

PJM REGIONAL TRANSMISSION PLANNING PROCESS

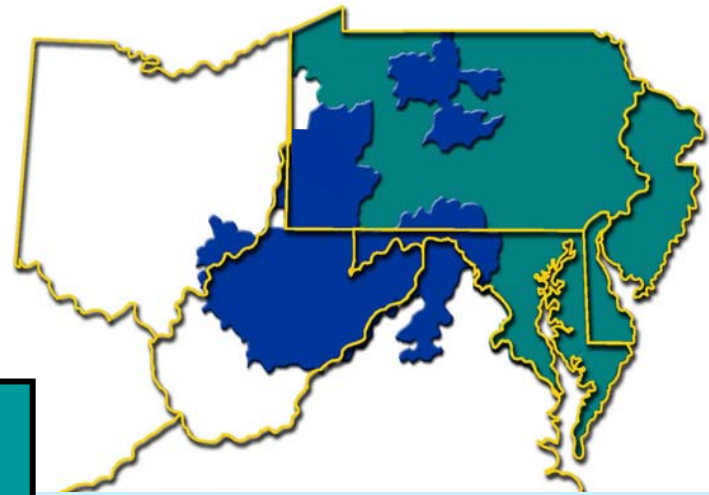
Transmission Expansion: Market-Based and
Regulated Approaches

L'Auberge Del Mar Resort

January 24-25, 2002

APS Today:

Generating Units	54
Generation Capacity	9,072 MW
Peak Load	8,269 MW
Annual Energy	42,554 GWh
Transmission Miles	5,000
Area (Square Miles)	31,000
Customers	1.4 Million



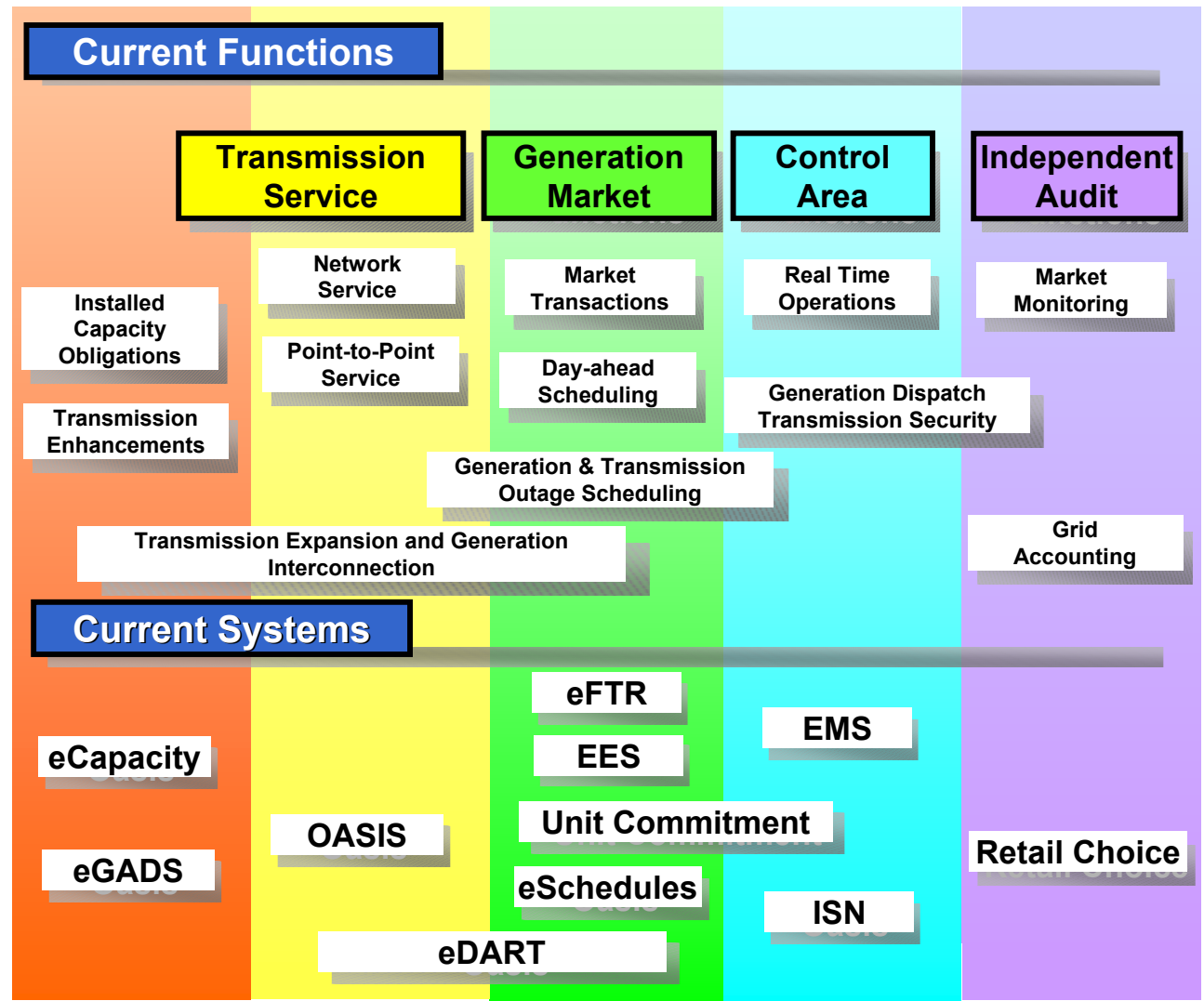
PJM / PJM West

Generating Units	604
Generation Capacity	69,072 MW
Peak Load	62,445 MW
Annual Energy	298,011 GWh
Transmission Miles	13,000
Area (Square Miles)	79,000
Customers	11 Million
Population Served	25.1 Million
States (+ D.C.)	8

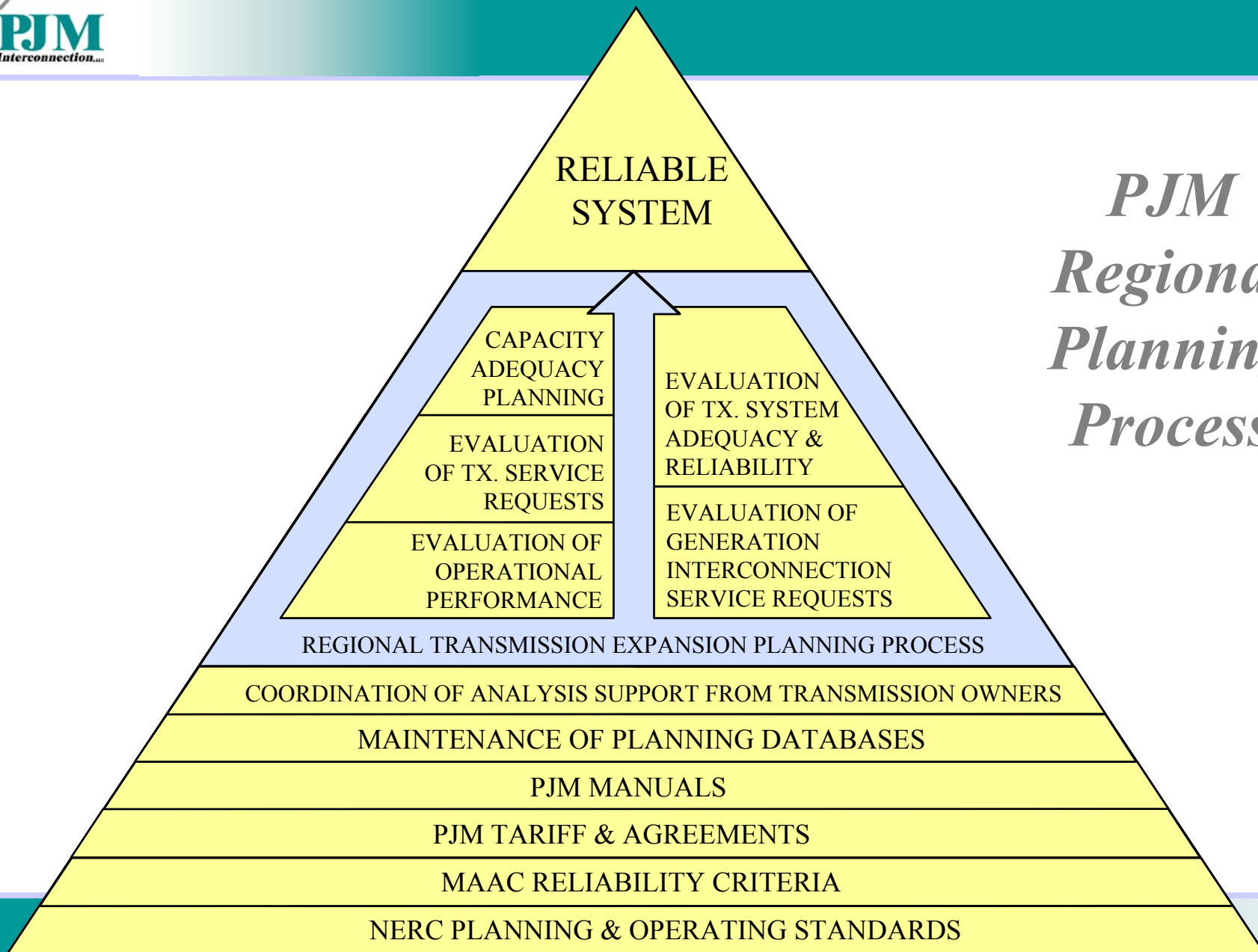
PJM Today:

Generating Units	550
Generation Capacity	60,000 MW
Peak Load	54,176 MW
Annual Energy	255,457 GWh
Transmission Miles	8,000
Area (Square Miles)	48,000
Customers	9.6 Million
Population Served	22 Million
States (+ D.C.)	6

- Regional Transmission Expansion Planning
- Administer Open Access Tariff
- Operate Energy Market
- Operate Control Area
- NERC Security Coordinator



- Allow for Open Process with Input from All Interested Parties
- Coordinate Expansion Plans Across Multiple Transmission Owner Systems
- Coordinate Expansion Plans Based on All Needs Identified Through Regional Planning Process
- Identify Most Effective and Efficient Expansion Plan for the Region



PJM Regional Planning Process

- MAAC Reliability Assessment (forward looking)
- PJM Transmission Adequacy Assessment (forward looking)
- Long Term Firm Transmission Service Requests
- Transmission Owner Projects
- PJM Operational/Economic Performance (historic perspective)
- Generation Provider Projects (Generation Interconnection Process)
- Merchant Transmission Projects
- Transmission Expansion Advisory Committee (TEAC) Input (Stakeholder Input)

- Generation Solutions
 - ◆ Strategically Sited Generation Projects
 - ◆ Distributed Resources
- Load Solutions
 - ◆ Demand-side/Load Management
 - ◆ Distributed Resources
- Transmission Solutions
 - ◆ Traditional Expansion/Enhancement Alternatives
 - ◆ Advanced Technology Options

- **Broad Scope**
 - Wide range of stakeholder input
 - Balanced consideration of all potential solutions/drivers
- **Flexibility**
 - New tools/methods for analysis
 - Accommodate rapidly changing needs
- **Results Oriented**
 - Focus on solutions
 - Transparency of process/results

- First RTEP Approved by PJM Board August 1, 2000.
 - Currently includes \$300 million in transmission infrastructure improvements.
 - Accommodates 39 generation projects (14,000 MW).
 - Plan is very fluid primarily due to changes to generation projects; significant changes have been made since 8/1/00 and reviewed with Board.
- Second RTEP Approved by PJM Board June 5, 2001.
 - Includes an additional \$430 million in transmission infrastructure improvements.
 - Accommodates 43 additional generation projects (12,600 MW).



QUESTIONS ??

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