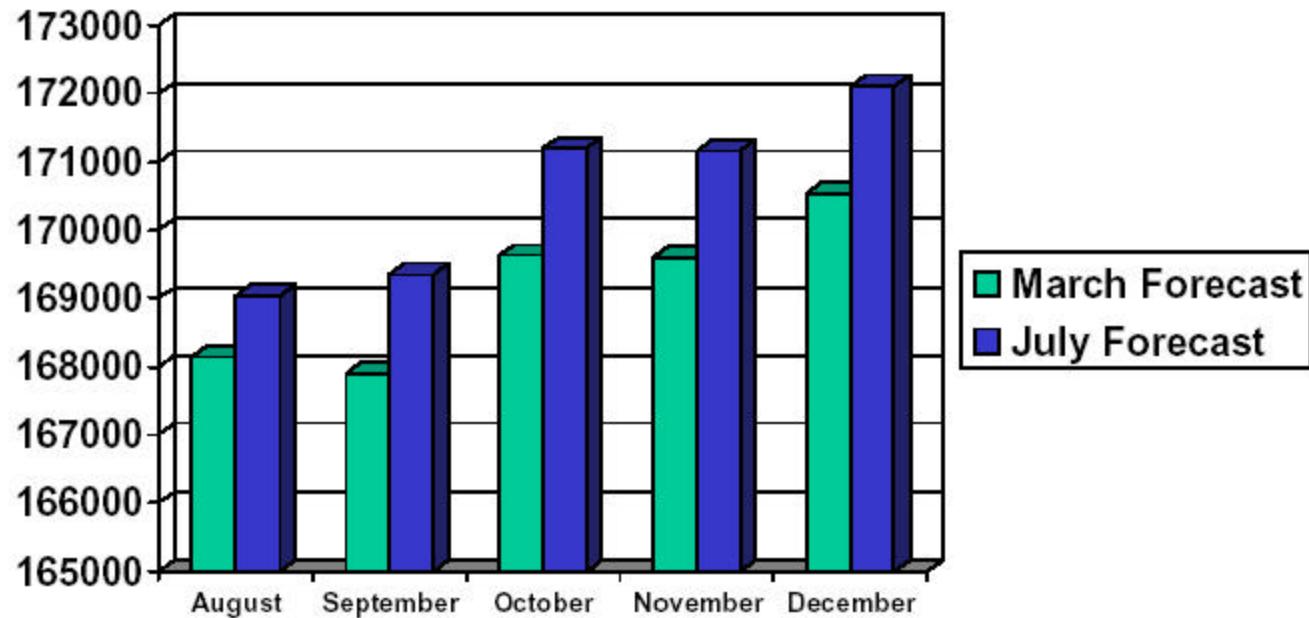
Successful Conservation and Demand Reduction

FERC Mitigation Plan in place

New Power Supply comes on line



Resource Differences (MW Nameplate)



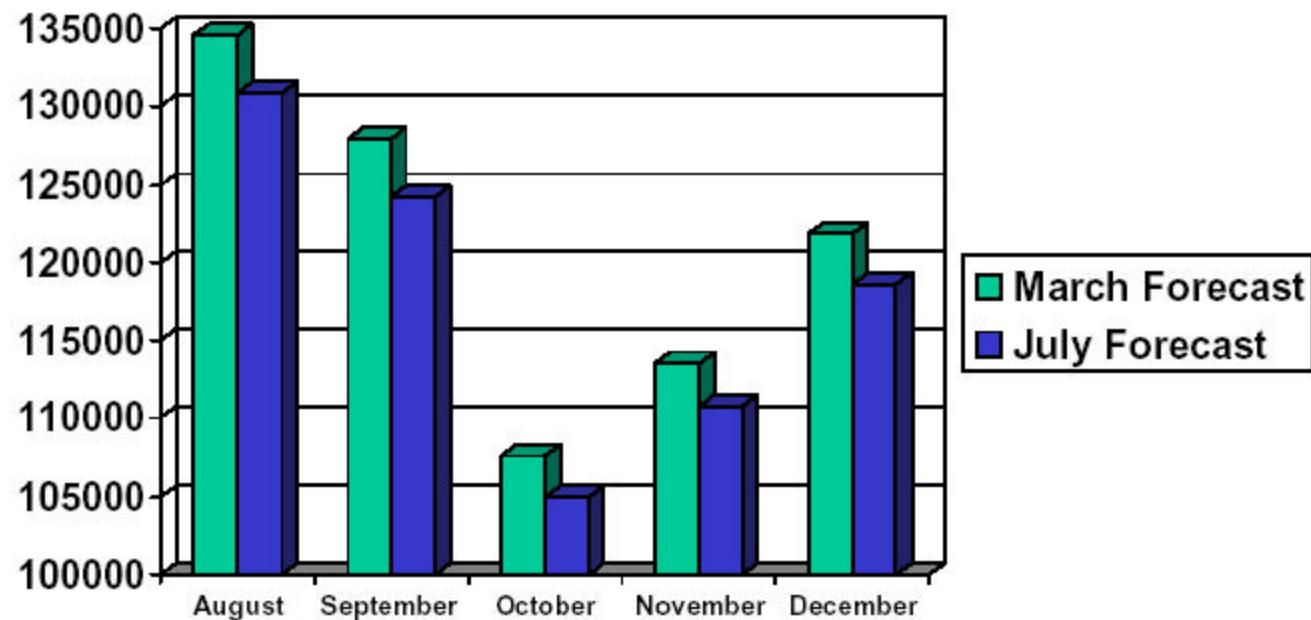


Conservation and Demand Reduction across WSCC

- Calls for voluntary conservation
- Reductions in the 2-10% range
- Governmental Edicts
- Price Induced Conservation
- Other programs

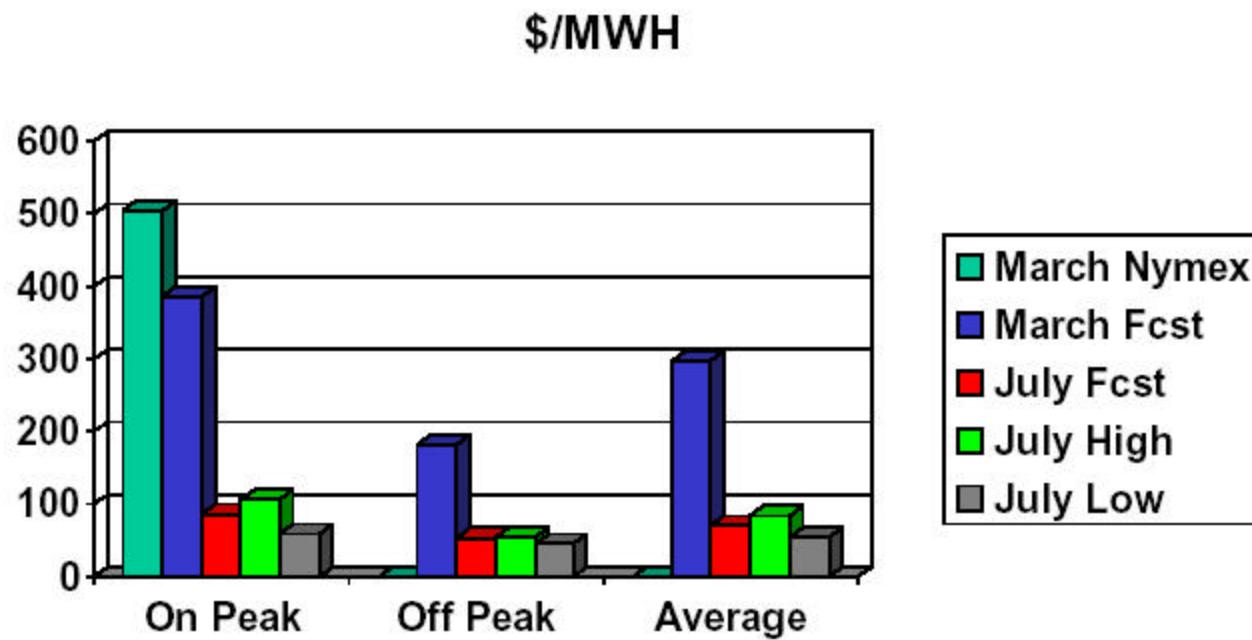


Load Differences (Peak MW)





August 2001 Price Forecasts





Problems that still need to be solved

Credit problems in California

Clarification of FERC June 19 order

Better short term scheduling

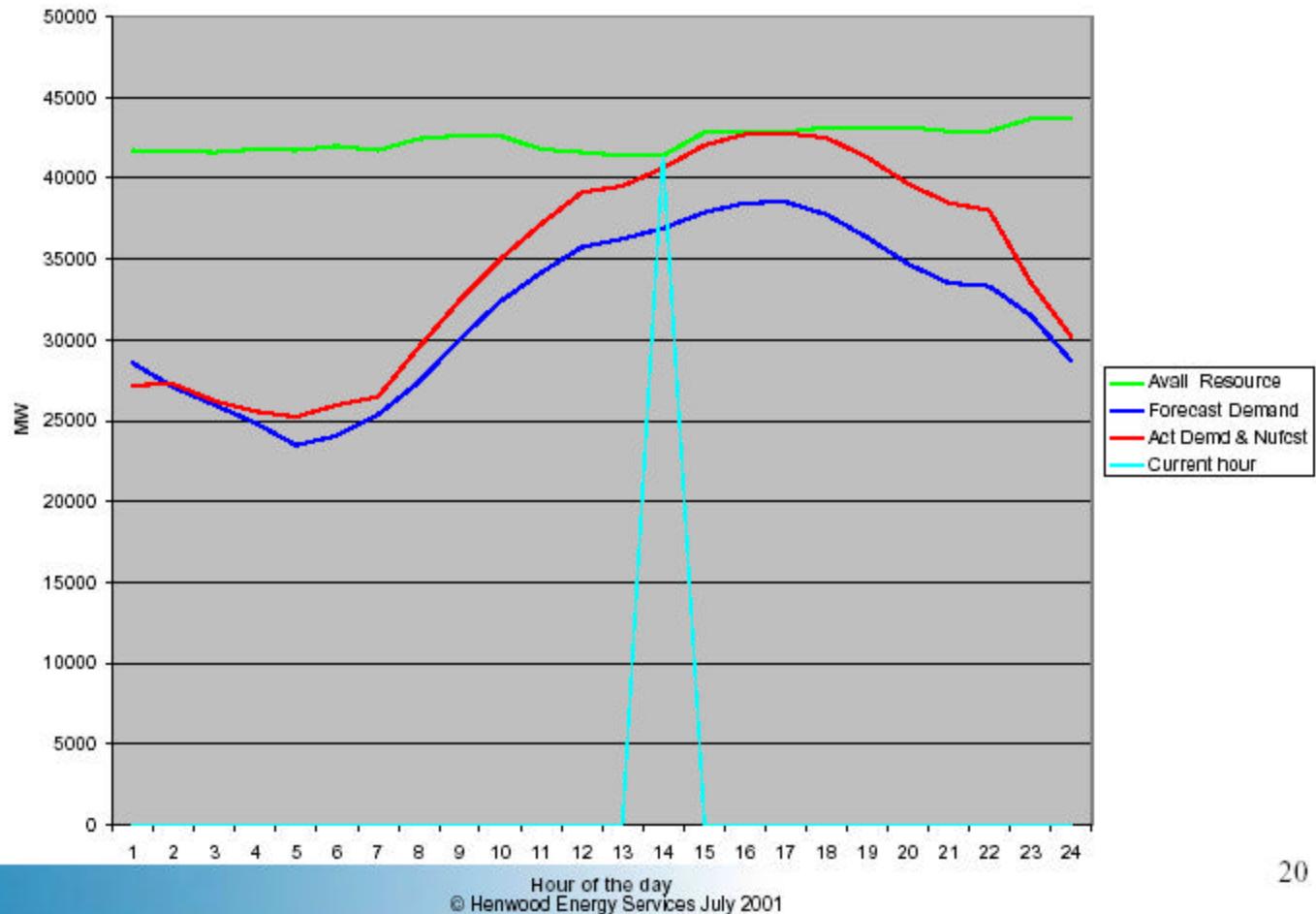
More cooperation between control areas

Settlement over charges for power generation



What Happened on July 3rd?

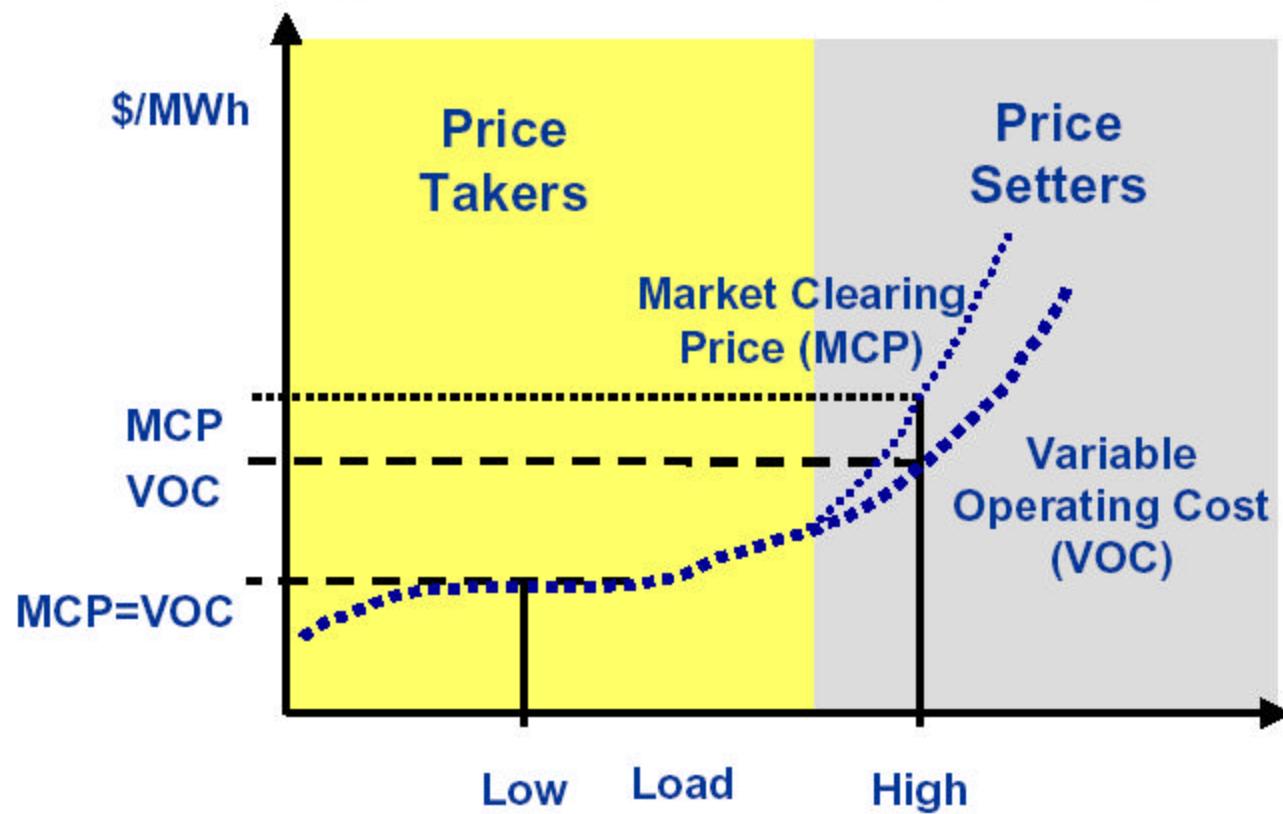
July 3, 2001 2 PM





Generator Bid Strategies

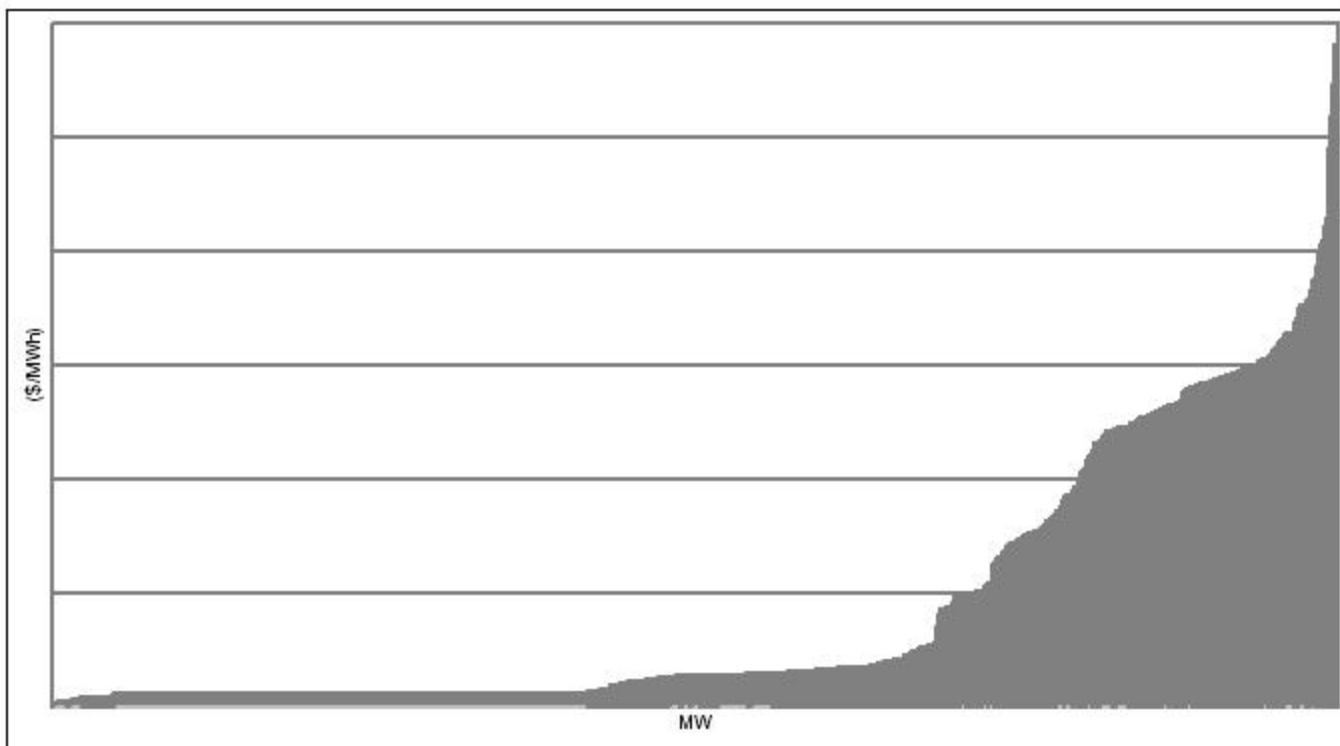
Marginal Cost and Scarcity Pricing





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WSCC Supply Curve





WSCC Summary

- **Prices are down!**
- Buyers are happy -**but rates are still up!**
- **Lower gas prices** help gas fired generation
- **Profits limited by price caps** in tight supply hours
- **New additional generation** must believe price caps will actually terminate in 2002