



# 2010 10-Year Assessment Scope Customer and Stakeholder Meeting

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July 10, 2009  
Pewaukee CR160



# Purpose

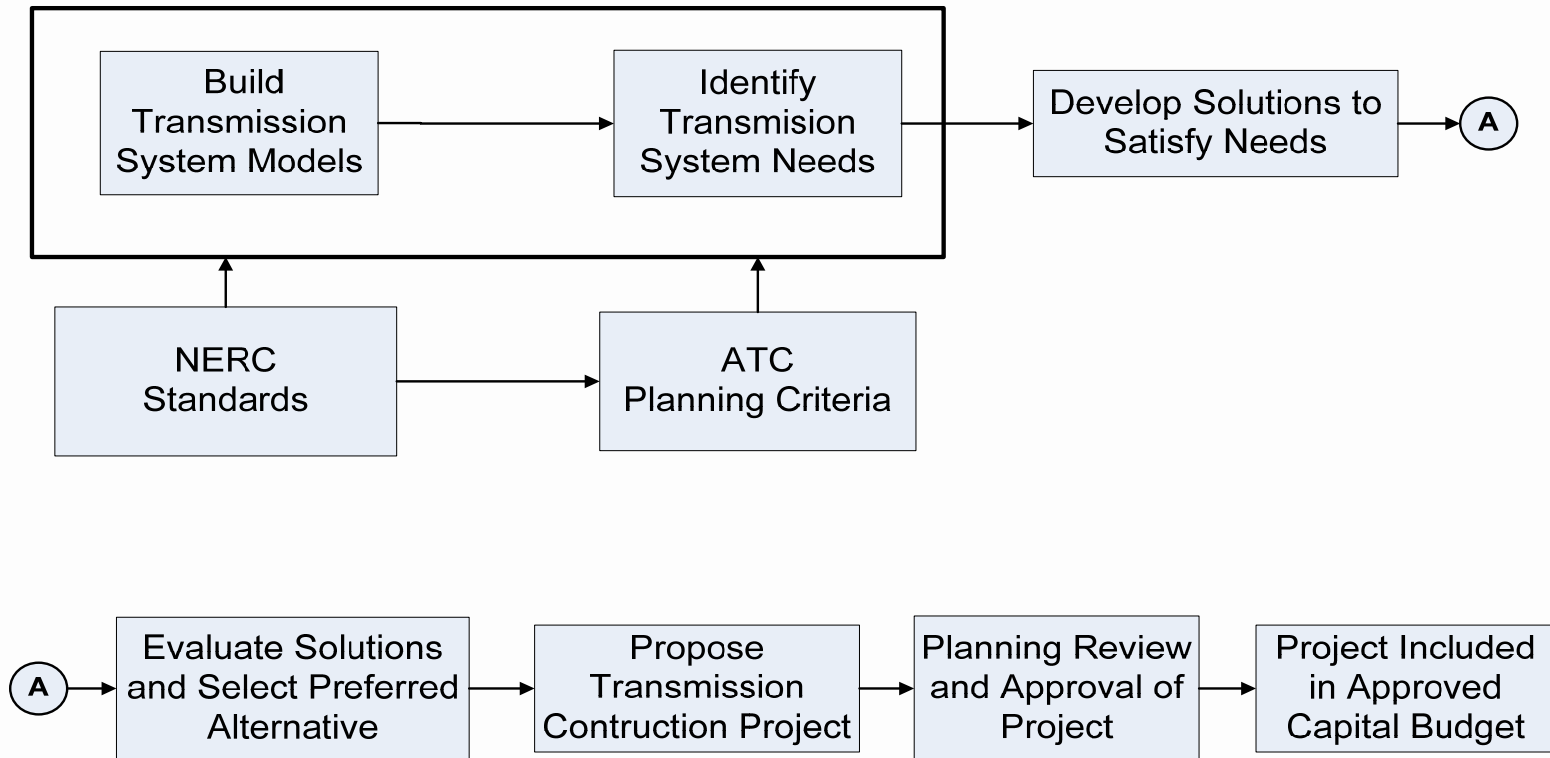
- FERC Order 890 Compliance
- Solicit pre-Study Comments
  - 2010 Assessment Process & Scope
  - Planning Criteria
  - 2010 Assessment Assumptions



# FERC 890 Principles

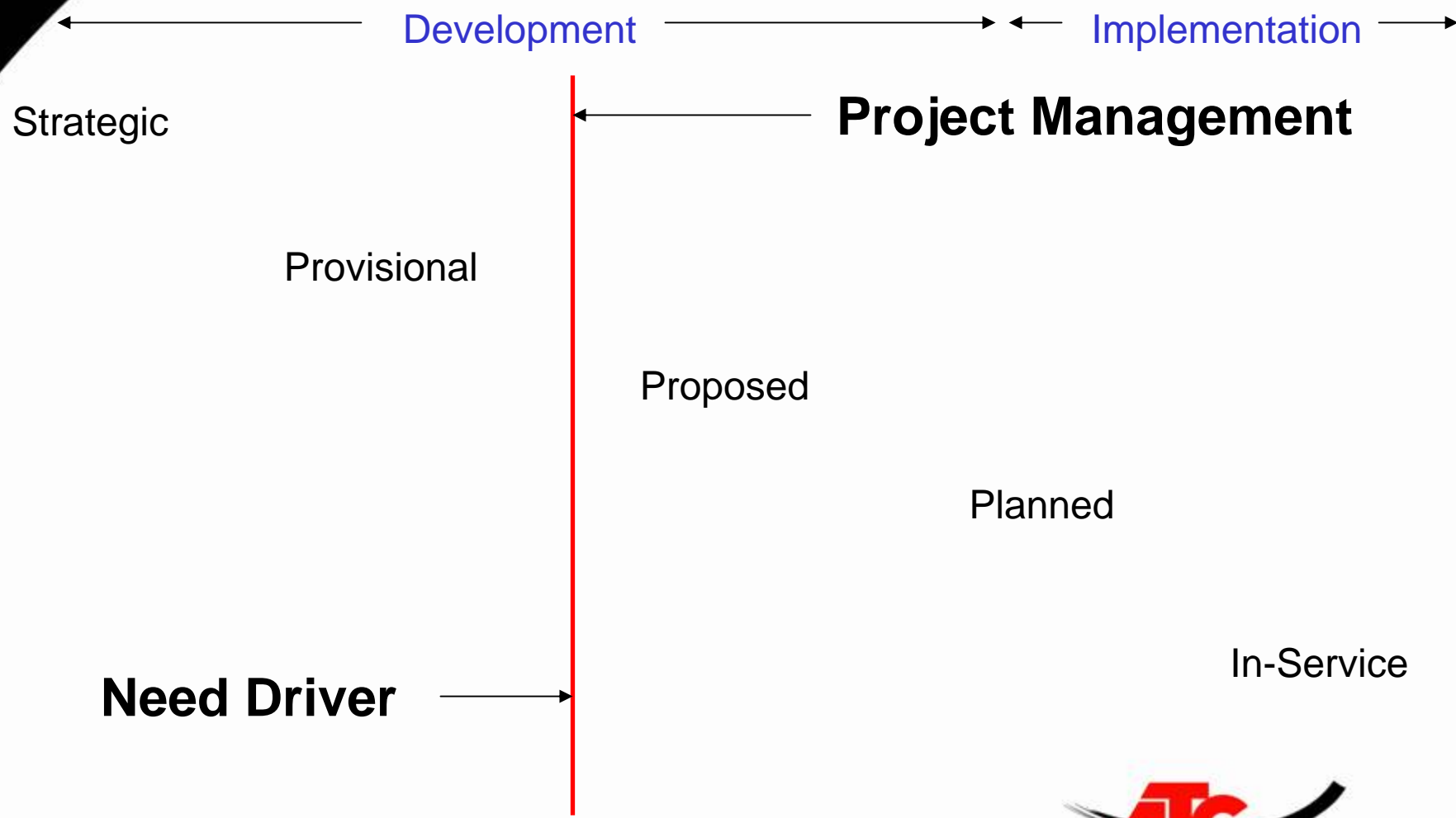
- Coordination
- Openness
- Transparency
- Information Exchange
- Comparability
- Economic Studies

# Transmission Planning Process

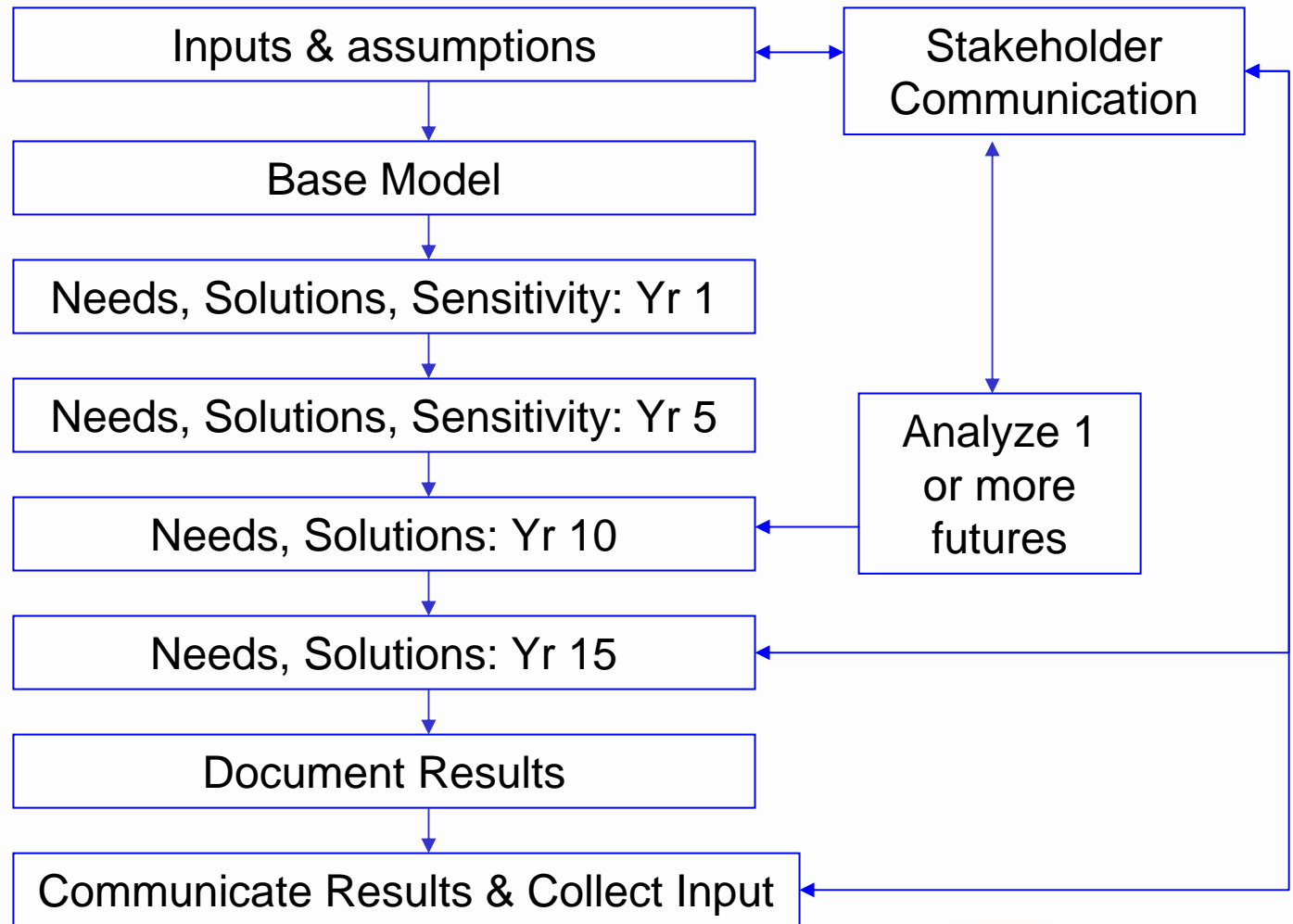




# Public Planning and Asset Delivery



# Enhanced Assessment





# Planning Criteria

- NERC Standards
- ATC Planning Criteria
  - <http://www.atc10yearplan.com>
    - Planning Factors
    - Planning criteria & Tools
    - System Performance Criteriaor directly at,
    - <http://www.atc10yearplan.com/PF7a.shtml>
- Solicit Improvement Ideas



# ATC Planning Criteria

- Annual Review
- NERC and Industry Changes
- Solicit Stakeholder Comments
- ATC 2010 focus limited
  - Models considered
  - Model Methods descrip.
  - NERC VAR-001: V schedule
  - Acronyms and references





# Model Years

- 2010 S Peak (As-built)
- 2011
- 2015
- 2020
- 2025



# Load - Historical

- Request by October 1
  - summer peak
  - winter peak
  - Light load
- Due by December 1
- Add to Databases

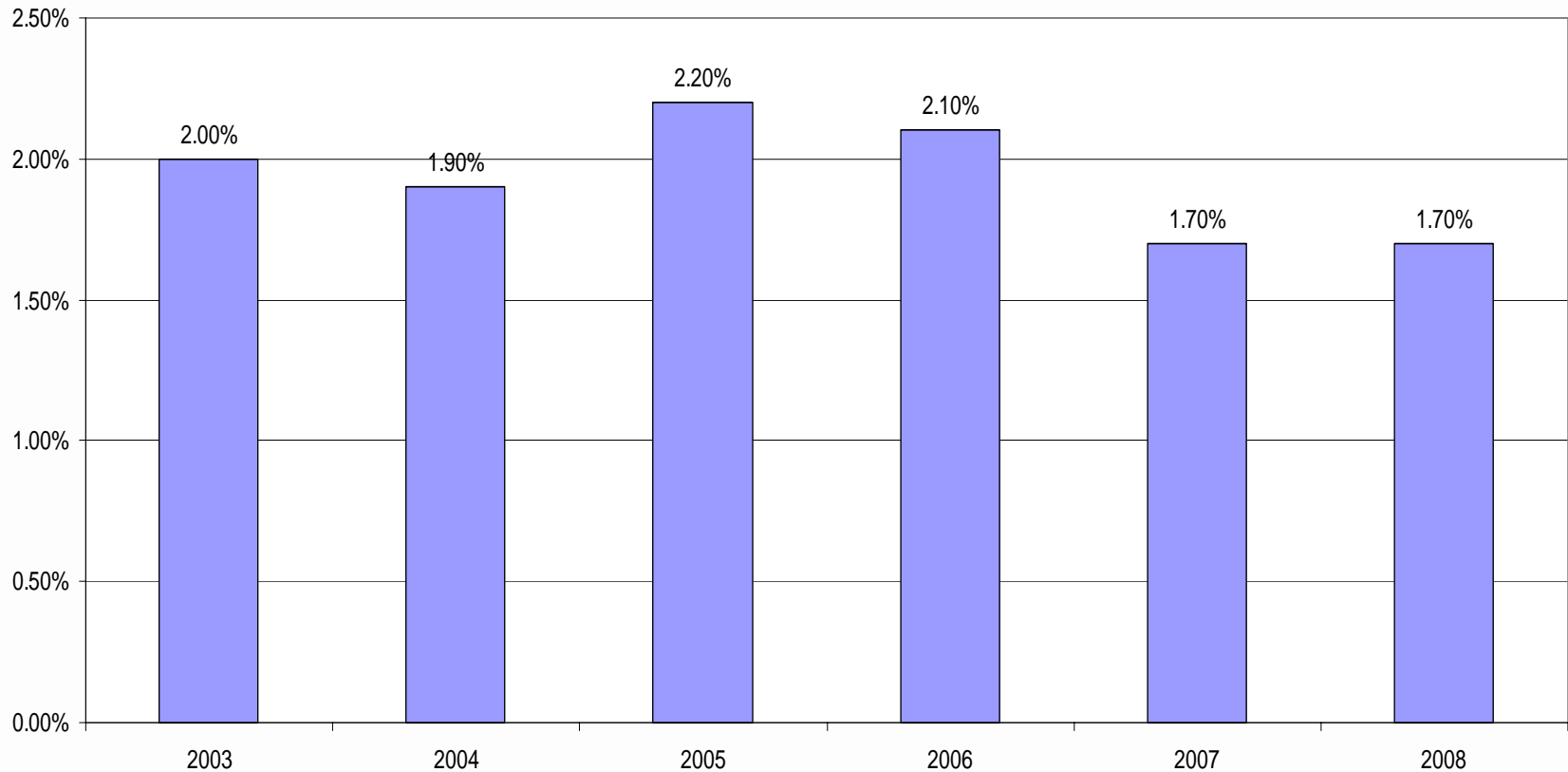


# Load - Forecasted

- Requested LDC forecasts Feb 2009
  - 11 years
    - option to provide 15 years
    - ATC will collaborate to create 15-years
  - Consistent with Resource Planning forecast
    - required by NERC Standards
    - Load that can be interrupted
- All received by June 2008
- ATC Compiles
  - Comparisons to previous forecasts
  - Differences confirmed with LDCs
  - Finalized copy to LDCs – 3<sup>rd</sup> Qtr 2009

# Load – Forecasted

ATC 10-Year Assessment  
Forecasted Load Growth Rates  
*Compounded Annually*





# Generation Model

## Generation Additions:

- Only add generators with signed Interconnection Agreements
- Additions modeled at MISO Facility study location
- MISO queue Suspended Generators with signed IAs
  - included in after 18 months

## Generation Retirements:

- generators with a completed MISO Attachment Y are modeled as retired.

## Model Change Cut-off Date



# Generation Dispatch

## Balancing Authority Merit Order Dispatch:

- Used for all Assessment models except the Shoulder Peak
- Balancing Authority Dispatch from merit order provided by Balancing Authority

## ATC-Wide Merit Order Dispatch:

- Shoulder Peak models
- ATC-Wide Merit Order Dispatch determined with ProMOD

## General Dispatch Notes:

- signed IA
- no scheduled transactions
- generation included in the host Balancing Authority.



# Reactive Power Resources

## Intact System

- 90% max VAr capability
- Meet intact voltage criteria.

## Outage Conditions

- 95% max VAr capability
- Meet voltage criteria for outages



# Sensitivities

- Load Forecast
  - 5% above expected
  - 5<sup>th</sup> and 10<sup>th</sup> years
- Generation Dispatch
  - West-to-east – 70% load
  - East-to-west – 90% load
- Futures (?)






# 2010 Assessment Studies

- 1<sup>st</sup> contingency Needs – 4 years
- Multiple outage screening
- New Possibilities
  - Wind/Slow growth/ High bias
  - Cascading Studies (multiple outages)
  - Urban Area Ultimate Strategies
- Generation -Transmission studies
- Distribution -Transmission studies
- Economic benefits studies



# Schedule

- Expected Load Forecast – June 30<sup>th</sup>
- **Stakeholder Meeting** – July 10<sup>th</sup>
- **Stakeholder Comments** – July 24<sup>th</sup>
- Initial Study Plan - July 31, 2009
- Criteria and Methodology Update – August 31<sup>st</sup>
- Model Development – 3<sup>rd</sup> Qtr
- Preliminary Needs – 4<sup>th</sup> Qtr
- **Preliminary Results** – 1<sup>st</sup> Qtr 2010
- Final Solutions – 2<sup>nd</sup> Qtr 2010
- **Document and Publish** – 3<sup>rd</sup> Qtr 2010



# To Provide Solicited Comments or for More Information

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Or call at 920-338-6537



# Thanks for Participating!