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The Wind Hits The Fan

An Abundance of Water and an Abundance of Wind Energy Results in an Abundance of Litigation

Presentation by Eric Lee Christensen

October 26, 2011

Idaho State Bar

Environment and Natural Resources Law Section

Northwest Energy Law: A Primer

“Whenever I'm caught between two evils, I take the one I've never tried.” -- Mae West

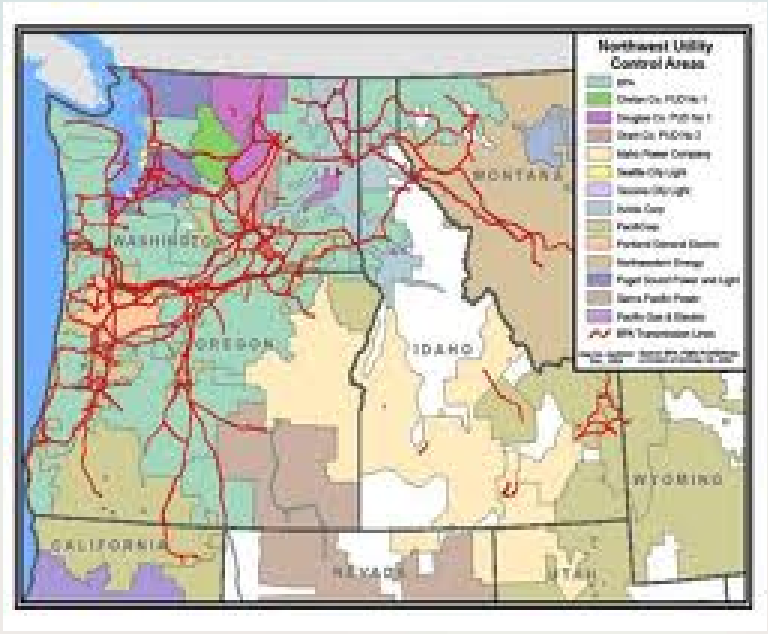
The Investor-Owned Model

- Vertically-Integrated Monopolies
- State Regulation of Retail Rates
- Federal Regulation by FERC

The Public Power Model

- Public Preference
- Public Ownership
- Governance by Electeds
- The New Deal and BPA

The BPA System



“Open Access” and Retail Deregulation

- PURPA
- Energy Policy Act of 1992
- FERC Order No. 888
- Public Power and “FERC Lite” Provisions

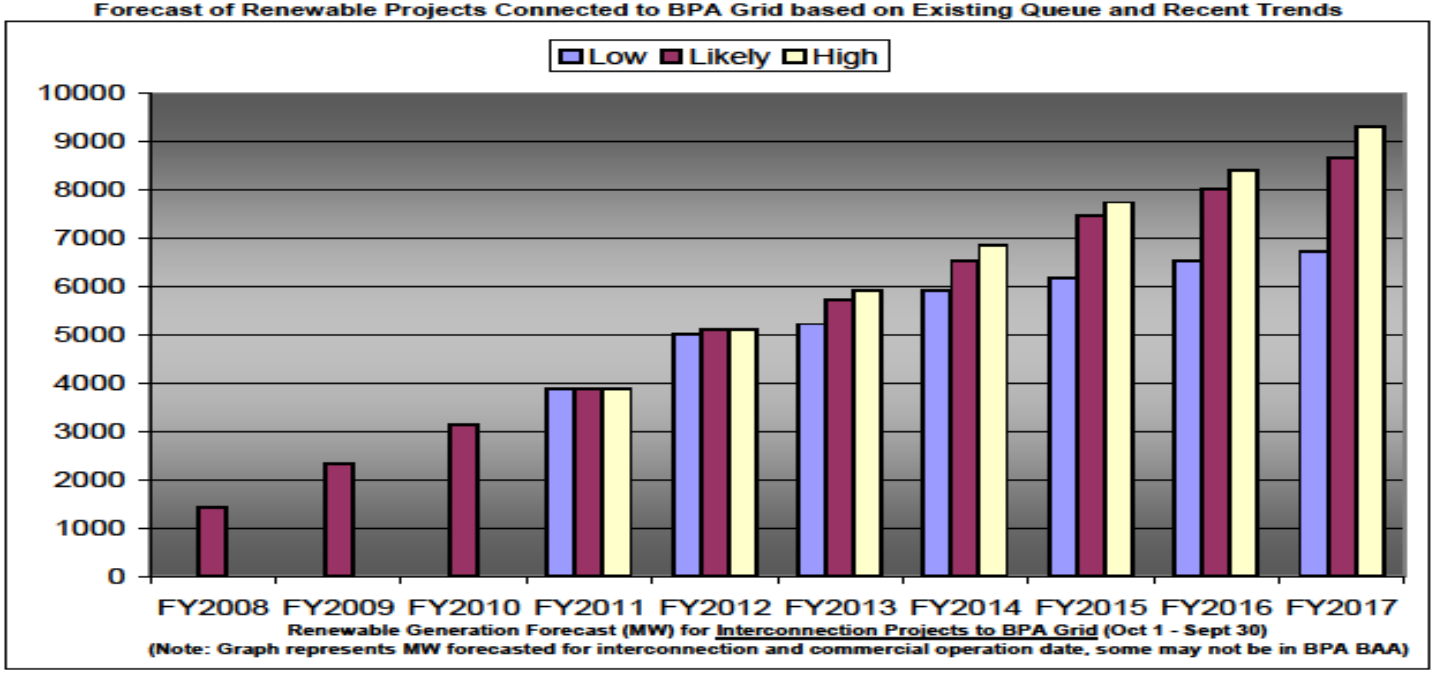
“Too Much of a Good Thing Can Be Taxing”

-- Mae West

Northwest Wind Explodes

BONNEVILLE POWER ADMINISTRATION

Forecast of Renewable Projects Connected to BPA Grid based on Existing Queue and Recent Trends

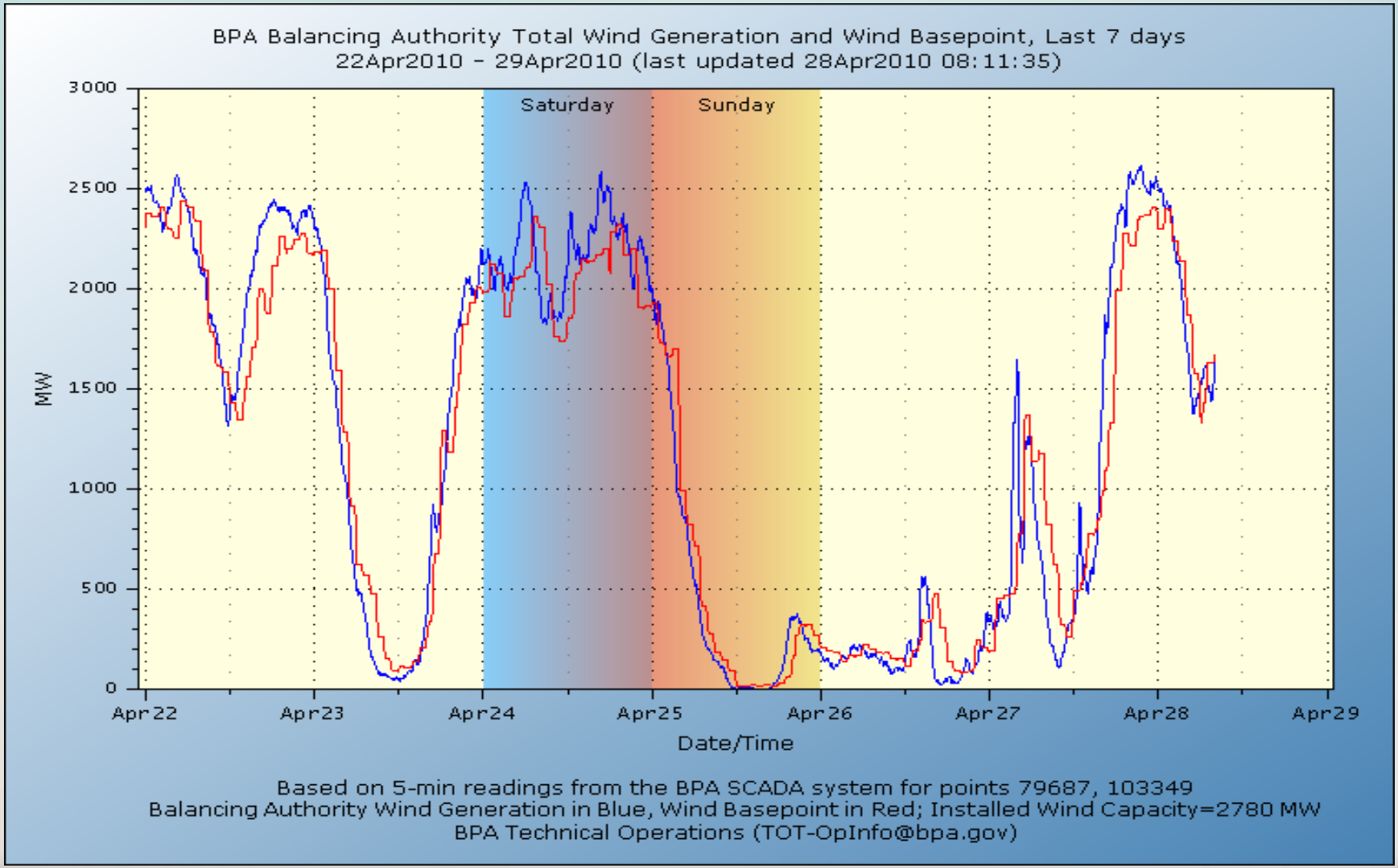


Renewable Generation Forecast (MW) for Interconnection Projects to BPA Grid (Oct 1 - Sept 30)
(Note: Graph represents MW forecasted for interconnection and commercial operation date, some may not be in BPA BAA)

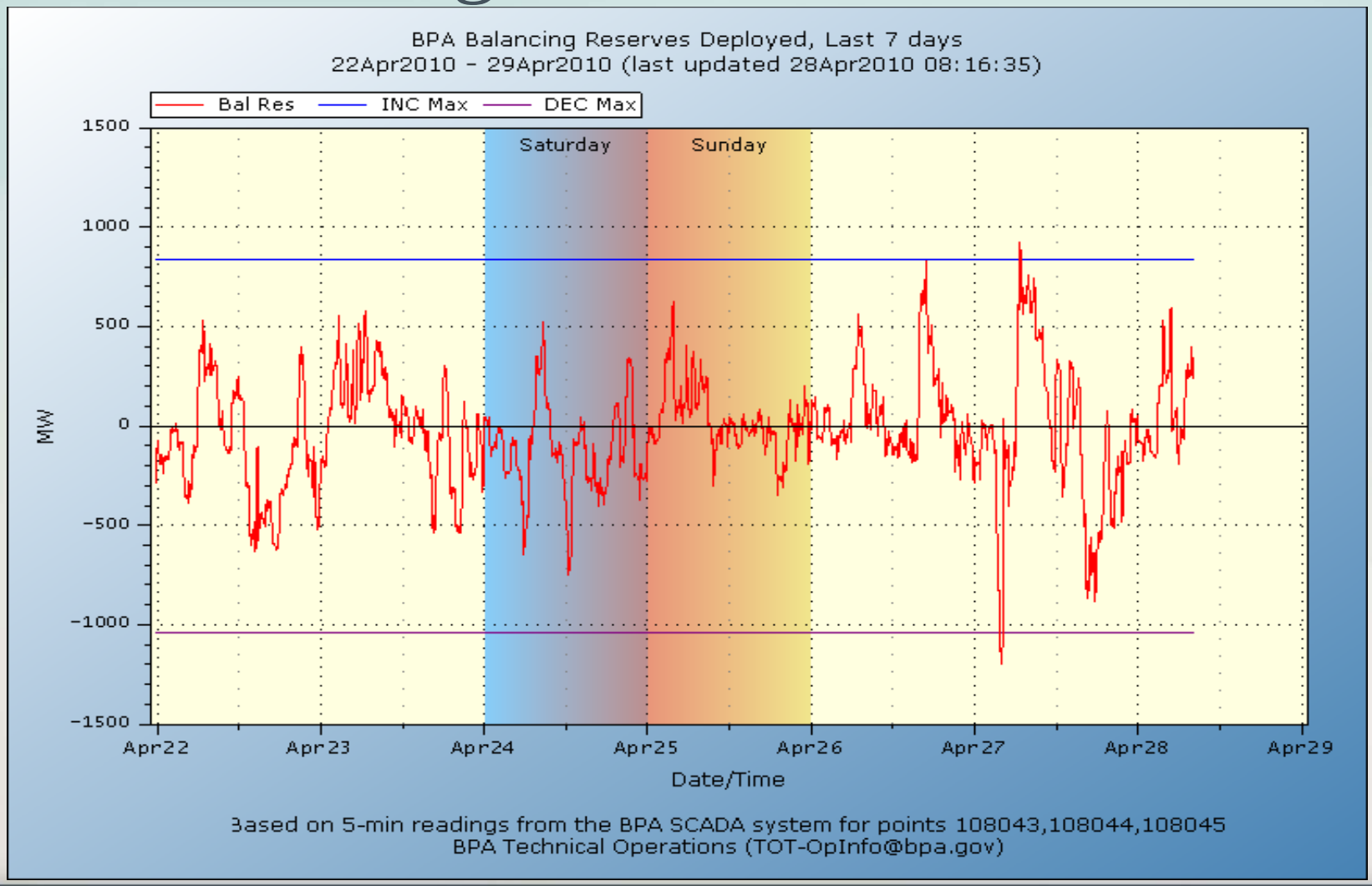
NOTES:
1. Projections beyond FY12 may be impacted or delayed due to a need for Transmission system expansion.
2. Projected totals based on previous experience and present growth factors including Production Tax Credits and RPS Demand.
3. Generation shown is interconnected to BPA-T; amount within BPA Balancing Authority Area is not estimated.

S. Enyeart As of: 9/12/2011

Producing Variable Output



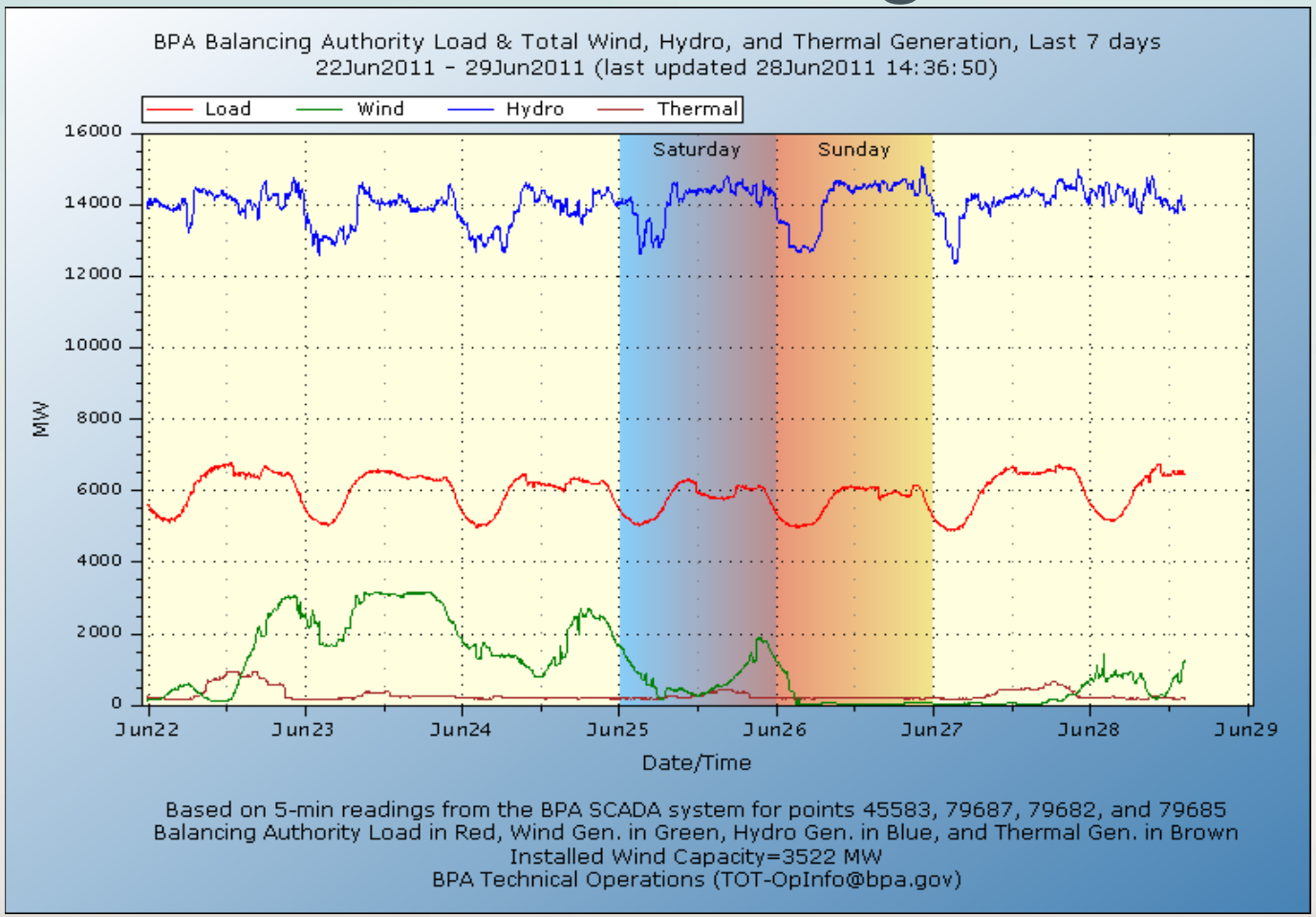
… and Big Demands on Reserves



Big Water. . .

And Big Wind. . .

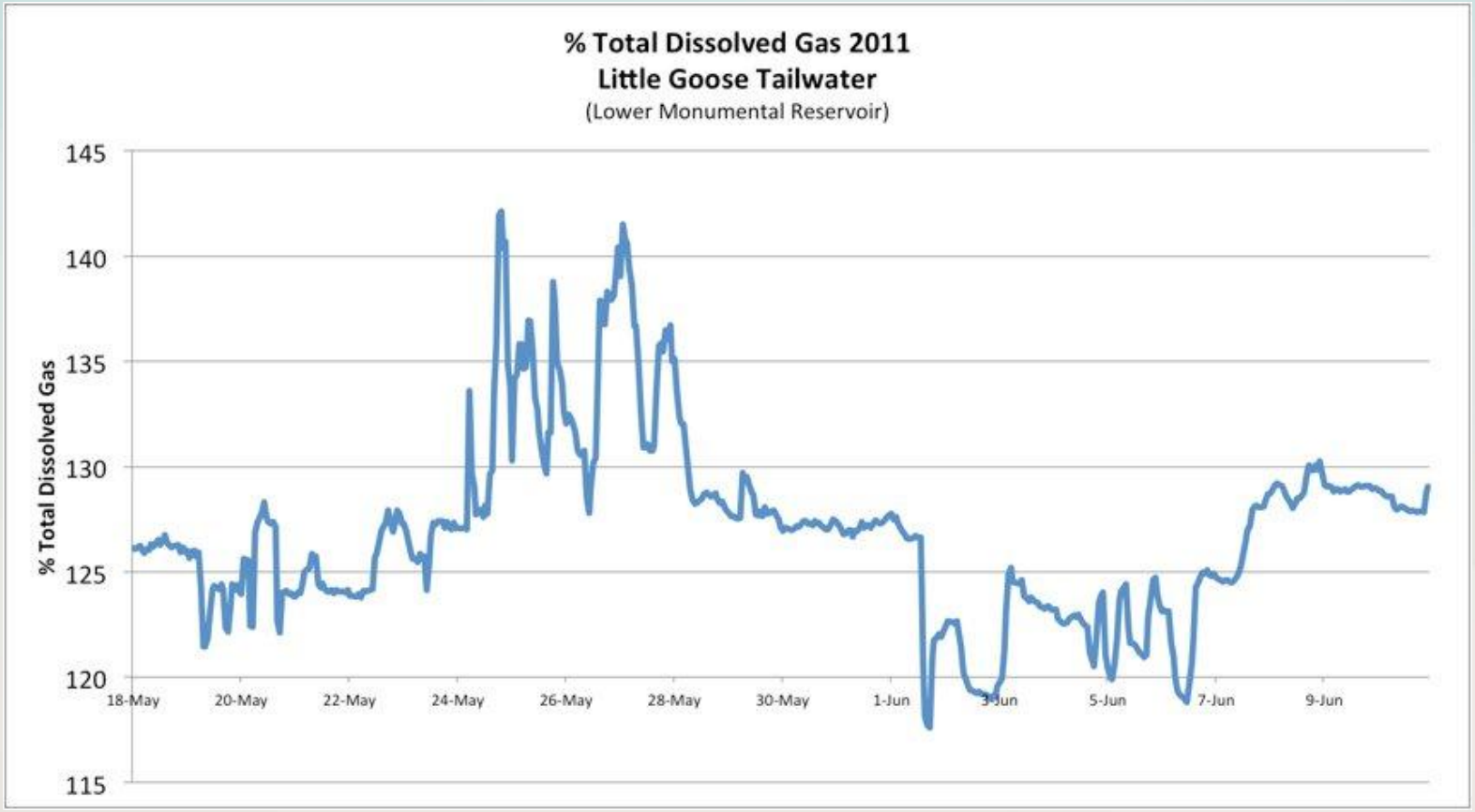
. . . Produces Too Much of a Good Thing



Forcing Spill….

Photo credit: Dan Wheat, Capital Press, July 7, 2011

Pushing TDG Limits



Producing Gas Bubble Disease

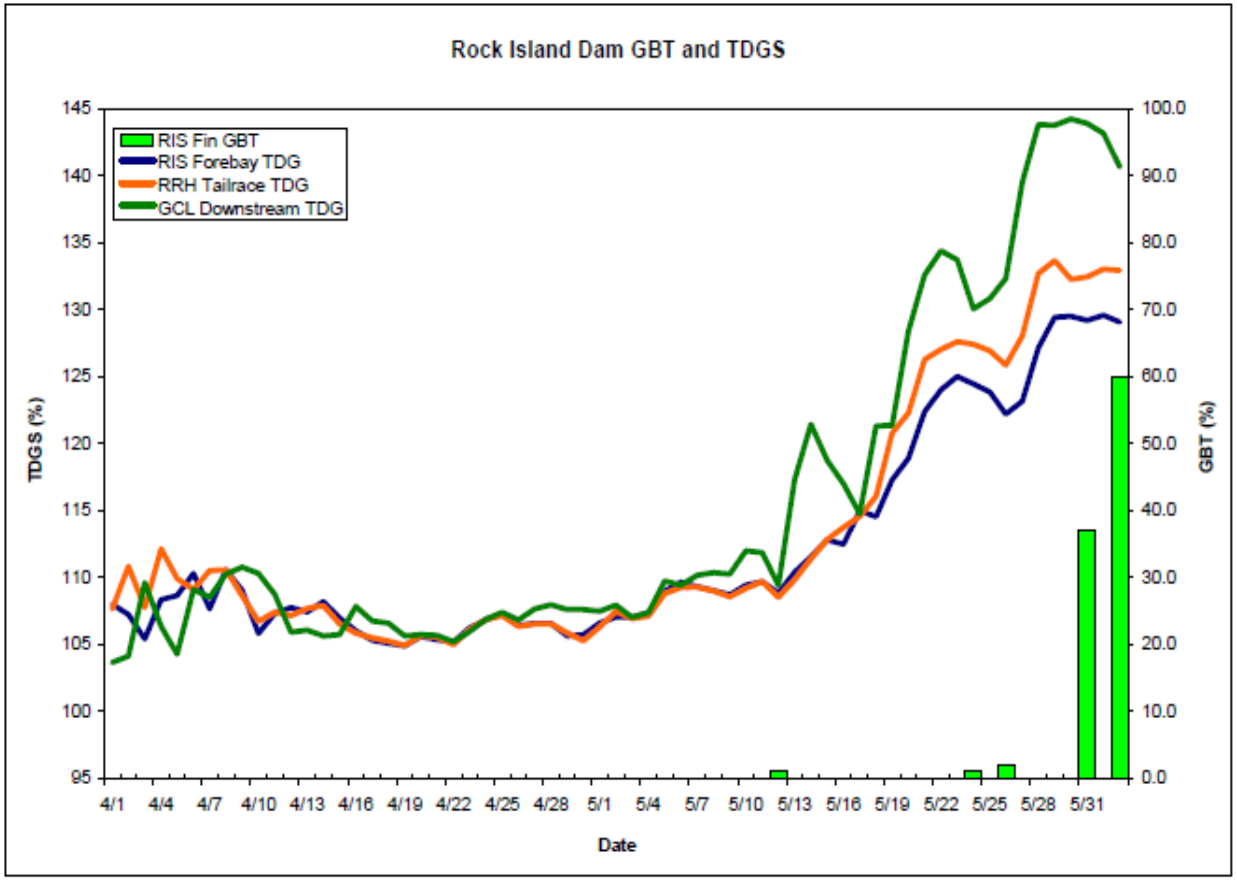


Figure 1. Percent of fish examined at Rock Island Dam showing signs of fin GBT with associated dissolved gas saturation levels in the Rock Island Dam forebay, the Rocky Reach Dam tailrace, and downstream of Grand Coulee Dam.

…Threatening Sensitive Species

Forcing BPA To React

- "Environmental Redispatch" Policy
  - ❖ No violation of dissolved gas limits
  - ❖ No negative pricing
  - ❖ Reduce thermal generation to minimum
  - ❖ Order curtailments of wind generation when necessary

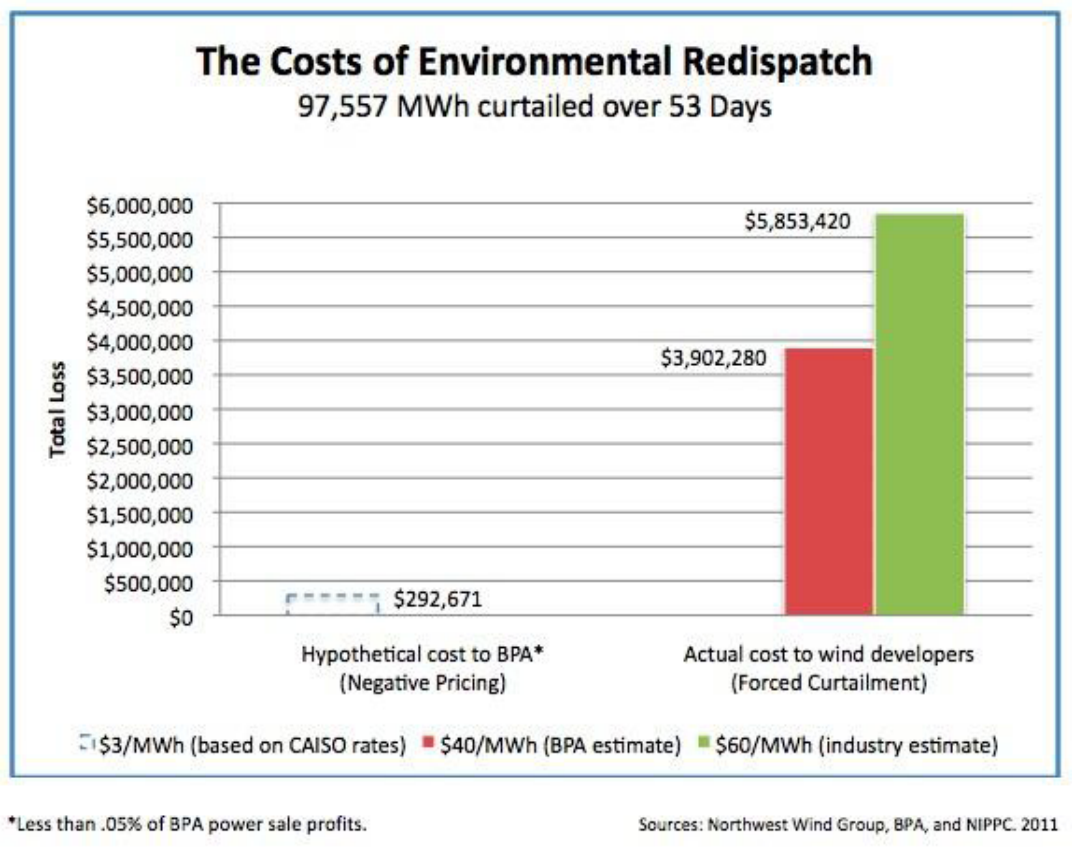
. . . And Forcing Wind Curtailments

- Ordered reduced wind output starting 5/18
- Cutbacks around 7% of output
- Total curtailments: ~ 100,000 MWh
- Extremely costly to wind generators
  - ❖ “If the wind blows, money flows”
  - ❖ $38 per MWh, as high at $121/MWh

Causing Litigation

- *Iberdrola Renewables, et al. v. BPA* (FERC Docket No. EL11-44-000)
- Primary argument: Environmental Redispatch = “undue discrimination”
- FERC Should Force BPA to Comply With Non-Discrimination Requirements of Order No. 888 under FPA § 211 (“FERC Lite”)
- Caught in Limbo Between FERC and Ninth Circuit

… Over the Costs of Having Too Much of a Good Thing



*Less than .05% of BPA power sale profits.

Sources: Northwest Wind Group, BPA, and NIPPC. 2011

“Too Much of a Good Thing Can Be Wonderful!”

-- Mae West

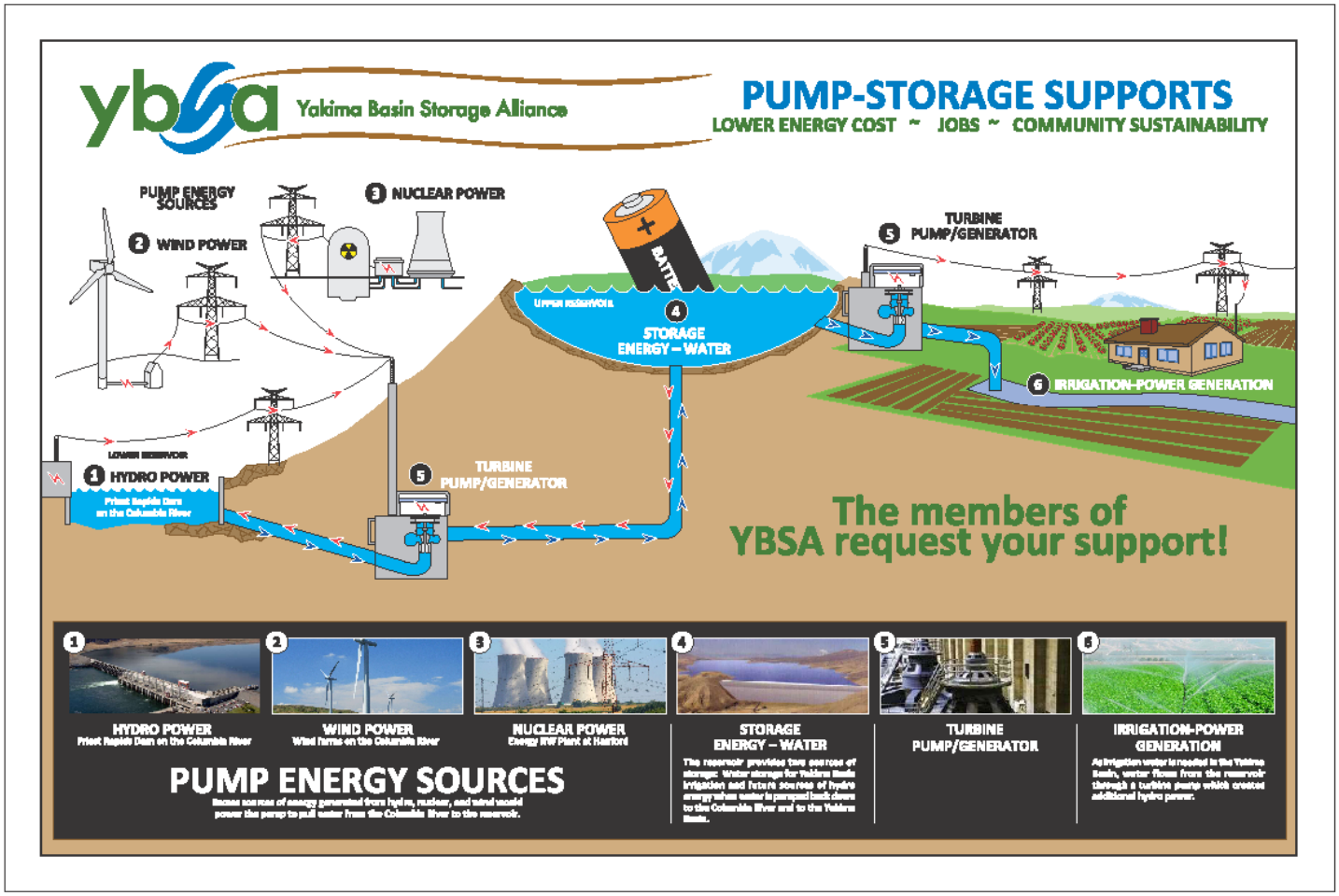
Non-Litigation Solutions

- Improving System Response to Variable Generation
  - ❖ I-TAP
  - ❖ 30-Minute Schedule
  - ❖ Consolidated BAAs
  - ❖ Dynamic Scheduling

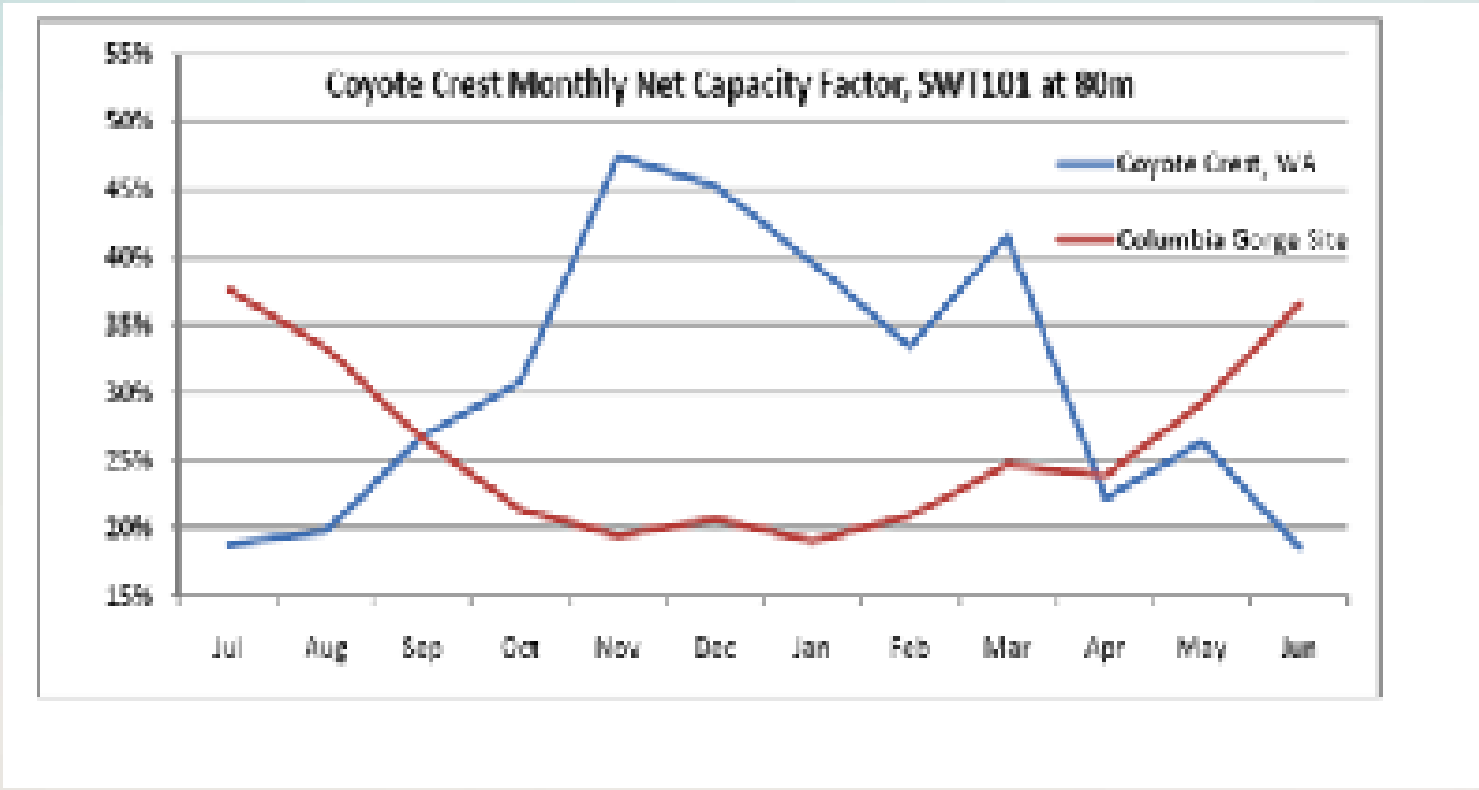
Juan de Fuca Cable

- 550 MW HCDC Light ®
- ± 150 kV
  Bi-directional
- 31 miles Total Length
  22 miles Undersea
- Connecting Victoria, BC, Canada with Port Angeles, WA, US

Pumped Storage



Improving Collective Wind Profile

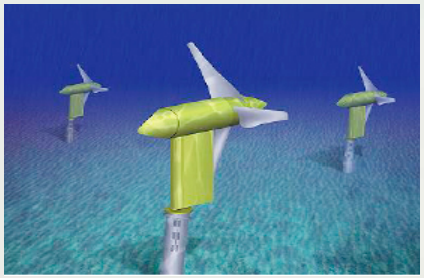


Electric Vehicles

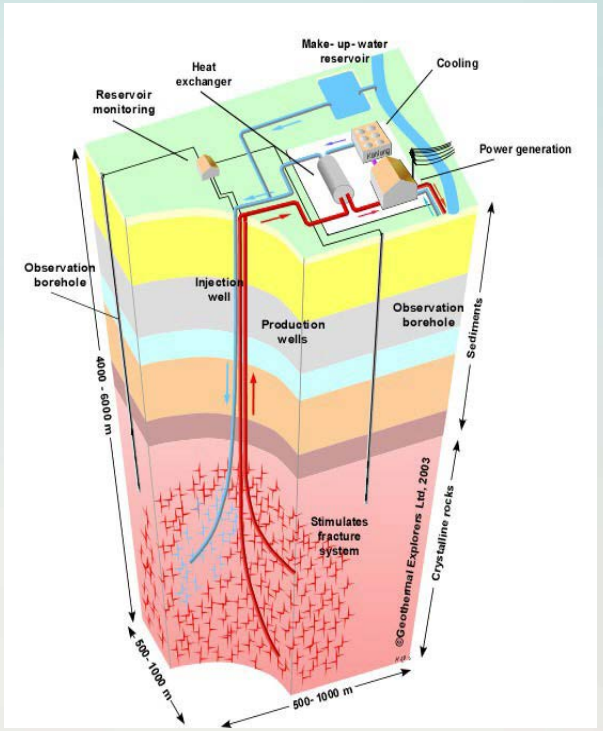
All Renewables Are Not Equal

Low-Impact Hydro

Biomass



Tidal



Geothermal

Thank you!

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