



ADI Group Initiative

NTTG Stakeholder Meeting

January 16, 2008



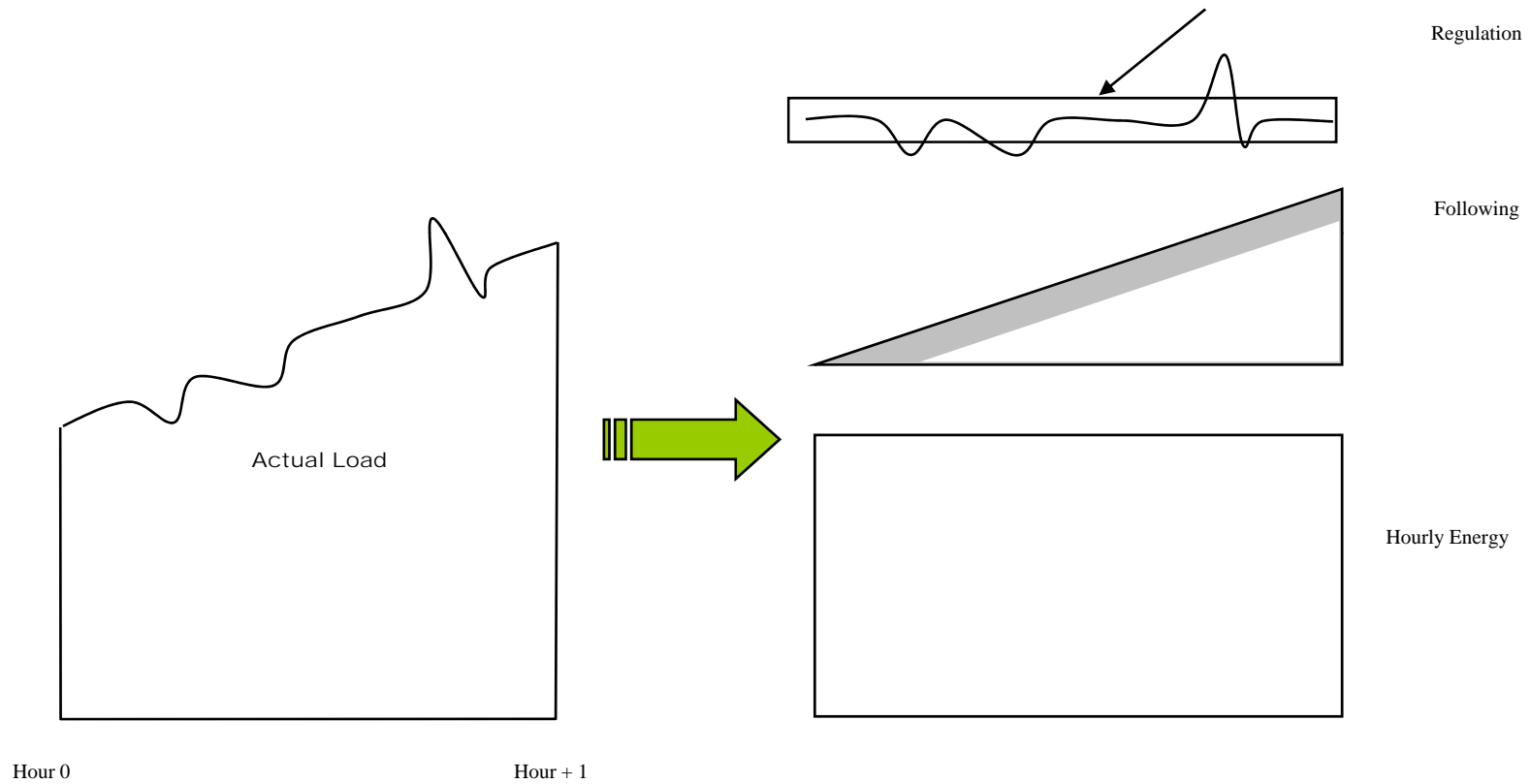


Agenda

- Development Background
- ADI Phase I
- Evaluation
- Future Features/Products
- Work plan

Development Background

ACE Pooling Limits





ADI Phase I

- Developed by Idaho Power, PacifiCorp, Northwestern, BCTC
- Established:
 - Communication between Balancing Areas
 - Software to Net ACE and return ACE adjustment
- Limited to BA's. No direct control
- No Capacity/Energy is sold or exchanged, BA's return energy to itself



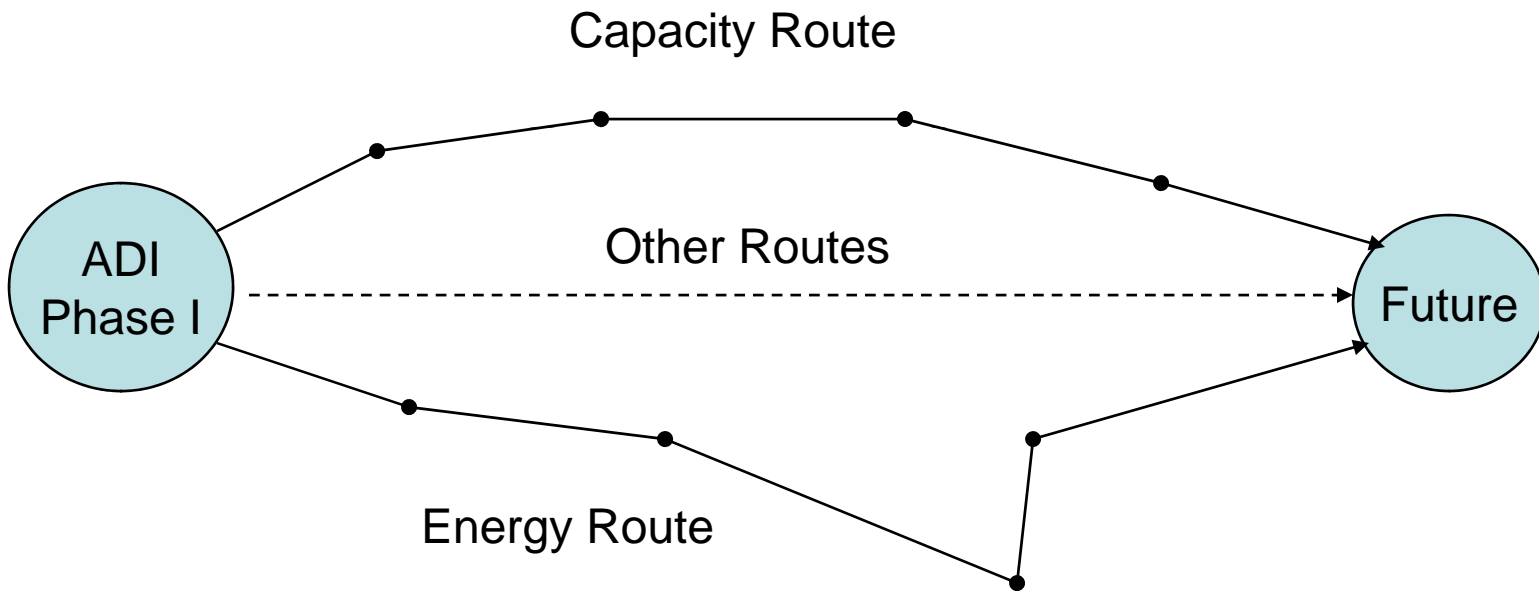
Evaluation

- Energy content practically zero (net ADI correction); Consequently, de minimus impact on accumulated inadvertent. (design goal)
- Participants experience fewer “AGC pulses with “ADI”; reduced wear and tear on controlling generators.
- Participants have had regulation reduced during some AGC cycles.
- Improved control performance with ADI (as measured via CPS).



Future Features/Products

Multiple Paths to a more feature rich energy market



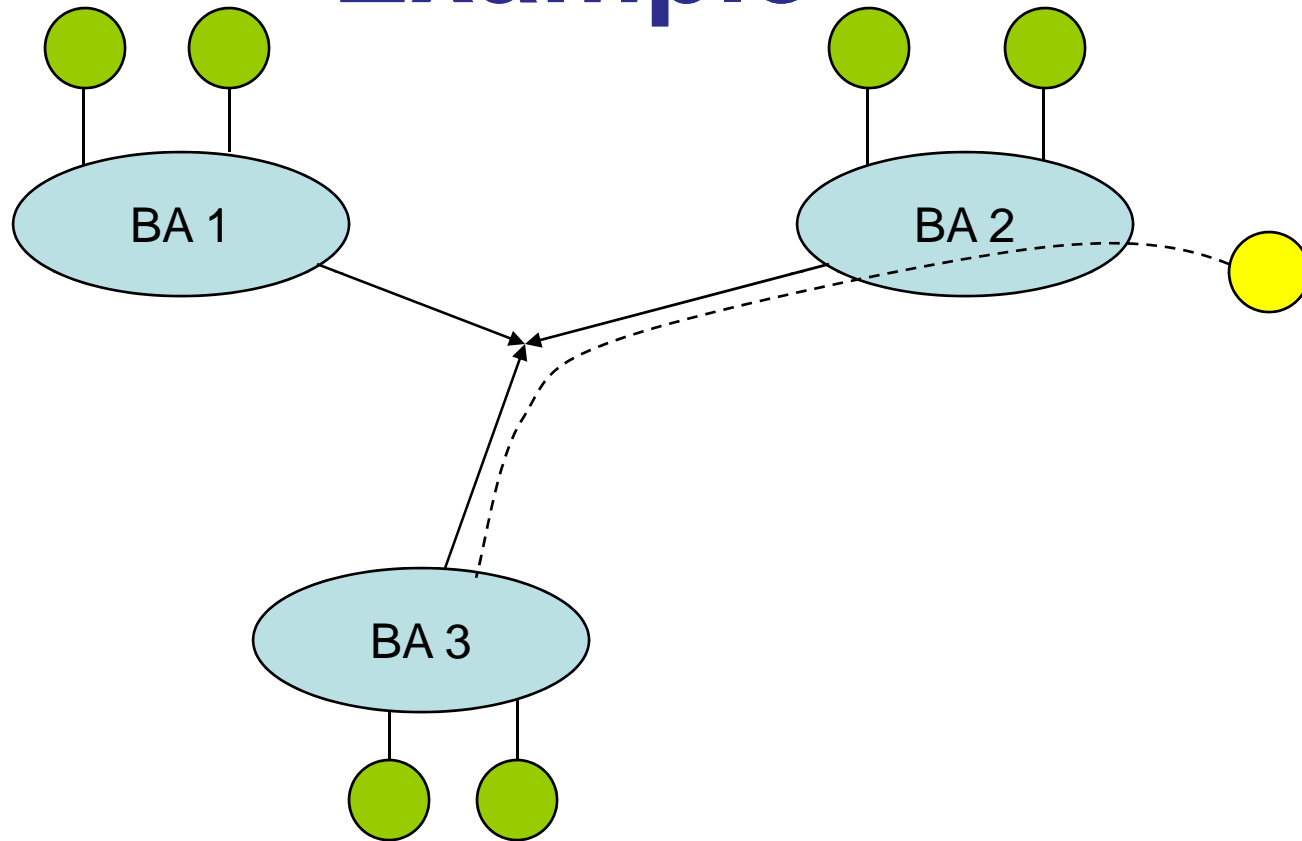


Areas of Development

- **Economic Efficiency**
 - Process to select lowest cost generation
 - Permit participation other generators in satisfying BA requirements
- **Communication**
 - What is required to “control” specific generators?
 - Can signals be passed through existing BA’s?
- **Compensation**
 - How is pricing of energy/capacity products determined?
 - How is settlement accomplished?
- **Transmission**
 - How can transmission constraints be handled?
 - Firm vs Non-Firm
- **Energy Products**
 - Regulation Capacity (no energy, control signal)
 - Load Following (capacity, some energy, control signal)
 - Hourly Energy (fixed energy, no control)



Generator Integration Example





Work Plan Objectives

- **Build upon successful ADI Platform**
- **Face-to-Face Meetings - 3 (associated with other NTTG Meetings)**
 - Kickoff
 - Alternative Selection
 - Plan Approval
- **Number of small Work Groups to investigate high value, low cost feature/products**
- **Conference Calls by feature work groups**
- **Stakeholder driven and supported**
 - no interest, further development not likely
- **Develop milestones**
 - Brainstorm products
 - Select high value, low cost products to evaluate
 - Develop implementation strategy
 - Develop implementation cost/benefits
 - Develop conceptual funding/ implementation plan
 - Report findings
- **Make recommendation to ADI Participants and NTTG Steering Committee**