







# **ACE Diversity Interchange (ADI)**

## ADI Project

ADI or ACE Diversity Interchange is the pooling of Area Control Errors (ACE) to take advantage of control error diversity (momentary imbalances of generation and load). The ADI pilot project has been developed by British Columbia Transmission Corporation (the Host) and the four control areas (Participants) operated by Idaho Power Company, NorthWestern Energy and PacifiCorp (Eastern and Western control areas).

## **ADI** Agreement

The ADI project was formally agreed upon through the execution of the ACE Diversity Interchange Agreement on November 13, 2006. This Agreement established two groups charged with overseeing the effort and implementing ADI:

### ADI Agreement Group:

- Rohan Soulsby, BCTC
- Ronald Schellberg, Idaho Power Company (Chair)
- Ray Brush II, NorthWestern Energy
- Brian Weber, PacifiCorp

# ADI Operating Group:

- Thomas Fung, BCTC (Chair)
- Greg Travis, Idaho Power Company
- Richard Setterstrom, NorthWestern Energy
- Robert Williams, PacifiCorp

#### **ADI Benefits**

By pooling their ACEs, the participants have been able to:

- Reduce control burden on individual control areas;
- Reduce sensitivity to resources with potentially volatile output such as wind projects;
- Reduce unnecessary generator control movement; and,
- Realize improvements in Control Performance Standards.

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## **ADI Project Discussions**

The ADI Participants and BCTC, the ADI Host, have been thoughtful in the design and implementation of ADI. Although no formal approvals were required in order to implement ADI, the project has been discussed with:

- Western Electricity Coordinating Council (WECC) management.
- FERC.
- The WECC Performance Workgroup.
- The Pacific Northwest Security Coordinator

In addition, approaches similar to the ADI pilot project have been discussed by the NWPP Regulation Sharing Task Force.

#### ADI Evaluation

ADI operations are not intended to maximize benefits; instead, ADI is a project that is intended to capture some incremental operating benefits at a relatively low cost.

#### Addition of Parties

ADI operations started March 31, 2007. In accordance with the ACE Diversity Interchange Agreement, once ADI is operational, "any control area operator whose electric control area is within the Western Interconnection, adjacent to and interconnected with one or more Participating Control Area Operations may join as a Party to [the] Agreement." [Section 4.]

# **ADI Suspension**

Implementation of ADI is being done is a safe and conservative manner. In fact, ADI will be suspended whenever there are concerns about system reliability and suspension of ADI means that each control area operator is operating in a "status quo" manner.

#### Other Pertinent Documents:

- ADI Agreement restated
- Documentation (appendix A of the ADI Agreement)
- Orientation seminar presentation
- Phase I Evaluation Report
- NTTG ADI Phase II Charter and Work Plan
- NTTG ADI Phase II presentation

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