

# **ESP Working Group INITIAL PLANNING PROCESS Scheduling and Implementation**

By

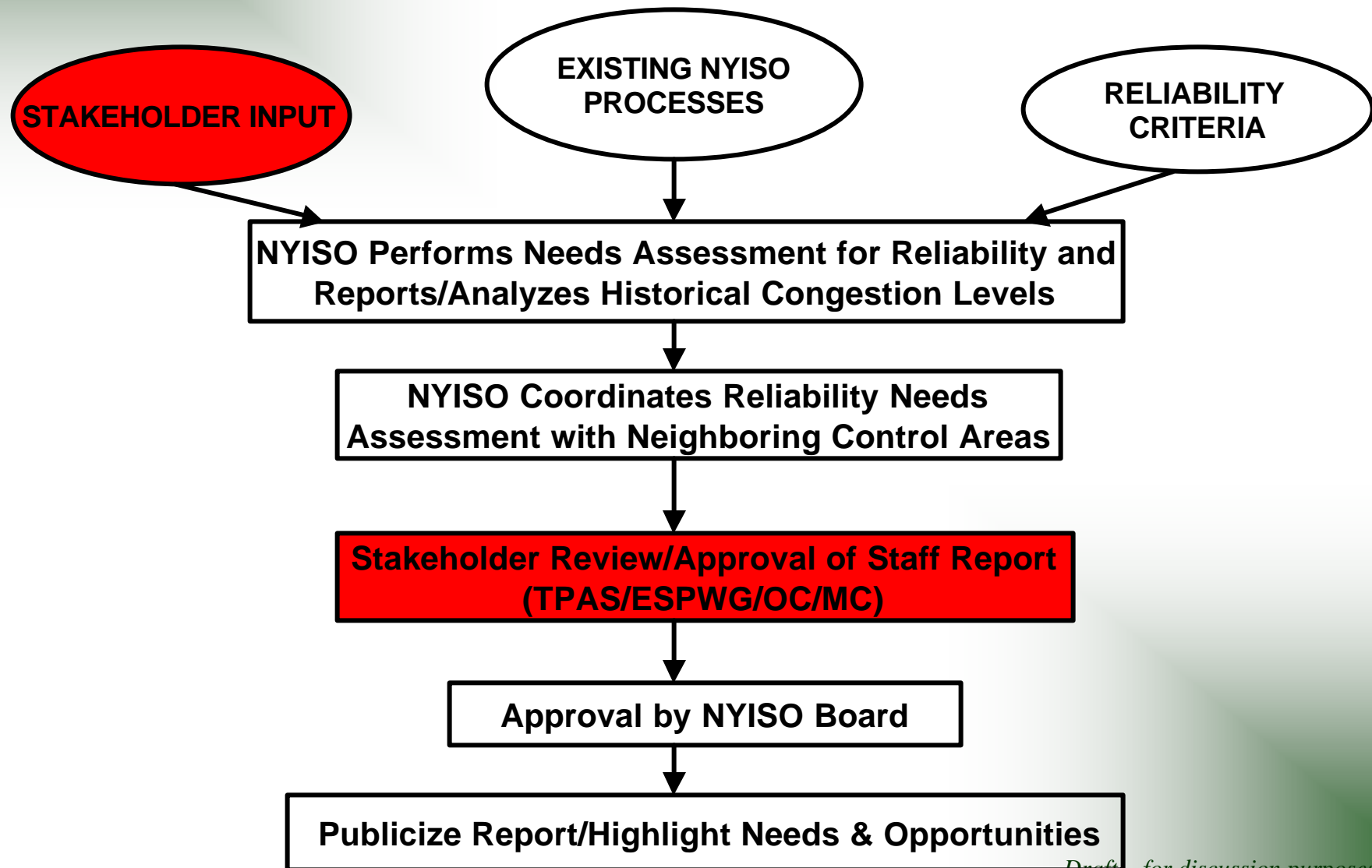
William A. Lamanna

ESP Working Group Meeting

December 16, 2003

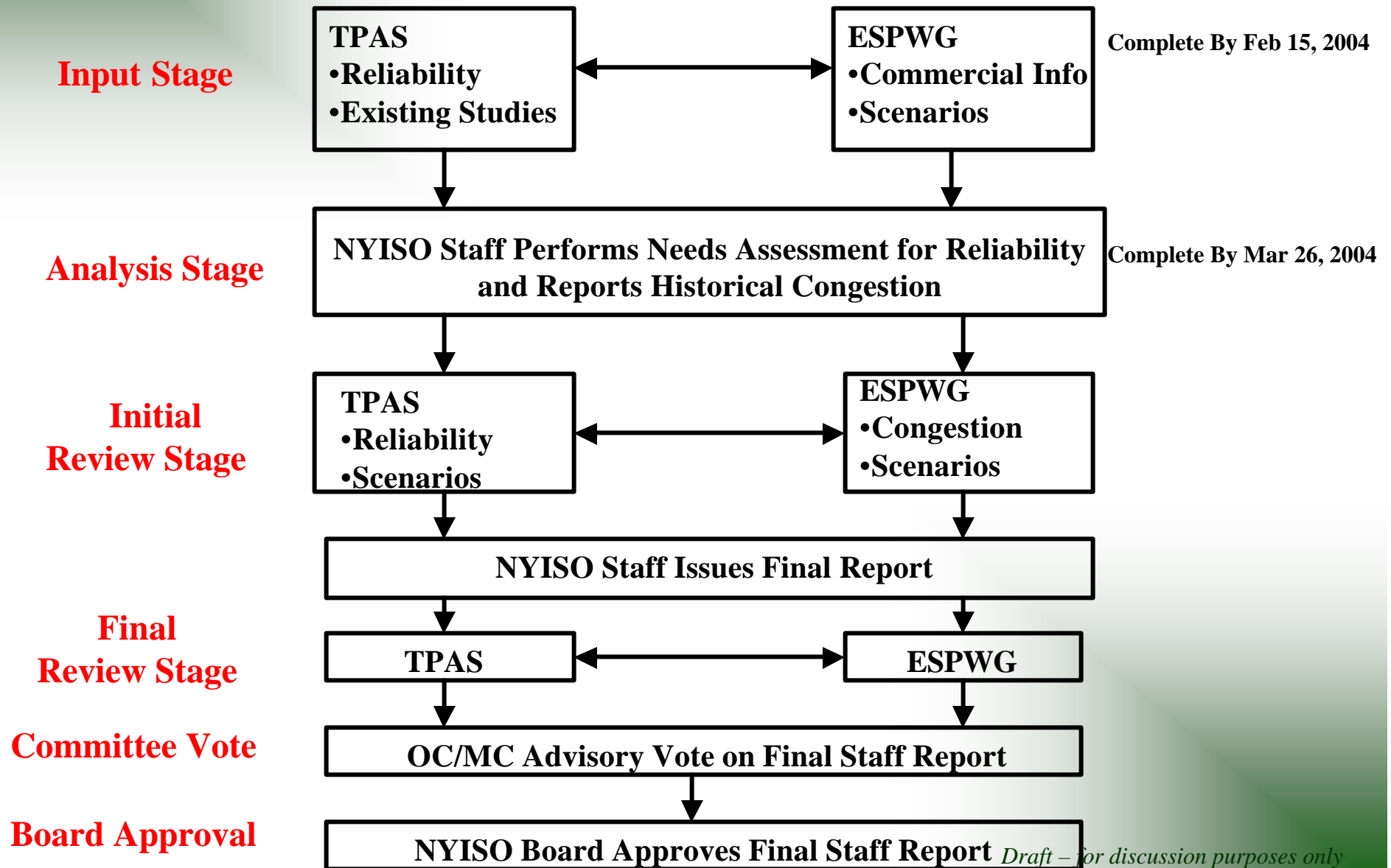
Albany, New York

# NYISO Initial Planning Process



*Draft for discussion purposes only*

# NYISO Initial Planning Process: Stakeholder Participation



NYISO Initial Planning Process  
Timeline

**Attachment C**

ID	Task Name	Finish	02				Half 1, 2003					Half 2, 2003				Half 1, 2004					Half						
			Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb		Mar	Apr	May	Jun	Jul	
1	<b>Initial Planning Process</b>	Wed 6/30/04																									
2	<b>Initial Assessment Report</b>	Wed 6/30/04																									
3	Develop Report	Fri 3/26/04																									
4	Committee Review (TPAS/ESPWG)	Wed 4/28/04																									
5	Committee Vote (OC/MC)	Tue 6/1/04																									
6	BOD Acceptance	Wed 6/30/04																									
7	<b>Load and Capacity Data Book</b>	Thu 7/3/03																									
8	<b>Identify Qualifying Interconnection Projects</b>	Thu 2/27/03																									
9	<b>Meetings with TO's &amp; Neighboring CA's</b>	Thu 4/1/04																									
10	<b>Meetings with Stakeholder Groups</b>	Thu 4/1/04																									
11	<b>Review Operational Assessments</b>	Thu 4/1/04																									
12	<b>Issue Identification, Eg:</b>	Thu 4/1/04																									
13	Fuel Diversity	Thu 4/1/04																									
14	Wind Integration	Thu 4/1/04																									
15	Environmental Regulations	Thu 4/1/04																									
16	Etc	Thu 4/1/04																									
17	<b>Transmission Adequacy Assessments:</b>	Fri 12/19/03																									
18	ATR	Fri 12/19/03																									
19	ATRA	Fri 12/19/03																									
20	<b>Resource Adequacy Assessment</b>	Fri 3/19/04																									
21	<b>Develop Historical Congestion Analysis</b>	Fri 3/19/04																									
22	<b>Needs Assessment</b>	Fri 3/19/04																									
23	<b>Scenario Analysis</b>	Fri 3/19/04																									

Project: Ini_plan_proc1 Date: Thu 9/4/03	Task		Milestone		External Tasks	
	Split		Summary		External Milestone	
	Progress		Project Summary		Deadline	

## **NYISO Initial Planning Process: Initial Assessment Report**

- Outline Draft To Be Presented at Next ESPWG Meeting
- Initial Draft Report Complete by March 26, 2004
- TPAS/ESPWG Review Completed by April 28, 2004
- OC Vote With MC Attendance at June 2004 Meeting

## NYISO Initial Planning Process: Load And Capacity Data Book

- 2003 Report is Primary Reference
- Base Load Forecast Extended to Eleven Zones
- Load Pocket Assessments To be Developed (TOs & NYISO)
- Load and Capacity Tables Developed for NYCA and Zones
- Tables to be Used For Screening Analysis
- High and Low Load Forecast By Feb 28, 2004
- Load Forecasting to Present Econometric Forecast Methodology to ESPWG
- Assumptions for Load and Capacity Screening Analysis

## NYISO Initial Planning Process: Load And Capacity Data Book Analysis

- Start with Table Directly From Report
- Base Case Has 0 MW for SCR 2004-2013 ( 500 MW?)
- Wind Resources 45 MW 2004-2013
- Additions are Projects Included in 2003 ATR
- Retirements Are Those Shown In L&C Report
- Purchases and Sales Lumped with Capacity Import ( 2755 Mw)
- Demand Response Lumped with DSM Forecast
- Following Table Shows Reserve Margins for NYCA

# NYISO Initial Planning Process: Load And Capacity Data Book Analysis

Category	Installed Capacity										
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Steam Turbine (Oil)	1747	1747	1747	1747	1747	1747	1747	1747	1747	1747	1747
Steam Turbine (Oil & Gas)	10534	10367	9999	9999	9467	9467	9467	9467	9467	9467	9467
Steam Turbine (Gas)	233	233	233	233	233	233	233	233	233	233	233
Steam Turbine (Coal)	3783	3783	3783	3783	3783	3783	3783	3783	3783	3783	3783
Steam Turbine (Wood)	38	38	38	38	38	38	38	38	38	38	38
Steam Turbine (Refuse)	256	256	256	256	256	256	256	256	256	256	256
Steam (PWR Nuclear)	2473	2473	2473	2473	2473	2473	2473	1975	1975	1975	1975
Steam (BWR Nuclear)	2606	2606	2606	2606	2606	2606	1987	1987	1987	1987	1987
Pumped Storage Hydro	1291	1291	1291	1291	1291	1291	1291	1291	1291	1291	1291
Internal Combustion	129	129	129	129	129	129	129	129	129	129	129
Conventional Hydro	4583	4633	4683	4733	4783	4783	4783	4783	4783	4783	4783
Combined Cycle	5786	7144	11154	12444	13524	13524	13524	13524	13524	13524	13524
Jet Engine (Oil)	531	531	531	531	531	531	531	531	531	531	531
Jet Engine (Gas & Oil)	171	171	171	171	171	171	171	171	171	171	171
Combustion Turbine (Oil)	1398	1398	1398	1398	1398	1398	1398	1398	1398	1398	1398
Combustion Turbine (Oil & Gas)	1418	1418	1418	1418	1418	1418	1418	1418	1418	1418	1418
Combustion Turbine (Gas)	1379	1963	1963	1963	1963	1963	1963	1963	1963	1963	1963
Wind	45	45	45	45	45	45	45	45	45	45	45
Other	1	1	1	1	1	1	1	1	1	1	1
Import Capability											
Capacity Import	2755	2755	2755	2755	2755	2755	2755	2755	2755	2755	2755
Demand Response Programs	500	500	500	500	500	500	500	500	500	500	500
NYCA Demand	32010	32420	32790	33170	33570	33930	34320	34710	35110	35480	35860
Required Capability	37182	37666	38102	38551	39023	39447	39908	40368	40840	41276	41725
Total NYCA Capability	41157	42983	46675	48015	48613	48613	47995	47496	47496	47496	47496
Reserve Margin	31%	35%	45%	47%	47%	45%	42%	39%	37%	36%	34%

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## **NYISO Initial Planning Process: Meetings With TOs & Neighboring Control Areas**

- Known TO & Neighboring CAs Plans Included in ATR, L&C
- Solicit TOs Directly at ESPWG and Direct Meeting, If Needed
- Input Phase for Baseline Closes First February ESPWG Meeting
- Input Will Affect Second Five Year Period Analysis
- 2003 ATR In Internal Review, Expected to TPAS in January
- Completed Sensitivity Assessment With NY/NE
- Completed Assessment of Existing NE & PJM Studies
- Will Complete Assessment of Ontario and Quebec by January 15
- Will Follow-up With Neighboring CAs As Required

## **NYISO Initial Planning Process: Meetings With Stakeholder Groups**

- Solicit Directly at ESPWG and Direct Meeting, If Needed
- Input Phase for Baseline Closes First February ESPWG Meeting
- Input Will Affect Second Five Year Period Analysis
- Two Stakeholder Review Stages

## **NYISO Initial Planning Process: Review Operational Assessments**

- Review Last Two Seasonal Operating Studies
- Review Latest NYISO Annual Transmission Performance Report
- Review MEN Seasonal Operating Study
- Review Other NYISO Operating Limit Studies
- Limited to Approved Assessments At or Before January 2004 OC Meeting

## **NYISO Initial Planning Process: Issue Identification**

- Reviewed Issues List Identified at ESPWG With Consultant
- Developed Issues Impact Matrix
- Complete Issues Identification by March 31, 2004

## NYISO Initial Planning Process: Issue Identification

DC Trans. Expansion			
Wind/Renewables Additions			
Generation Expansion			
Retirement			
TO Plans			
Infrastructure Aging			
Environmental Compliance			
Fuel Availability/Diversity			
Impact of New Technologies			
Blackout Impacts			
Load Forecast Uncertainty			
Neighboring System Plans			
Operating/Planning Criteria/Procedures Changes			
Demand Response Programs			

# NYISO Initial Planning Process: Issue Identification

Category	Issue Applicability													
	D	A	C	E	F	G	H	I	J	K	L	M	N	O
Steam Turbine (Oil)				D			G							
Steam Turbine (Oil & Gas)				D			G							
Steam Turbine (Gas)				D				I						
Steam Turbine (Coal)							G							
Steam Turbine (Wood)														
Steam Turbine (Refuse)														
Steam (PWR Nuclear)				E			H							
Steam (BWR Nuclear)				E										
Pumped Storage Hydro														
Internal Combustion														
Conventional Hydro				F										
Combined Cycle	A		C					I			M			
Jet Engine (Oil)														
Jet Engine (Gas & Oil)														
Combustion Turbine (Oil)														
Combustion Turbine (Oil & Gas)														
Combustion Turbine (Gas)			C					I			L	M	N	
Wind		B												
Other									J					
Import Capability														
Capacity Import					P	Q			R		S	T		
Demand Response Programs														
NYCA Demand									K					O
Required Capability														
Total NYCA Capability														
Reserve Margin														

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## **NYISO Initial Planning Process: Transmission Adequacy Assessment**

- First Five Years Based on Existing Standard Reliability Assessments
- Additional Analysis for Second Five Year Period With Stakeholder and Neighboring CA Input
- Screening Level Analysis Used For Second Five Year Period
- Confirming Load Flow Analysis for Horizon Year 2013 If Required
- Perform Short Circuit Analysis for First Five Year Period Only

## **NYISO Initial Planning Process: Resource Adequacy Assessment**

- First Five Years Based on Existing Standard Reliability Assessments
- Additional Analysis for Second Five Year Period With Stakeholder and Neighboring CA Input
- Screening Level Analysis Used For Second Five Year Period
- Confirming MARS Analysis for Horizon Year 2013



## **NYISO Initial Planning Process: Baseline Needs Assessment**

- Determine If Baseline Resources and Transmission System Meets All Applicable Reliability Requirements(ARR)
- Perform Additional Analysis If ARR Not Met
- Only Identify Additional Resources or Transmission to Meet ARR
- No Specific Facilities Identified

## **NYISO Initial Planning Process: Scenario Analysis**

- From Issues Impact Matrix and Screening Analysis Develop up to Five Scenarios for Analysis