BPA Transmission

Presentation to the

MT Energy & Telecommunications Interim Committee

September 22, 2005

ENERGY & TELECOMMUNICATIONS
INTERIM COMMITTEE
September 22, 2005
Exhibit 4

BPA Transmission

- BPA owns and operates 75% of the Northwest's high voltage electric grid.
- 300,000 square miles in OR, WA, ID, MT and sections of WY, NV, UT and CA.
- 15,000 miles of transmission line, 285 substations.
- Peak load of about 30,000 megawatts.
- $650 million a year in revenues.
- BPA voluntarily operates under FERC's Open Access Transmission Tariff.

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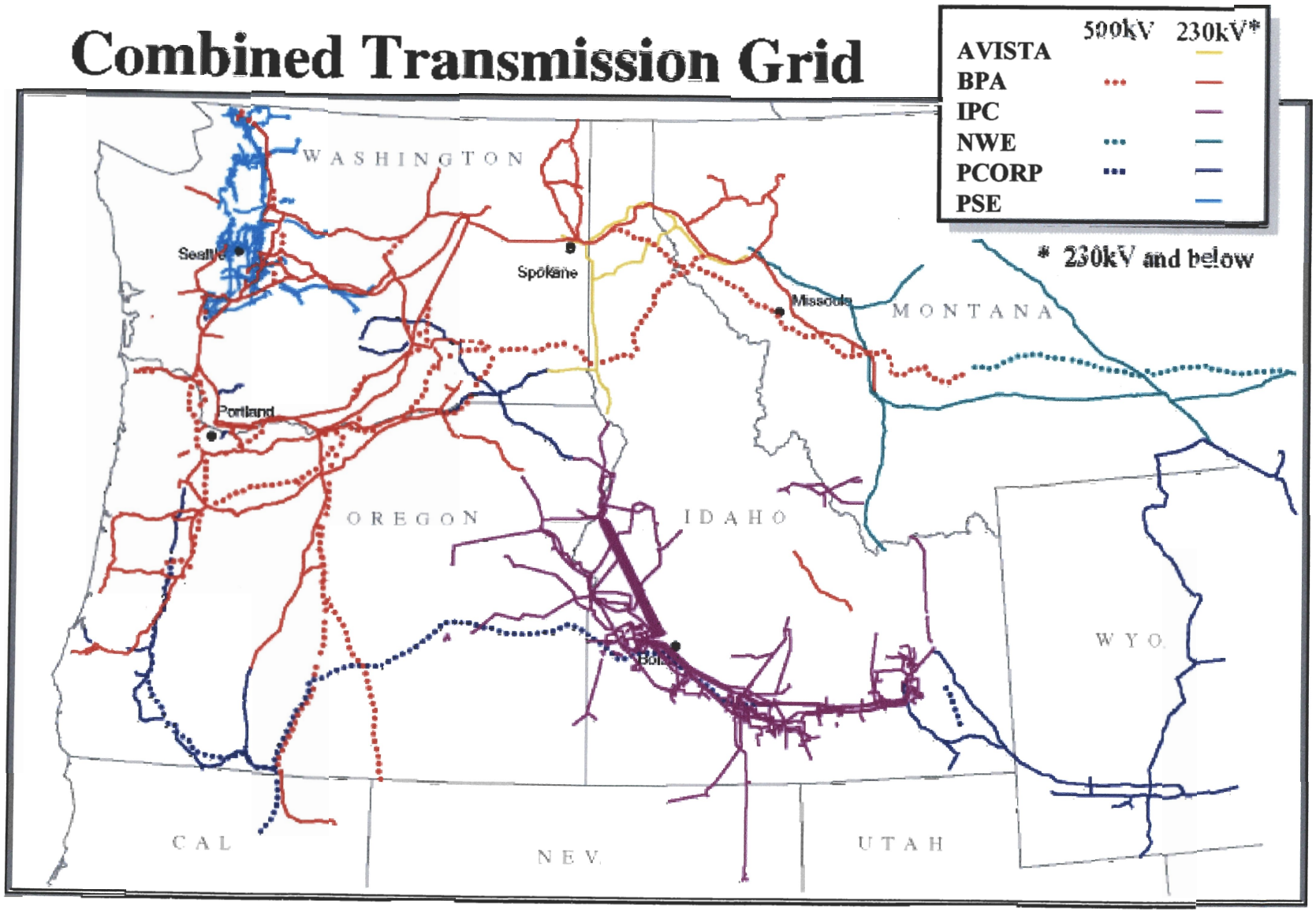
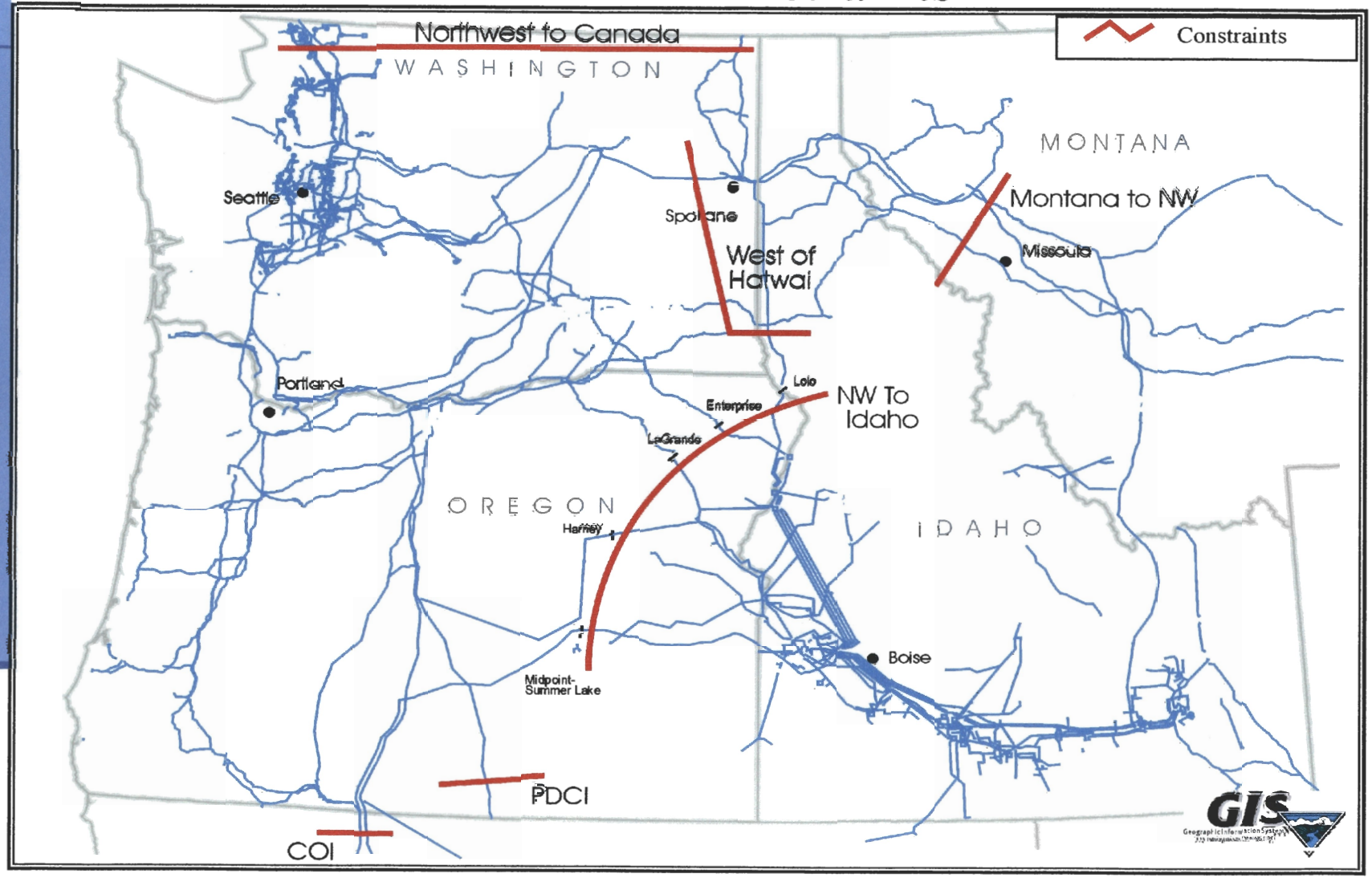
Combined Transmission Grid



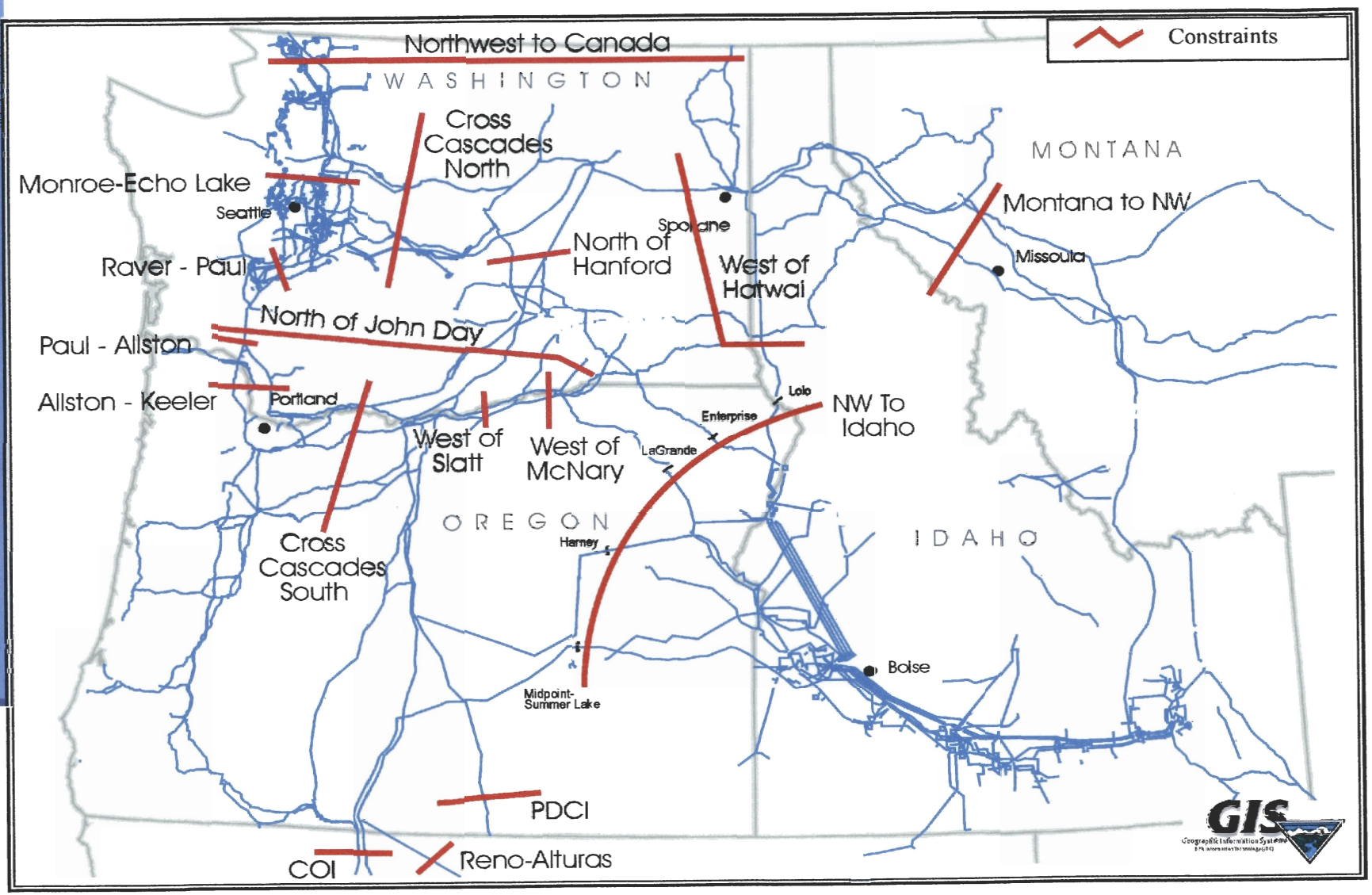
Increasing Access to the Grid

- Expand the Pie
- Increase Utilization
- Coordinated Planning

1994 NW Constraints



2001: Network Constraints



Infrastructure Program

- To address the region's transmission needs, BPA developed a transmission infrastructure program in 2001 to focus on:
  - Maintaining reliable transmission service to population centers.
  - Restoring or enhancing transfer capability across key paths.
  - Providing margin so the system can be maintained.
  - Evaluating and investing in non-wires alternatives.

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Infrastructure Accomplishments

- First major line construction in the Northwest since 1987.
- Invested more than $1 billion over four years.
- Two 500-kV lines completed, one under way.
  - Kangley – Echo lake
  - Coulee – Bell
  - Schultz – Wautoma
- Modernized the nation's largest direct current terminal (Celilo Converter - 3100 MW).
- Several projects to upgrade local load service.

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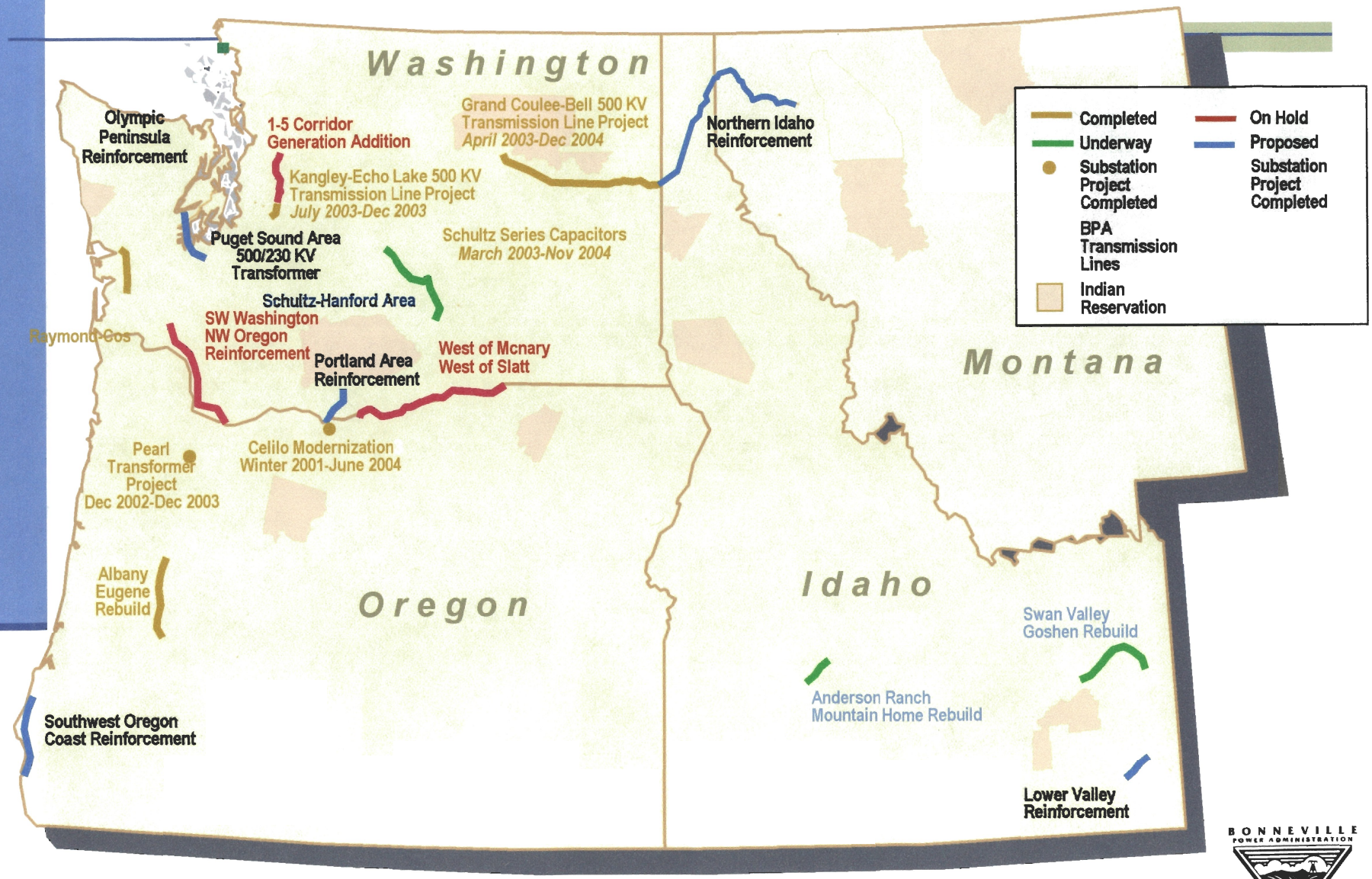
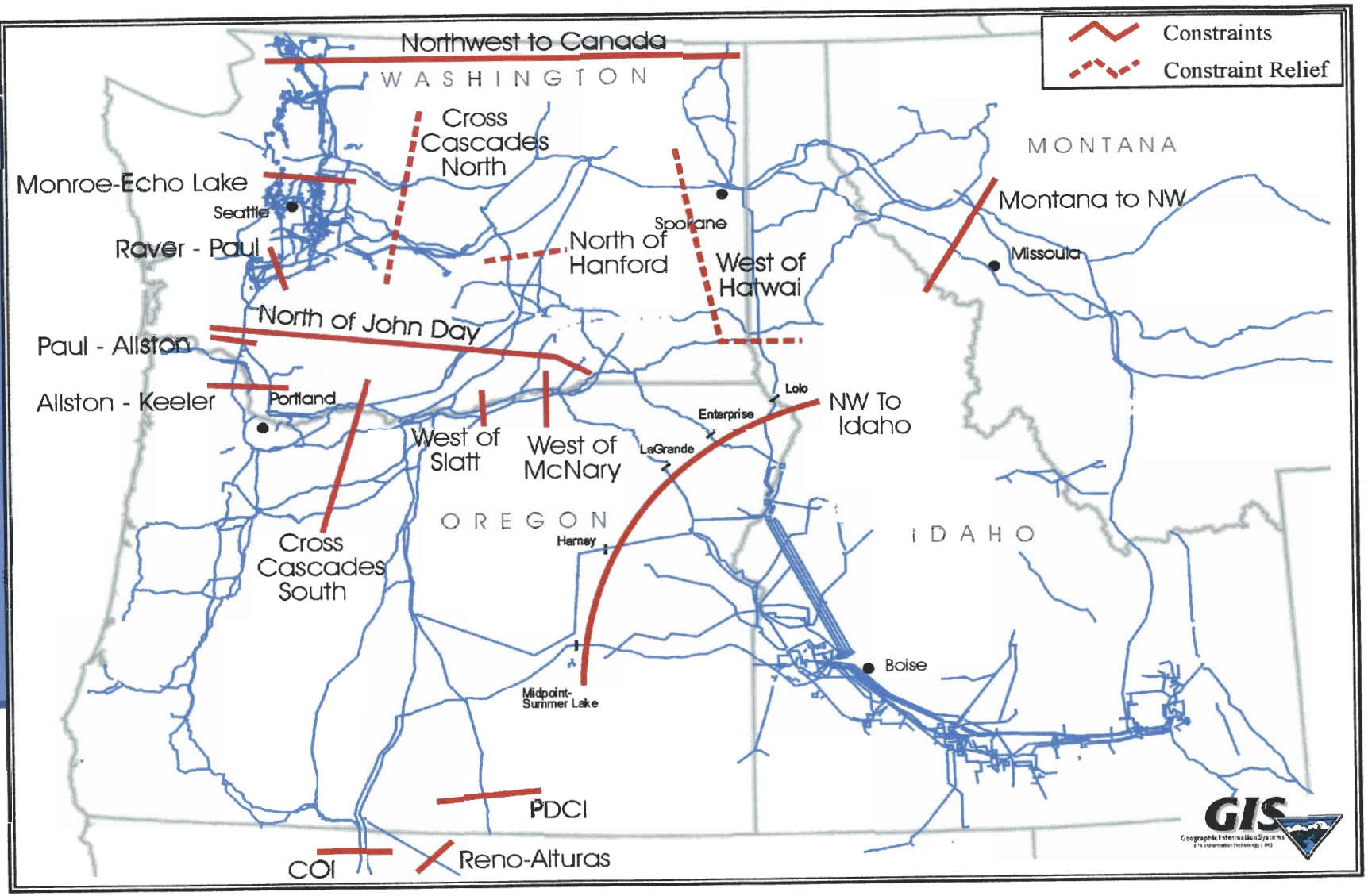
Status of BPA Infrastructure Additions



2005: Network Constraints



Montana to Northwest

NTAC STUDY

- **Three Scenarios**
  - 0 – 250 MW
  - 250 – 750 MW
  - 750 – 1500 MW
- **Typical cost estimates being developed**
- **Initial draft report to be issued soon**
- **Work to be completed in the Fall**

TRANSMISSION SERVICE REQUESTS

- **Detailed engineering studies**

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Non Wires Solutions

- Potential Measures
  - Demand response
  - Energy efficiency
  - Distributed generation
  - Appropriately sited large generation
- Objectives
  - Find least-cost solutions to transmission limitations
  - Provide equivalent reliability to a transmission fix
  - Benefits of transmission deferral
    - Time value of money
    - Option value of delaying costly investments

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Increase Utilization

- New flow-based **A**vailable **T**ransfer **C**apability methodology
- **C**onstraint **S**chedule **M**anagement
- New products and services
  - Conditional firm
  - Redispatch
- Proactive remarketing of unused rights
- Strategic use of nonfirm and short-term firm

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Transmission Adequacy

- Fall 2004, BPA issued white paper on developing standards to cover physical and economic adequacy.
  - Physical – traditional engineering reliability view
  - Economic – how much congestion can we tolerate?
- Public comment provided feedback that guidelines should be developed by the region for the region.
- Northwest Power Pool is sponsoring development
- New guidelines will support existing national and regional reliability criteria.
- Guidelines will be drafted by Sept. 30, 2005 with regional review and approval by Dec. 31, 2005.

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