



# Joint Initiative Infrastructure Work Group Update Dynamic Scheduling

**September 29, 2008**

# Meeting Agenda

- Scope and assumptions
- Deliverables
- Work streams
- Key Milestones
- Next Steps and Meeting Schedule

# Straw Scope Statement

- Scope of initial effort is to develop a business case and feasibility assessment for the development of a common dynamic communication infrastructure/ protocol that will allow participating entities to purchase or sell capacity and energy on a dynamic basis.
- The protocol will use existing transmission service products, as available, and existing scheduling processes to the extent practical.

# Key Assumptions

- This effort is intended to define the minimum structure necessary to support implementation of a common dynamic communication infrastructure/protocol. Expansion and/or enhancement of this infrastructure may be considered in future stages.
- This infrastructure/protocol will enable the source and sink for a dynamic schedule to be changed easily and quickly.
- This effort is limited to the development of a business case and high level technical design for communication structure and protocols only
  - The technical design will accommodate many product types, but product development is out of scope
  - Identification of an energy product that will use this infrastructure is highly desirable

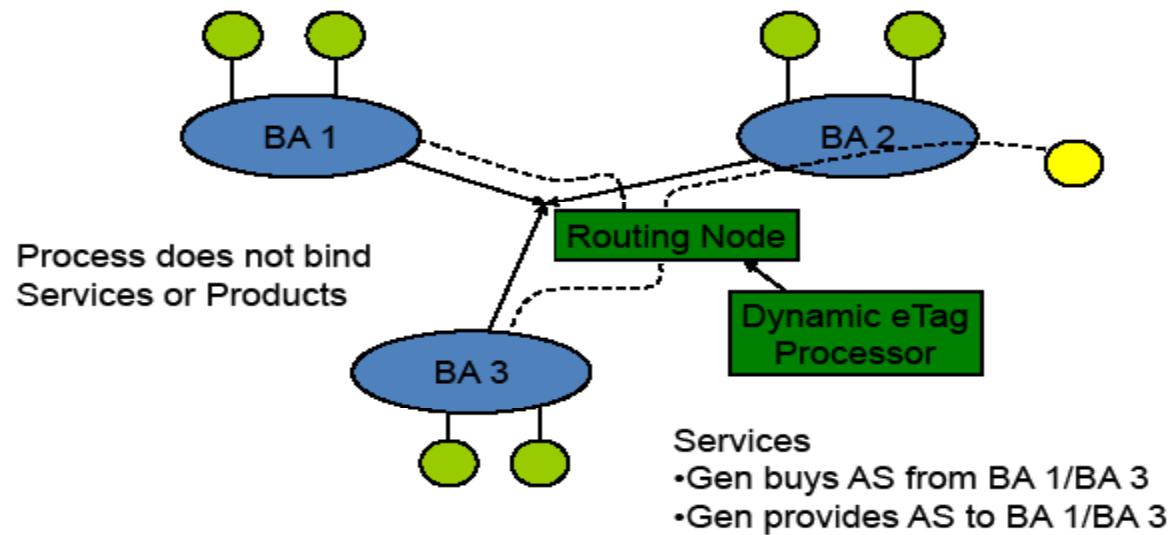
# Key Assumptions

- Tariff changes will not be required
- Bi-lateral two party trades between the parties is assumed
- A node will be developed for a group of aggregated utilities. Each balancing area will not have its own node
- Nodes will communicate with balancing areas
  - Generators participating in transactions will do so via a balancing authority

# Conceptual Diagram



## NTTG Putting it together



# Out of Scope

- Development of products
- Development of a market or bi-lateral trading board
- Tariff changes
- Creation of intra-hour etags (if developed elsewhere, design will accommodate them with necessary lead time)

# In-Scope

- Assess and specify technical feasibility requirements and develop high level design
  - How many nodes
    - Information exchange
      - Node-to-BA
      - Node-to-Node
      - BA-to-Gen
    - EMS calculations based on product requirements (dynamic schedule)
    - Determine dynamic eTag source and processing
    - What are reliability responsibilities – redundancy requirements?

# In-Scope

- Describe technical protocols and system implementation requirements
- Review and assess legal/jurisdictional issues
- Business case development
  - Key objectives, assumptions, purpose
  - Final project implementation plan
    - Deliverables and milestones
    - Capital and OM costs (staffing resources, hw/sw, etc.)
    - Implementation timeline
  - Value and when will it be realized
  - Risks and how they will be addressed
  - Dependencies
- Development of an Implementation Agreement
  - Terms & Conditions for host and participants
  - Terms & Conditions for opting out

# Final Report – Draft Outline

<b>Dynamic Scheduling Infrastructure</b>	
<b>Table of Contents</b>	
I. Scope and Purpose .....	1
II. Current Process and Procedures .....	1
A. Historical Processes.....	1
B. Proposal.....	3
C. Implementation Issues.....	3
II. Communication Infrastructure	
A. Introduction.....	5
B. Processing Node.....	7
C. Business Structure.....	11
D. Infrastructure and Cost .....	12
E. Value of Improved Dynamic Scheduling Infrastructure.....	13
Attachments:	
Attachment A – Data Requirements	16
Attachment B – EMS Implementation Flow Chart	17
Attachment C – Documentation	19

# Potential Work Streams

## Policy Workgroup

- Authority to act on behalf of participating utility

## Protocol Development Workgroup

- EMS /AGC Control Operation specialists

## Implementation Plan Development

- EMS/AGC Control Operation Specialists

# Key Milestones/Dates

October	November	December	January
<ul style="list-style-type: none"> <li>▪ Define ICCP Structure <ul style="list-style-type: none"> <li>• How many nodes?</li> <li>• Communication between nodes</li> <li>• Common template</li> </ul> </li> <li>▪ EMS Implementation <ul style="list-style-type: none"> <li>• What data is driving the routing process (how do you set up transaction?)</li> <li>• Where is the data coming from (who supplies via what mechanism?)</li> <li>• Who initiates transaction?</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ EMS Implementation <ul style="list-style-type: none"> <li>• Energy accounting implementation issues</li> <li>• AGC Calculation</li> </ul> </li> <li>▪ Contract Issues</li> </ul>	<ul style="list-style-type: none"> <li>▪ Implementation Plan <ul style="list-style-type: none"> <li>• Utilize existing ADI hw/sw or purchase?</li> <li>• Deliverables &amp; milestones</li> <li>• Resources requirements</li> <li>• Capital and maintenance costs</li> <li>• Implementation schedule</li> </ul> </li> <li>▪ Review and assess legal/jurisdictional issues</li> </ul>	<ul style="list-style-type: none"> <li>▪ Business case development <ul style="list-style-type: none"> <li>• Key objectives, assumptions, purpose</li> <li>• Benefits and when realized</li> <li>• Risks and how addressed</li> </ul> </li> <li>▪ Development of Implementation Agreement</li> <li>▪ Offer Implementation Agreement</li> </ul>

# Next Steps

- Further flesh out technical issues and concerns that will need to be addressed
- Categorize issues by human resource/expertise requirement and estimate workload complete tasks
- Next meeting is scheduled for 9/29 via conference call or in person at the WECC Offices in SLC after the Joint Initiation Integration Meeting