



NYISO Reliability & Economic Planning Process

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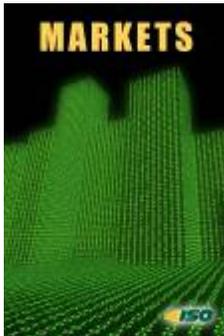
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The Roles of the NYISO



Reliable operation of the bulk electricity grid

- *Managing the flow of power over 11,000 circuit-miles of high voltage transmission lines from more than 500 generating units*



Design and implementation of open and competitive wholesale electricity markets

- *Market transactions totaling more than \$75 billion since inception in 1999*

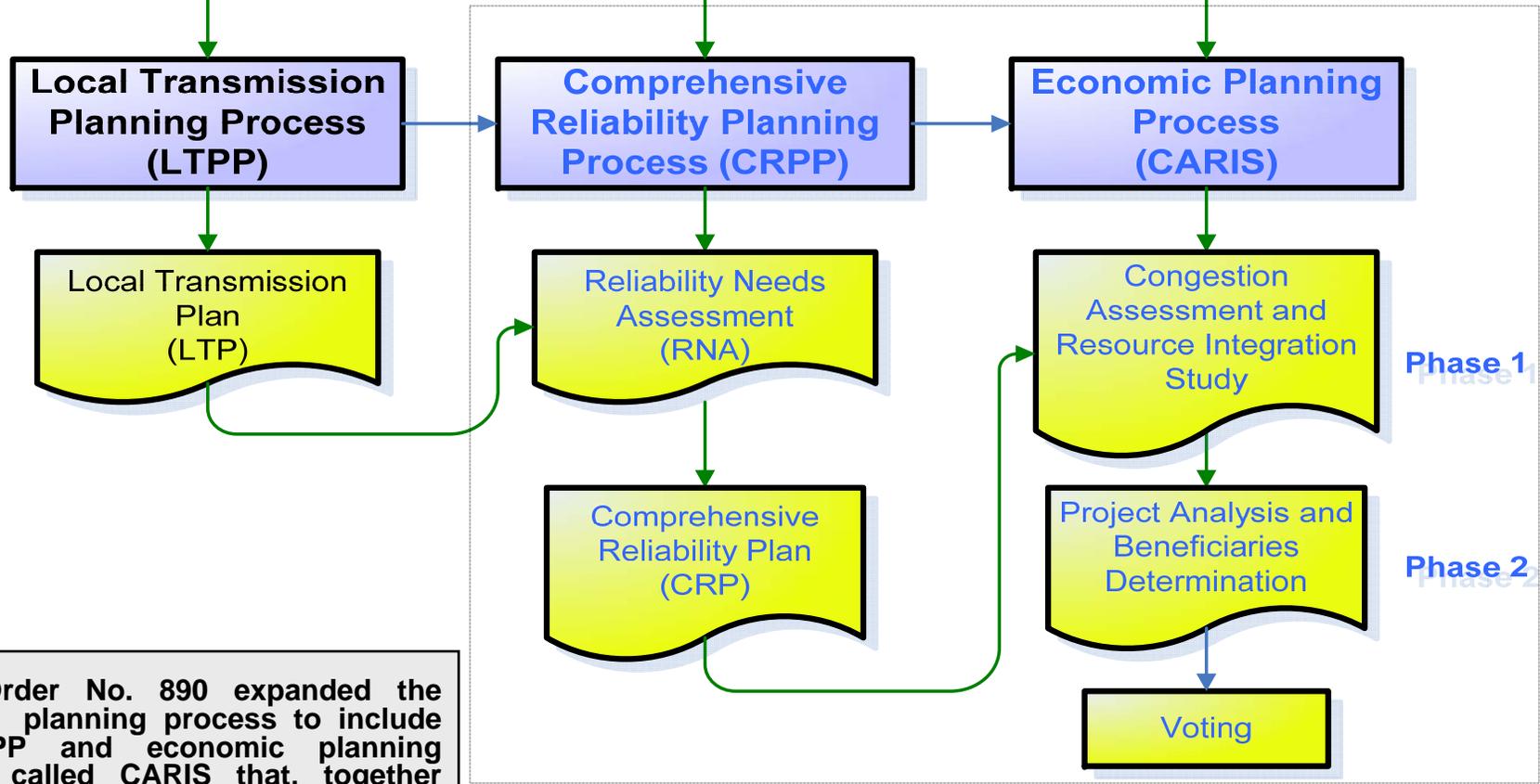


Planning for New York's energy future

- *Assessing needs over a 10-year horizon and evaluating the feasibility of projects proposed to meet those needs*

NYISO Planning

COMPREHENSIVE SYSTEM PLANNING PROCESS (CSPP)



FERC Order No. 890 expanded the NYISO's planning process to include the LTPP and economic planning process called CARIS that, together with the reliability planning process (CRPP), comprise a new 2-year planning process known as the CSPP.

Reliability Planning: NYISO

- ◆ **Comprehensive Reliability Planning Process (CRPP)**
 - *Formal, transparent, long-term (10-year) two-step process*
 - Reliability Needs Assessment (RNA)
 - Comprehensive Reliability Plan (CRP)
 - *Market-based & regulated backstop solutions*
 - All resources are eligible- Transmission, Generation, Demand Response
 - Preference to market-based solutions
 - *“Beneficiaries Pay” cost allocation and cost recovery under the NYISO Tariff*
 - Applies only to regulated backstop solutions that the NYISO determines to be needed for reliability

Economic Planning: NYISO

- ◆ **Congestion Assessment and Resource Integration Study (CARIS)**
 - ***Formal and transparent two-phase process based on CRPP***
 - **Phase I: Study Phase (10-years)**
 - Identification and ranking of congested elements/paths
 - Evaluation of generic congestion mitigation solutions
 - All resources considered as solutions- Transmission, Generation, Demand Response
 - **Phase II: Specific Project Evaluation Phase**
 - Applies to economic transmission projects only
 - Includes cost-benefit analysis
 - ***“Beneficiaries Pay” cost allocation and cost recovery under the NYISO Tariff***
 - Beneficiary supermajority vote (80%) for approval

Metrics Used in Planning Studies

◆ **Reliability Planning**

- **RNA** – to identify Reliability Needs in terms of LOLE, not solve them
 - *NERC/NPCC/NYSRC reliability criteria, including resource adequacy*
- **CRP** – to ensure all proposed solutions to identified needs are proposed, evaluated and planned in a timely manner

◆ **Economic Planning**

- **Benefit/Cost analysis** for all types of solutions – transmission, generation, and demand response
- **Primary metric: Statewide Production Cost**
- **Other metrics: load payments, generator payments, losses, emissions, ICAP impact and TCCs**

◆ **Scenarios**

- **Provide scenario analysis** to determine the impact of uncertainties
- **Many “what-if” studies** are performed to provide additional information

Planner's Wish-list

- ◆ **Integration of more components of the planning process into a single modeling framework**
 - *Faster to run*
 - *Easier to handle database, post processing, etc.*
 - *Capable of handling real world constraints such as generator ramping rates, intermittent resources, etc.*
 - *Provide performance measures in terms of LOLE, Benefit/Cost ratios, etc.*
- ◆ **More flexible to emulate competitive market rules and operations.**

The New York Independent System Operator (NYISO) is a not-for-profit corporation that began operations in 1999. The NYISO operates New York's bulk electricity grid, administers the state's wholesale electricity markets, and conducts system and resource planning for the state's bulk electricity system.



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