

2012 Assessment Preliminary Study Design

Customer/Stakeholder Meeting
Pewaukee
April 28, 2011

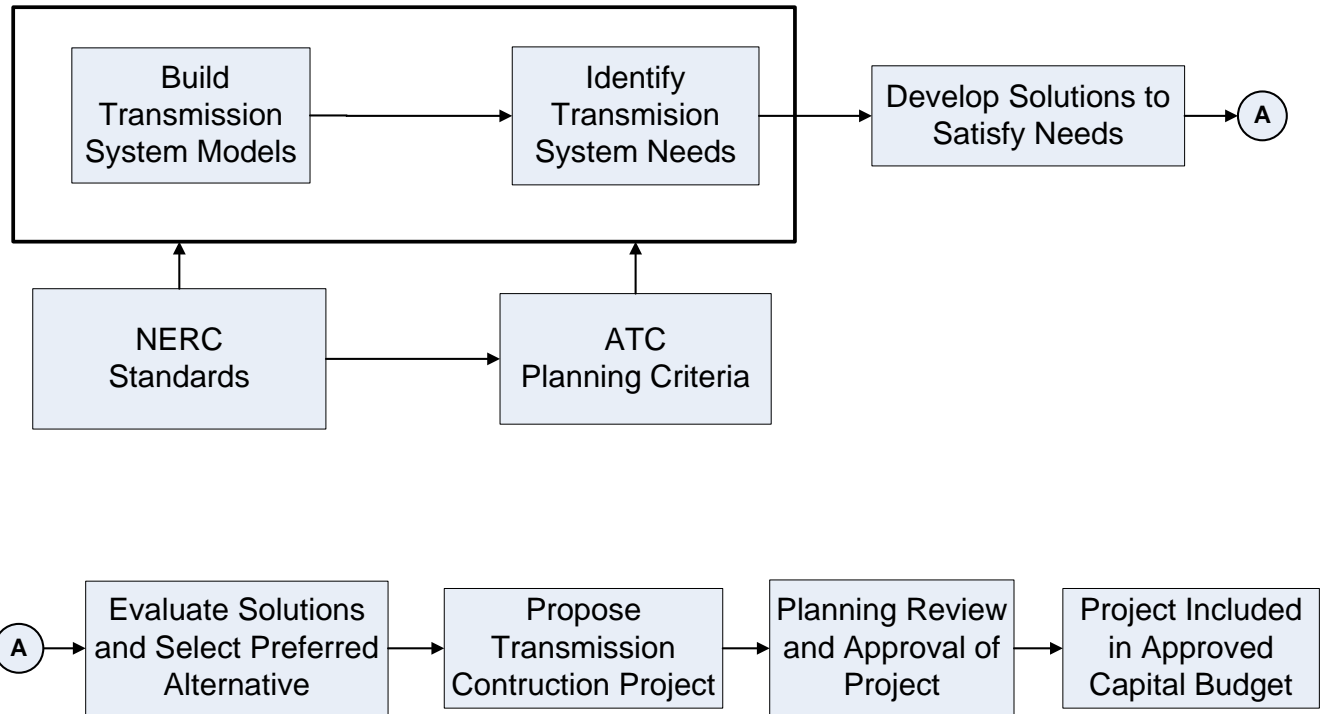
Helping to **keep the lights on,**
businesses running and communities strong®



Purpose

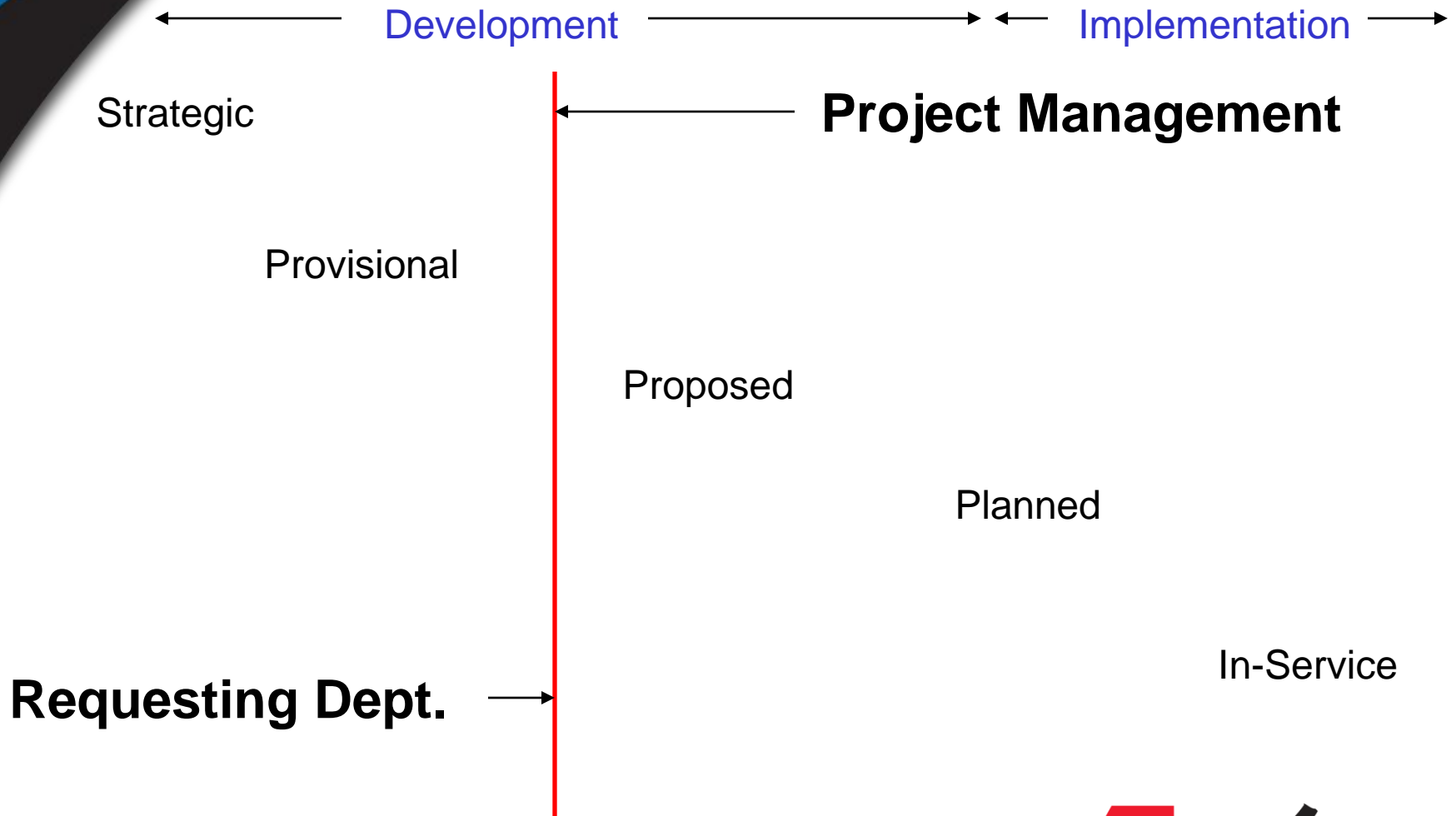
- Solicit pre-Study Comments
 - 2012 Assessment Process – similar to past
 - Planning Criteria
 - 2012 Assessment Assumptions
- FERC Order 890 Compliance

Transmission Planning Process

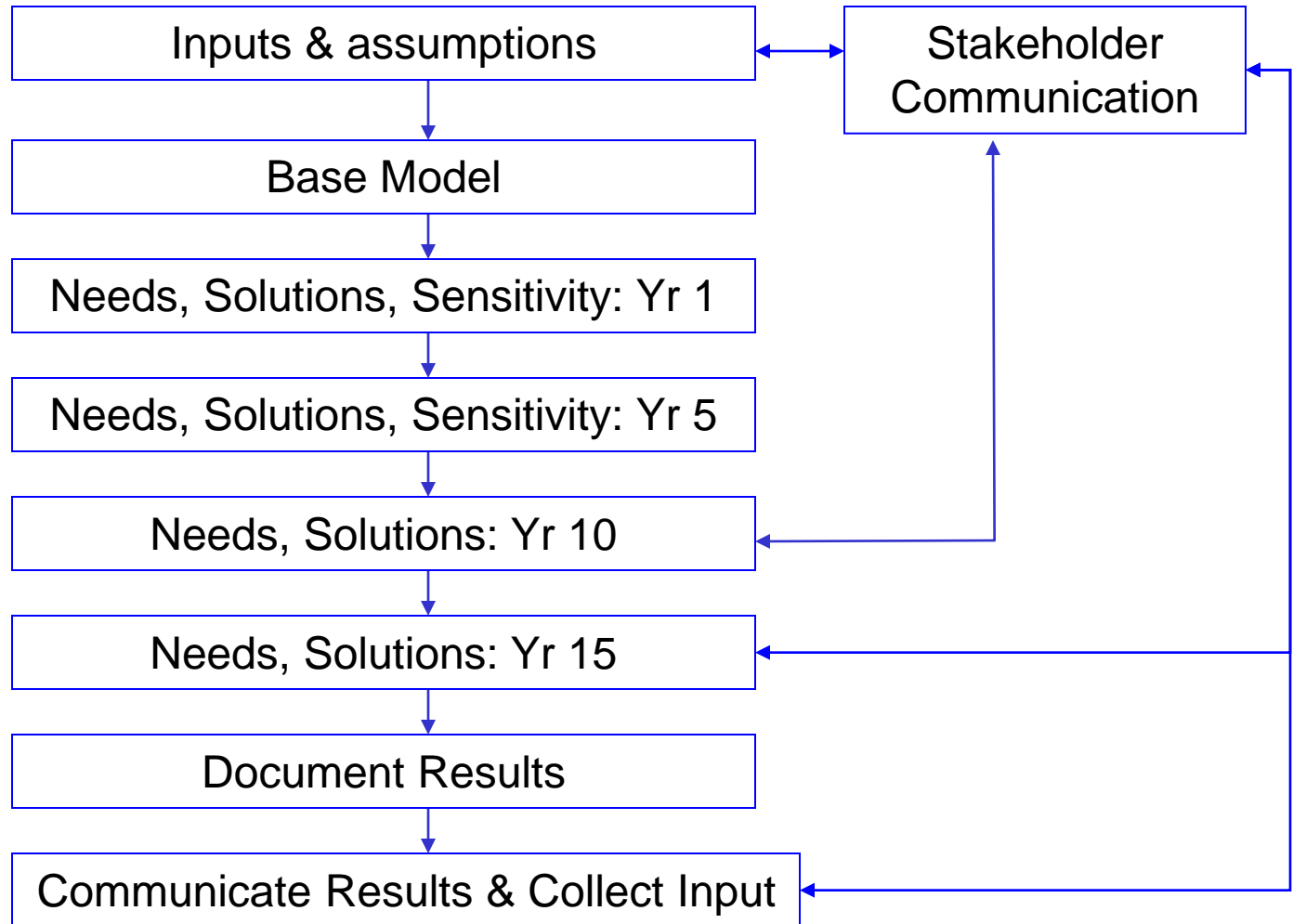




Planning & Project Process



Assessment Process



Planning Criteria & Methodology

- NERC Standards
- ATC Planning Criteria
<http://www.atc10yearplan.com>
Planning Factors
- Solicit Improvement Ideas
- Enhancing to follow changing standards

Model Years

- 2012 (As-Planned)
- 2013
- 2017
- 2022
- 2027

Load - Historical

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

Load - Forecasted

- Requested LDC forecasts Feb 2011
 - 11 years
 - Consistent with Resource Planning forecast
- Due in April 2011
- ATC Compiles
 - Comparisons to previous forecasts
 - Differences confirmed with LDCs
 - Finalized copy to LDCs – 3rd Qtr 2011

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 Assessment Summer Peak models Balancing Authority Dispatch from merit order provided by Balancing

ATC-Wide Merit Order Dispatch:

- Shoulder and Minimum Load models
- ATC-Wide Merit Order Dispatch determined with ProMOD

General Dispatch Notes:

- signed IA
- but, no scheduled transactions
- then 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
 - 105% of expected
 - 5th and 10th years
- Generation Dispatch
 - 3000 MW import – 70% load
 - East-to-west – 90% load
- High Wind - shoulder load?
- Minimum Load
- 65% Load, High Wind?




2012 Assessment Studies

- 1st contingency Needs – 4 years
- Multiple outage screening
- Generation -Transmission studies
- Distribution -Transmission studies
- Economic benefits studies
- Regional Reliability
- Public Policy Benefits

Schedule

- Expected Load Forecast – 2nd & 3rd Qtr 2011
- **Stakeholder Study Meeting** – 2nd Qtr 2011
- **Stakeholder Comments** – May 31, 2011
- Initial Study Design - July, 2011
- Criteria and Methodology Update – 3rd Qtr 2011
- Model Development – 3rd Qtr 2011
- **Preliminary Needs** – 1st Qtr 2012
- **Preliminary Solutions** – 2nd Qtr 2012
- **Document and Publish** – 3rd Qtr 2012



To Provide Solicited Comments or for More Information

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Thanks for Participating!