





**Counting The Cost:
Accounting For The Costs Of
Restructuring**

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Making a
small, bad
idea bigger.

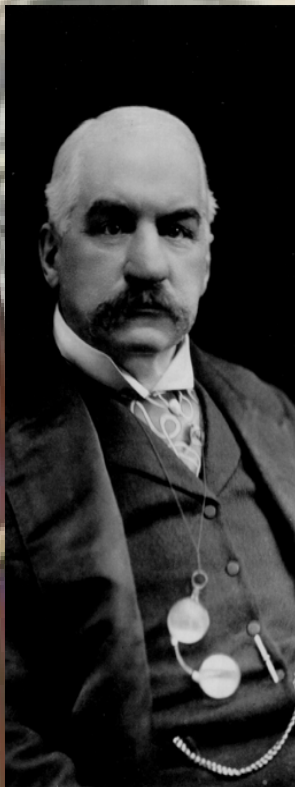


Counting The Cost

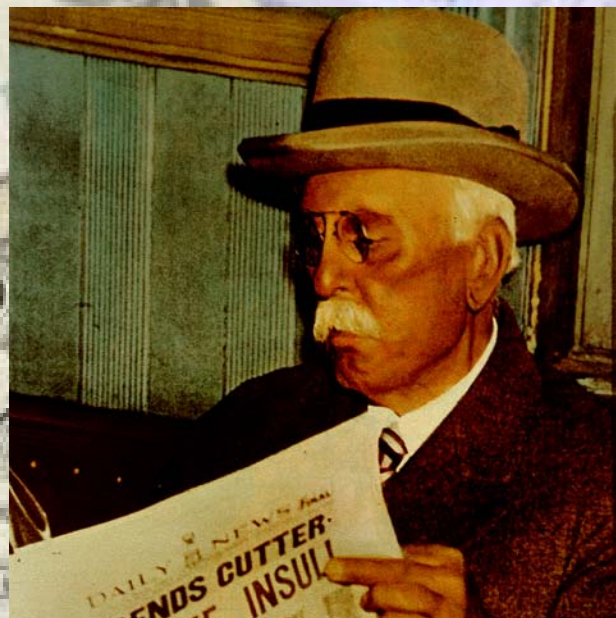
- Historical Background
- Recent History
- Speeders and slackers
- Indego
- RTO West
- Cost Benefit Study
- Conclusion



The Robber Barrons



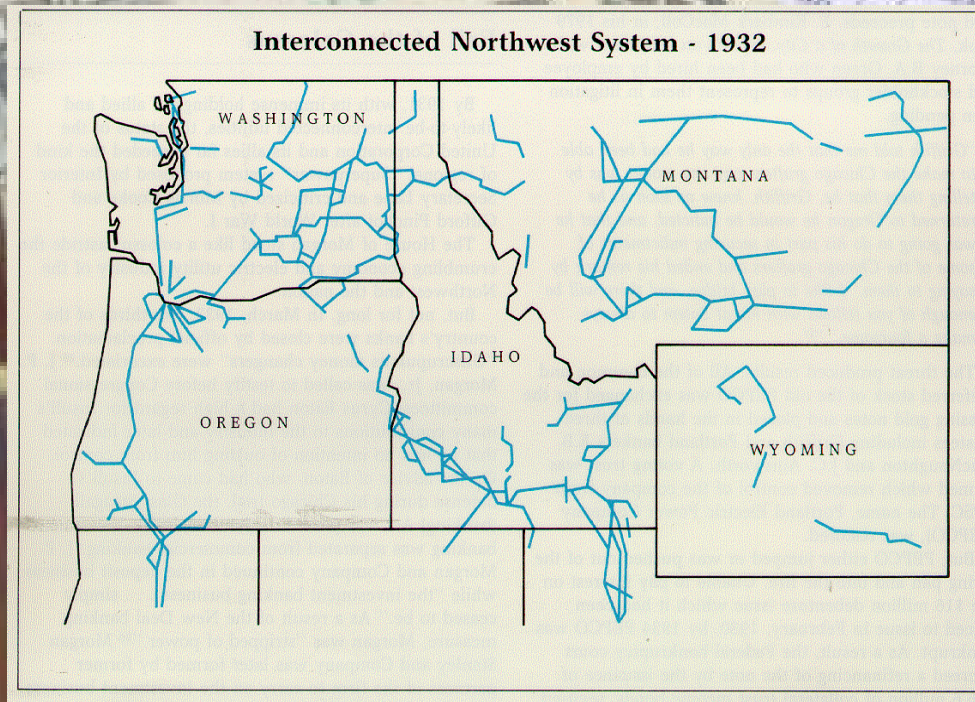
JP Morgan



Samuel Insull



The Northwest Before Roosevelt



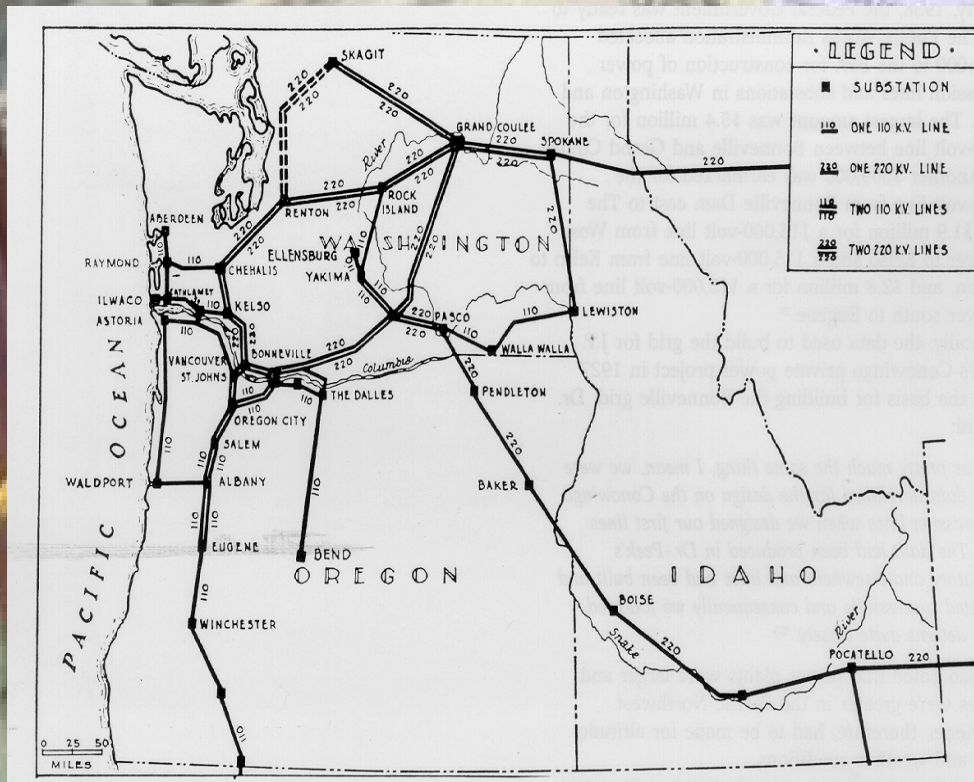
Roosevelt steps in



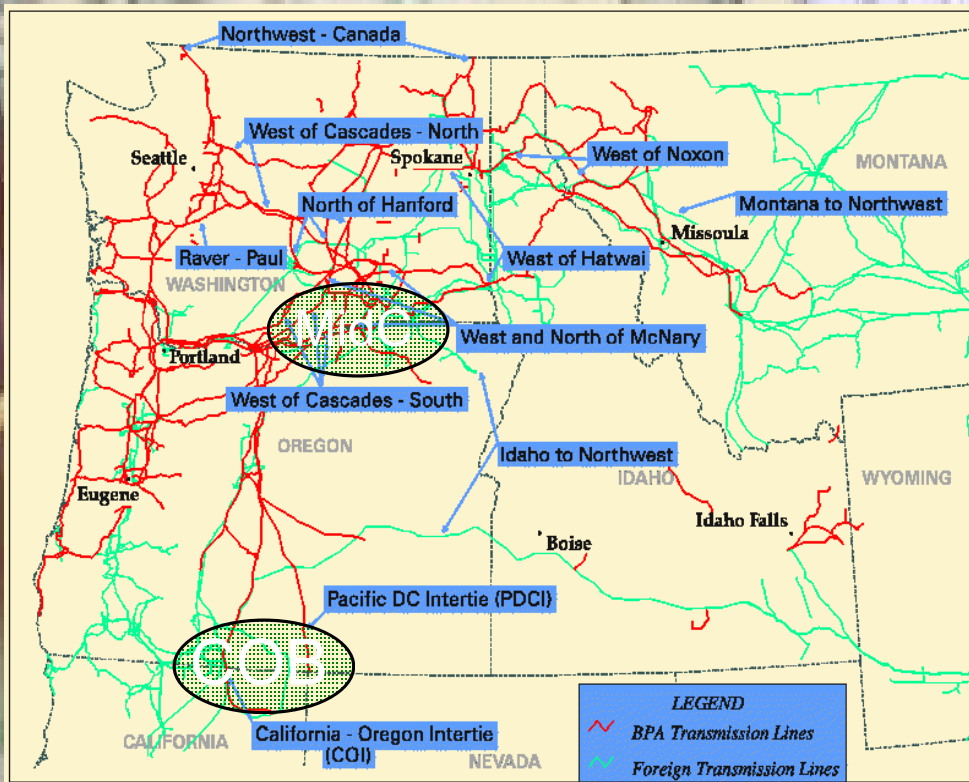
Globe Photos, Inc.



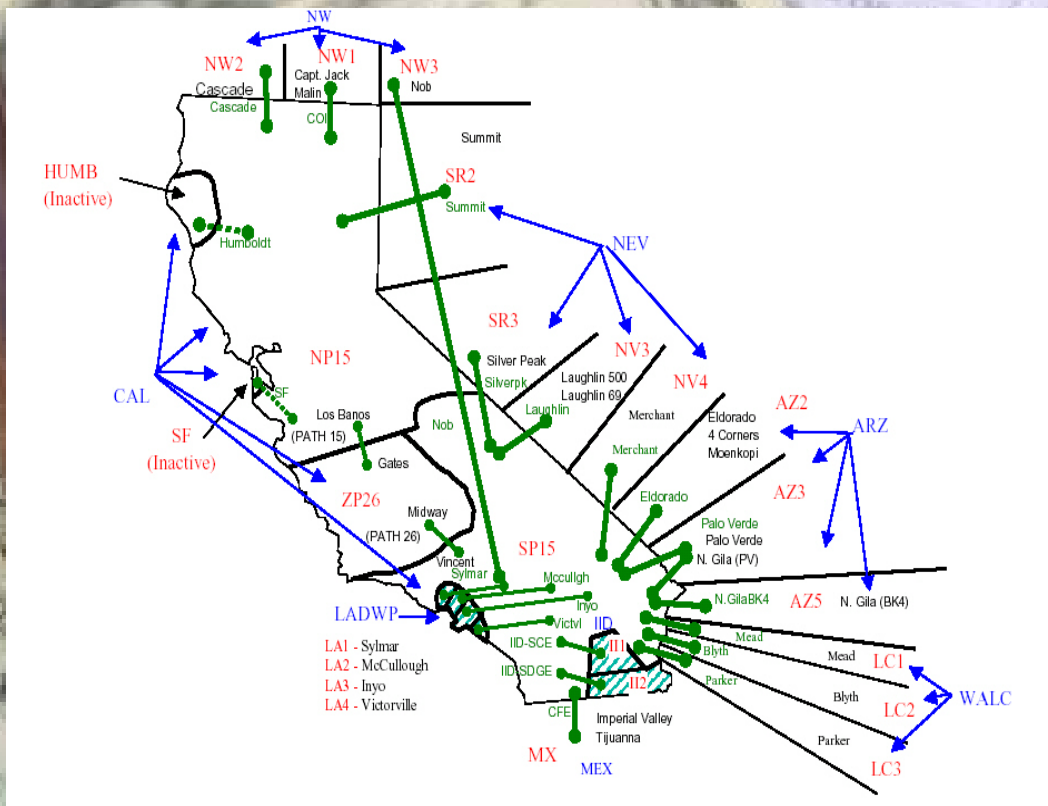
J.D. Ross Master Plan



Basic Geography Northwest Delivery Points

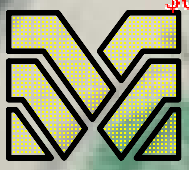
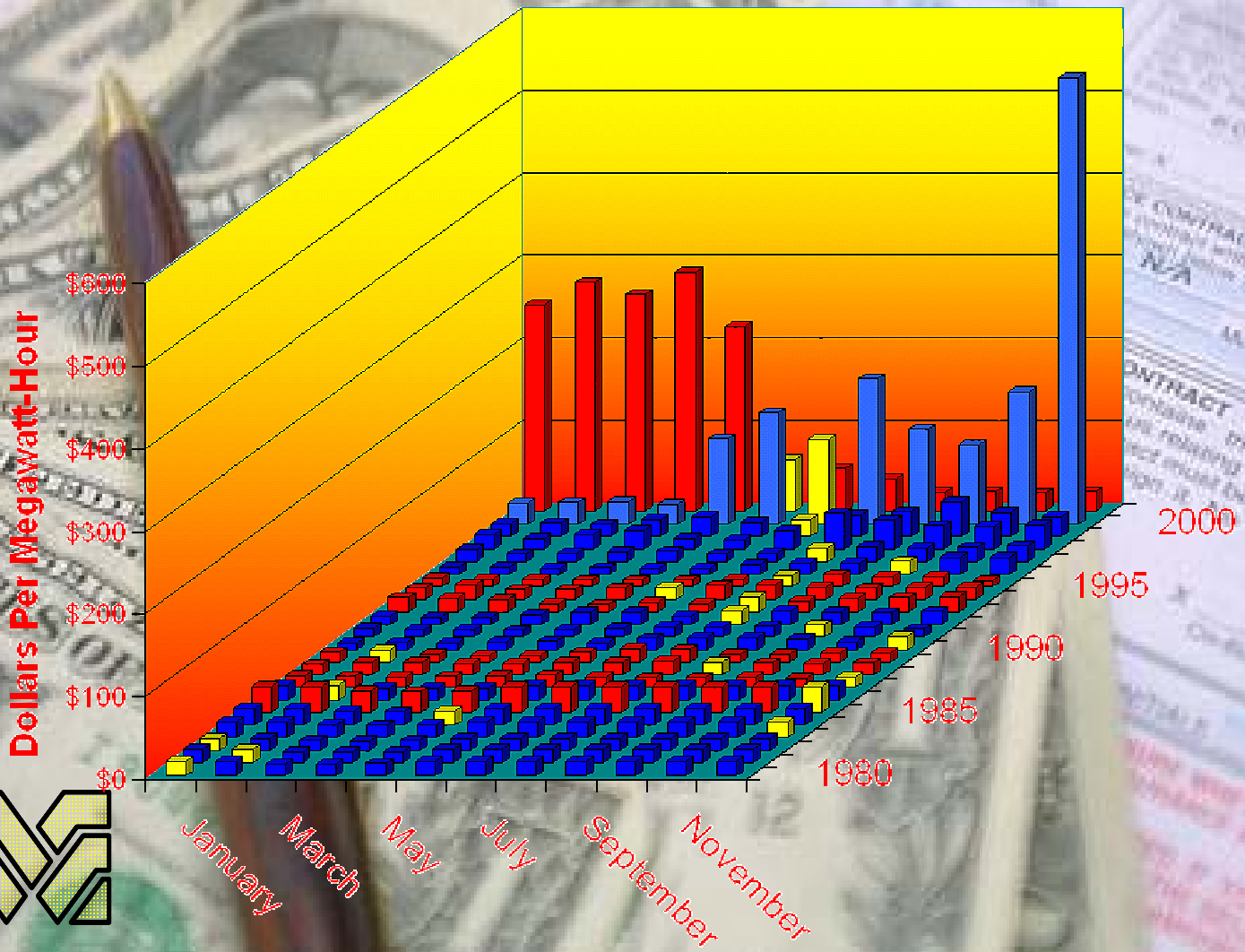


California

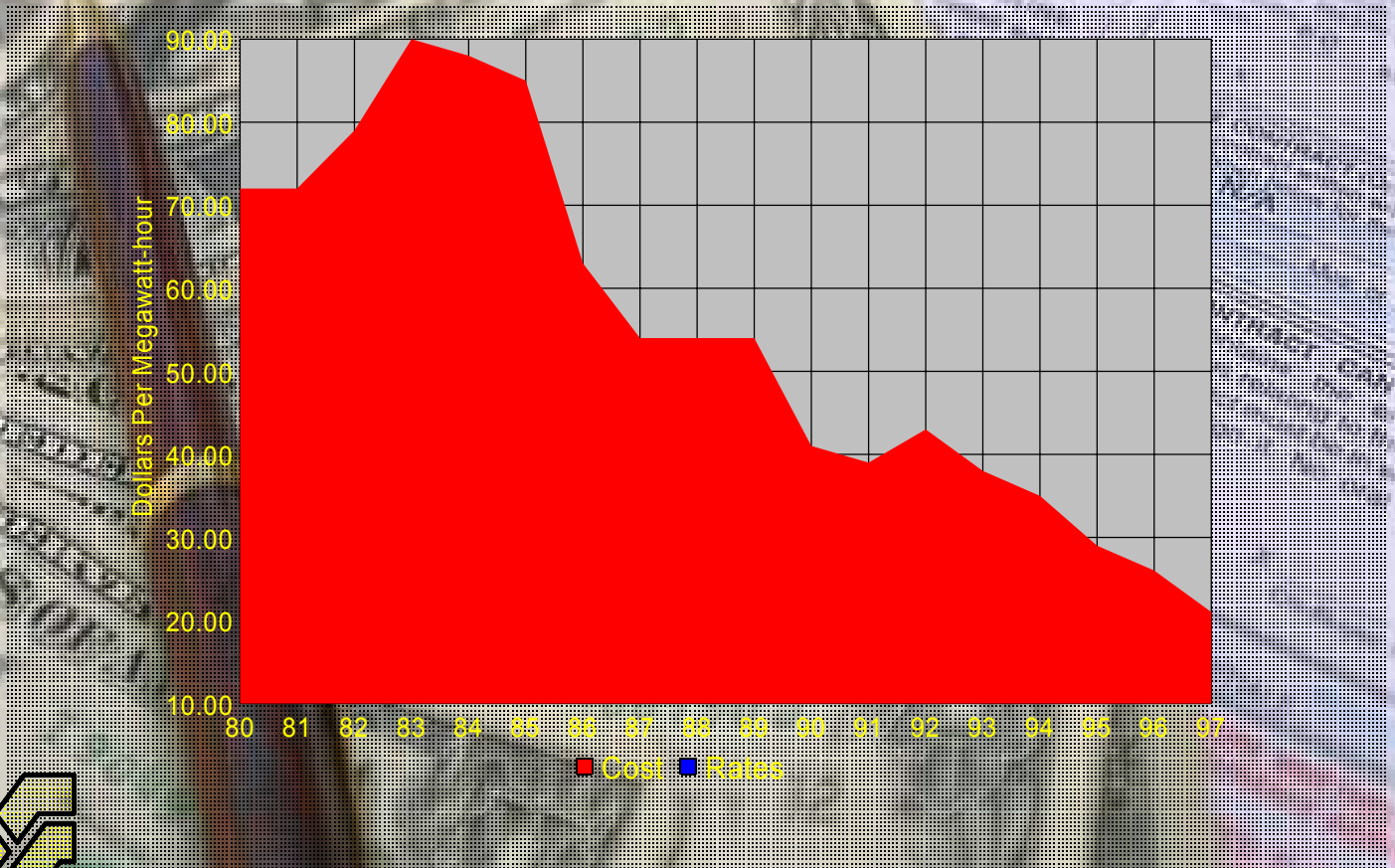


Mid-Columbia Prices Since 1980

(Drought Years In Red. Minimum Reserve Margin Months In Yellow)



Changing Prices and Costs at BPA



Recent History

- The fourteen month California market failure had many appalling aspects
- Some of the worst occurred during the "super-crisis" in December, January, and February
- California ISO operations become inexplicable by traditional utility dispatch standards
- Critical ISO issues have never been understood and may simply have been wrong

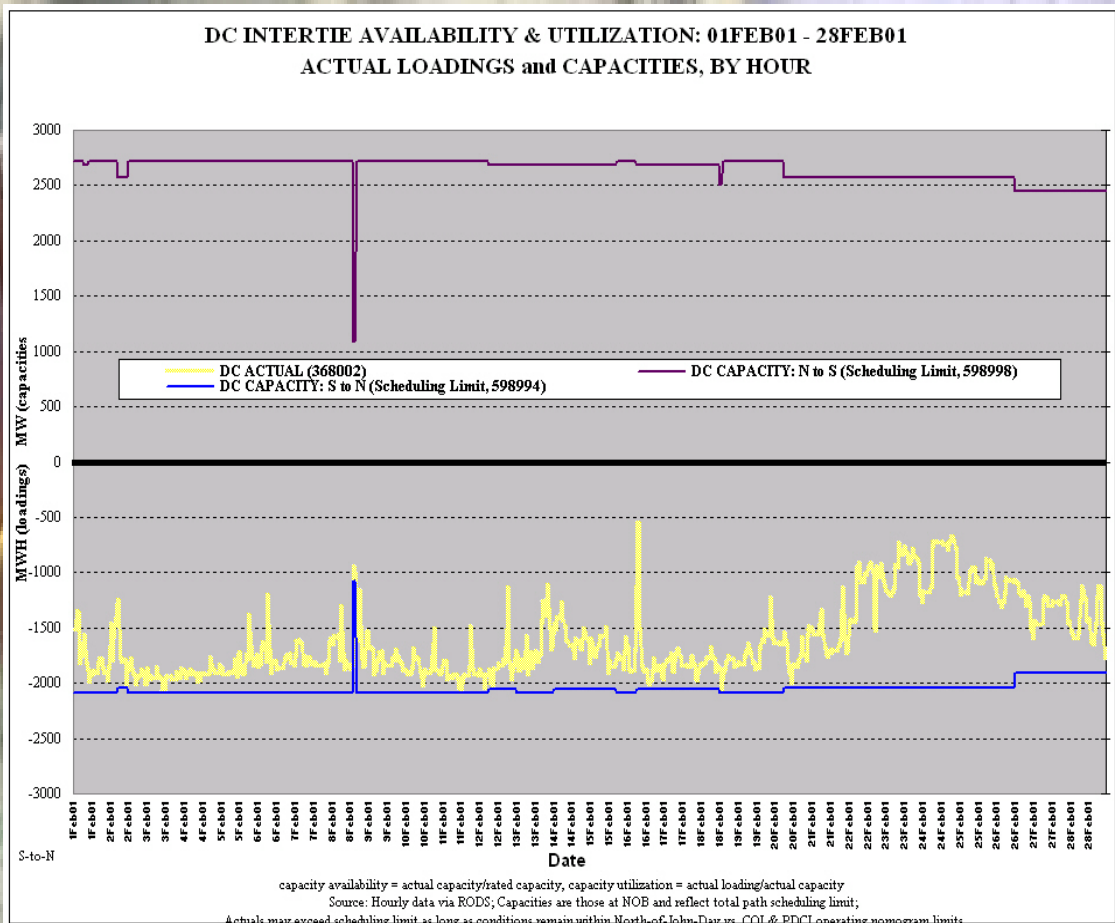


Path 15

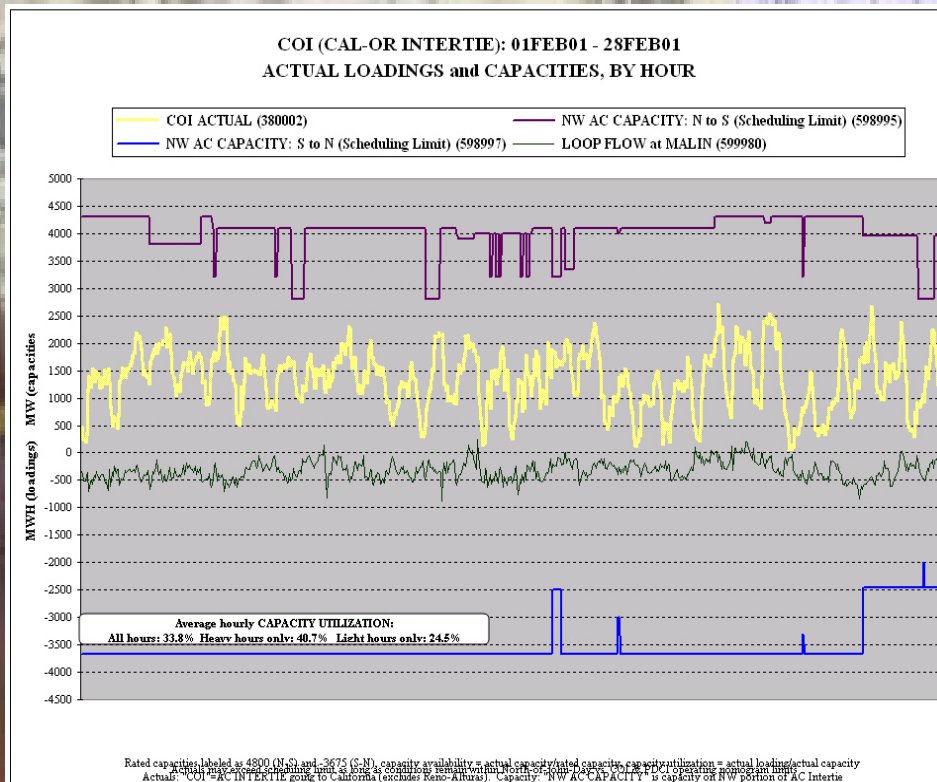
- The ISO justified interruptions to "NP-15" -- Northern California -- because it was unable to move power north
- The parallel path to Northern California was not congested over this period
- The ISO has never been able to explain how this occurred



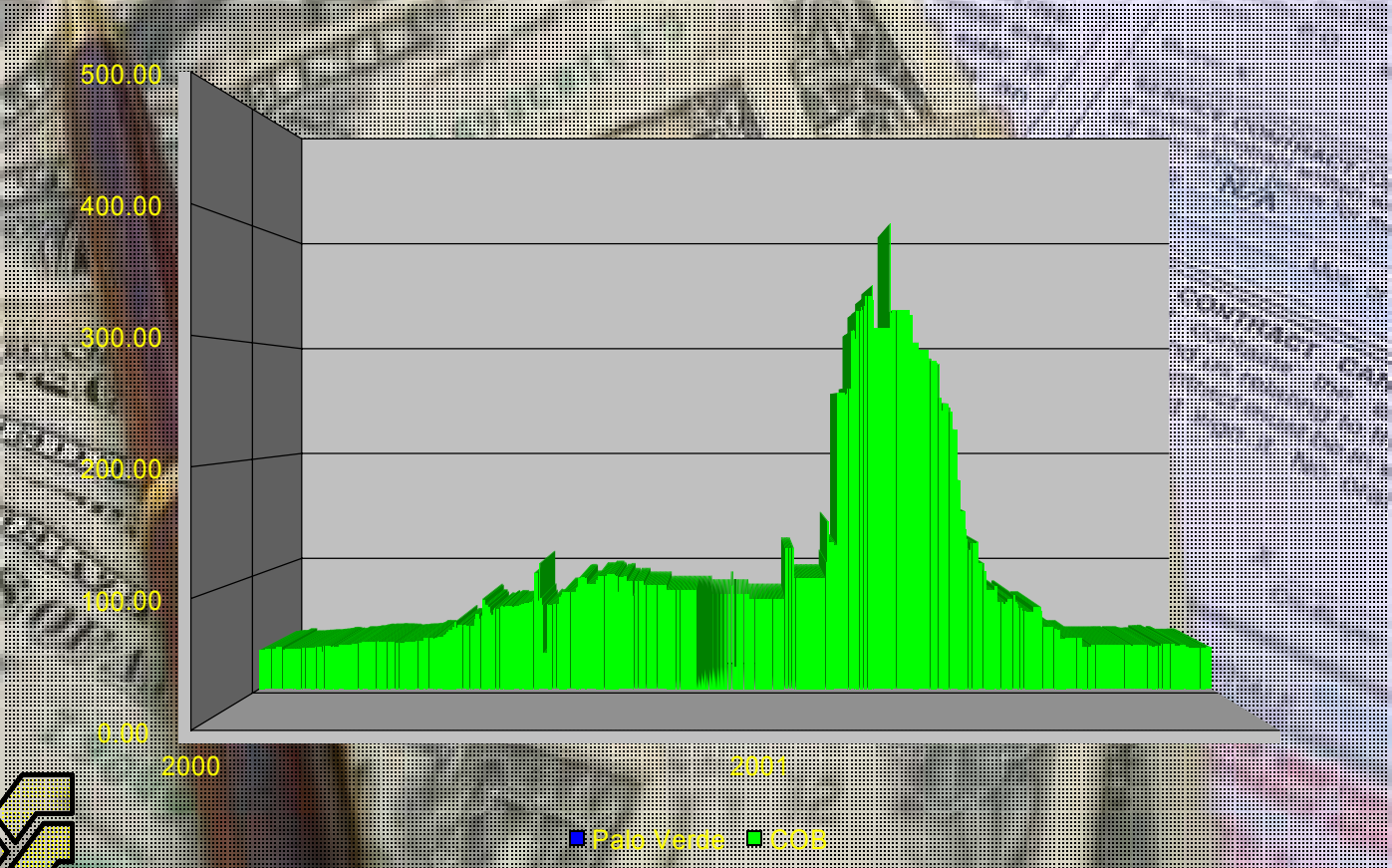
DC Loadings - 80%



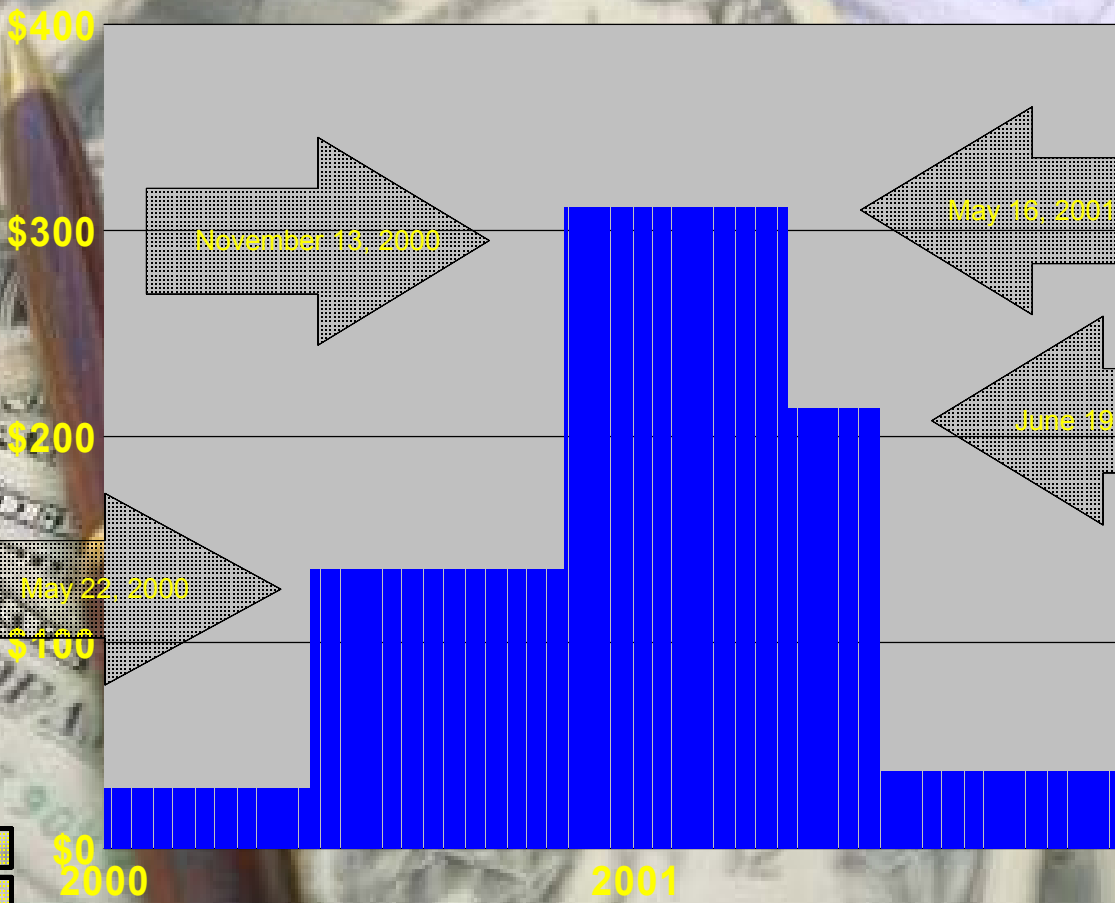
AC Loadings -- 40.7%



Can Water Run Uphill?



Ignoring Fundamentals



Speeders and Slackers

Congestion schemes often provide an incentive to congest narrow pathways



Indego

- Indego occupied much of our lives until – after an enormous study – we found that smudging costs around 100 did not make them go away
- The phrase "dull and pointless" was coined to describe Indego meetings
- Never have so many, done so much, to achieve so little



RTO West

- Cost benefit study proves that twenty years of successful markets could not have existed without bureaucratic intervention
- Why break what's not broken?



Cost Benefit Study

- Generally, the domination of the northwest system by hydroelectric power provides a relatively efficient bulk power system to begin with;
- Pancaking therefore has a greater impact on the congestion prices across constraints than it does on overall production cost efficiency;
- The ability to further substitute hydro resources for thermal resources, through further regionalization, offers significant benefits.



Derating The System

3.3.10 Generation from Hydro Units

The hourly generation schedule of hydro units in the northwest and British Columbia was provided by RTO West based on average hydro conditions and was used in the GE MAPS in both With RTO and Without RTO cases. The Benefit Cost Work Group decided on this approach to ensure that the model captured all environmental, operational, and other constraints that determine generation from hydro units. The work group fixed the hydro schedule because the “hydro operations in the Pacific Northwest are driven largely by non-power constraints associated with fish and wildlife mitigation, flood control, irrigation, navigation, etc.”²⁷



Montana Transmission

Annual Average Energy Price (Real 2000\$/MWh)				
Area	Region	Without RTO	With RTO	% Change
BC Hydro + W Kooteny	RTO-West	35.80	34.41	(3.89)
Avista Corp	RTO-West	35.50	29.70	(16.34)
Bonneville Power Admin	RTO-West	34.82	29.75	(14.57)
Chelan Douglas Grant PUD	RTO-West	34.18	29.73	(13.01)
Idaho Power Company	RTO-West	30.30	28.93	(4.53)
Montana Power Company	RTO-West	25.24	26.82	6.27
Nevada Power Company	RTO-West	33.75	30.38	(9.99)
Pacificorp East	RTO-West	30.16	27.46	(8.94)
Pacificorp West	RTO-West	32.73	29.68	(9.33)
Portland General Electric	RTO-West	33.42	29.73	(11.05)
Puget Sound Energy	RTO-West	35.60	29.77	(16.39)
Seattle City Light	RTO-West	34.82	29.75	(14.56)
Sierra Pacific Power	RTO-West	40.99	33.21	(18.97)
Tacoma Public Utilities	RTO-West	34.42	29.75	(13.56)
Alberta Power	ALBERTA	23.98	23.81	(0.69)
LA Dept of Water & Power	CA ISO	34.39	30.99	(9.87)
Pacific Gas & Electric	CA ISO	32.88	31.32	(4.76)
San Diego Gas & Electric	CA ISO	32.20	30.97	(3.83)
Southern California Edison	CA ISO	32.93	31.41	(4.61)
Public Service of Colora	Rocky Mtn	32.66	25.72	(21.23)
WAPA Colorado-Missouri	Rocky Mtn	26.75	25.76	(3.73)
WAPA Upper Missouri	Rocky Mtn	27.59	24.56	(10.99)
Arizona Public Service	WConnect	31.17	27.77	(10.93)
El Paso Electric	WConnect	36.17	30.63	(15.32)
Imperial Irrigation Dist	WConnect	30.69	28.71	(6.44)
Public Service New Mexico	WConnect	33.16	27.80	(16.14)
Salt River Project	WConnect	31.12	27.68	(11.06)
Tucson Electric Power	WConnect	31.14	27.41	(11.96)
WAPA Lower Colorado	WConnect	31.11	27.42	(11.85)



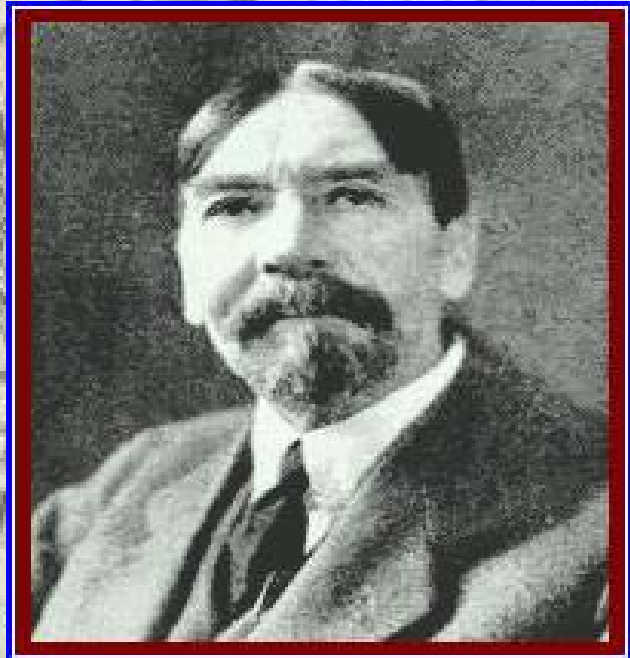
Friedrich Nietzsche

He who fights with a monster might take care lest he thusly become a monster. And if you gaze long into an abyss, the abyss gazes also into you.



Thorstein Veblen

Theories are constraining on the underlying facts.



Conclusion

1. Social engineering is not an end in itself
2. The California ISC has been a memorable failure
3. "I will regulate no more forever"



