

2015 Proposed Project Budget

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Summary of Process To Date

May 30 BPWG

- *Overview of 2015 Project Prioritization and Budgeting Process*
- *Review of 2014-2016 Product Plan: NYISO Strategic Initiatives and FERC Orders*

July 9 BPWG

- *Review of 2015 Project Prioritization Criteria and link to NYISO Strategic Plan*
- *Review of 2015 Preliminary Project Candidate List*

July 25 BPWG

- *Proposed Project Descriptions for 2015 Preliminary Project Candidates*
- *Review of Prioritized 2015 Preliminary Project Candidate List and potential milestones*
- *Review of stakeholder comments and NYISO response since June BPWG*

August 27 BPWG

- *Proposed Project Descriptions for 2015 Preliminary Project Candidates*
- *Review of Prioritized 2015 Preliminary Project Candidate List and potential milestones with cost/benefit analysis*

September 5 BPWG

- *Proposed 2015 Project Budget*

September 22 BPWG

- *Revised 2015 Project Budget*
- *Revised Project Descriptions for 2015 Project Candidates*

Proposed 2015 Project Budget

| Business Intelligence Products | | | | | | |
|---|-----------------------------|-------------------------------------|-------------------------------------|----------------|--------------------|---------------|
| | <i>Proposed Deliverable</i> | <i>Strategic Objective</i> | Estimated Cost (in millions) | | | |
| | | | <i>NYISO Labor</i> | <i>Capital</i> | <i>Consultancy</i> | <i>Total</i> |
| NY Generator Attribute Tracking System (GATS) Data Feed | Deployment | Authoritative Source of Information | \$0.21 | \$0.00 | \$0.00 | \$0.21 |
| OASIS Postings Technology Upgrade Phase 2 | Deployment | Excellence in Execution | \$0.18 | \$0.00 | \$0.00 | \$0.18 |
| DSS Business Objects Upgrade | Deployment | Excellence in Execution | \$0.17 | \$0.05 | \$0.10 | \$0.32 |
| Public Website Renewables Page | Deployment | Authoritative Source of Information | \$0.11 | \$0.00 | \$0.00 | \$0.11 |
| Public Website NYISO Budget and Value Proposition Pages | Deployment | Authoritative Source of Information | \$0.03 | \$0.00 | \$0.07 | \$0.10 |
| Enterprise Information Management: Data Integration | Deployment | Leader in Technology Innovation | \$0.22 | \$0.45 | \$0.11 | \$0.78 |
| Total | | | \$0.92 | \$0.50 | \$0.28 | \$1.70 |

| Capacity Products | | | | | | |
|---|-----------------------------|---------------------------------|-------------------------------------|----------------|--------------------|--------------|
| | <i>Proposed Deliverable</i> | <i>Strategic Objective</i> | Estimated Cost (in millions) | | | |
| | | | <i>NYISO Labor</i> | <i>Capital</i> | <i>Consultancy</i> | <i>Total</i> |
| Modify the Pivotal Supplier Tests (SOM) | Deployment | Excellence in Execution | \$0.06 | \$0.00 | \$0.00 | \$0.06 |
| ICAP AMS Enhancements Phase 2 | Deployment | Excellence in Execution | \$0.09 | \$0.00 | \$0.00 | \$0.09 |
| Reactive Test Data Collection and Tracking | Functional Requirements | Excellence in Execution | \$0.09 | \$0.00 | \$0.00 | \$0.09 |
| ICAP Reference System Phase 2 | Functional Requirements | Excellence in Execution | \$0.06 | \$0.00 | \$0.00 | \$0.06 |
| ICAP Auction Validating and Reporting Phase 2 | Deployment | Leader in Technology Innovation | \$0.14 | \$0.00 | \$0.00 | \$0.14 |
| External CRIS Rights for Non-UDR Transmission Expansion | Market Design Concept | Leader in Market Design | \$0.08 | \$0.00 | \$0.00 | \$0.08 |
| Develop Rules for the Elimination of Capacity Zones or Achievement of Price Convergence | Market Design Concept | Leader in Market Design | \$0.06 | \$0.00 | \$0.00 | \$0.06 |
| Behind the Meter: Net Generator Model+ | Market Design Approved | Leader in Market Design | \$0.09 | \$0.00 | \$0.00 | \$0.09 |

+ = Project may be applicable to the implementation of REV directed outcomes.

| Capacity Products (continued) | | | | | | |
|--|-----------------------------|----------------------------|-------------------------------------|----------------|--------------------|---------------|
| | <i>Proposed Deliverable</i> | <i>Strategic Objective</i> | Estimated Cost (in millions) | | | |
| | | | <i>NYISO Labor</i> | <i>Capital</i> | <i>Consultancy</i> | <i>Total</i> |
| Winter DMNC Temperature Adjustments | Market Design Approved | Excellence in Execution | \$0.02 | \$0.00 | \$0.00 | \$0.02 |
| Fuel Assurance: Market Design Concepts | Market Design Concept | Leader in Market Design | \$0.10 | \$0.00 | \$0.00 | \$0.10 |
| ICAP AMS Enhancements Phase 3 | Development Complete | Excellence in Execution | \$0.18 | \$0.00 | \$0.00 | \$0.18 |
| Total | | | \$0.97 | \$0.00 | \$0.00 | \$0.97 |

| Demand Response | | | | | | |
|---|-----------------------------|----------------------------|-------------------------------------|----------------|--------------------|---------------|
| | <i>Proposed Deliverable</i> | <i>Strategic Objective</i> | Estimated Cost (in millions) | | | |
| | | | <i>NYISO Labor</i> | <i>Capital</i> | <i>Consultancy</i> | <i>Total</i> |
| SCR Performance Obligations: Eliminate Requirement for Mandatory Test# | Deployment | Leader in Reliability | \$0.18 | \$0.00 | \$0.00 | \$0.18 |
| SCR Performance Obligations: Change Minimum Performance Obligation From 4 to 6 Hours# | Market Design Approved | Leader in Reliability | \$0.04 | \$0.00 | \$0.00 | \$0.04 |
| Metering Infrastructure Requirements for Demand Response#+ | Functional Requirements | Excellence in Execution | \$0.11 | \$0.00 | \$0.10 | \$0.21 |
| DRIS Enhancements for DR Program Administration# | Deployment | Excellence in Execution | \$0.14 | \$0.00 | \$0.00 | \$0.14 |
| Expanding on Selected DER Concepts to Further Align with REV#+ | Market Design Concept | Leader in Market Design | \$0.04 | \$0.00 | \$0.00 | \$0.04 |
| Total | | | \$0.51 | \$0.00 | \$0.10 | \$0.61 |

= Project may be impacted by legal proceedings related to FERC Order 745 and related regulatory directives.
 + = Project may be applicable to the implementation of REV directed outcomes.

| Energy Markets | | | | | | |
|--|-----------------------------|----------------------------|-------------------------------------|----------------|--------------------|---------------|
| | <i>Proposed Deliverable</i> | <i>Strategic Objective</i> | Estimated Cost (in millions) | | | |
| | | | <i>NYISO Labor</i> | <i>Capital</i> | <i>Consultancy</i> | <i>Total</i> |
| Coordinated Transaction Scheduling with ISO-NE (SOM) | Deployment | Leader in Market Design | \$1.14 | \$0.00 | \$2.42 | \$3.56 |
| Scheduling & Pricing: Comprehensive Shortage Pricing (SOM) | Deployment | Leader in Market Design | \$0.66 | \$0.00 | \$0.23 | \$0.89 |
| Scheduling & Pricing: Comprehensive Scarcity Pricing (SOM) | Development Complete | Leader in Market Design | \$0.36 | \$0.00 | \$0.26 | \$0.62 |
| Fuel Assurance: Market Design Concepts | Market Design Concept | Leader in Market Design | \$0.04 | \$0.00 | \$0.02 | \$0.06 |
| Behind the Meter: Net Generation Model+ | Market Design Approved | Leader in Market Design | \$0.06 | \$0.00 | \$0.01 | \$0.07 |
| Total | | | \$2.26 | \$0.00 | \$2.94 | \$5.20 |

+ = Project may be applicable to the implementation of REV directed outcomes.

| Enterprise Products | | | | | | |
|---|-----------------------------|---------------------------------|-------------------------------------|----------------|--------------------|--------------|
| | <i>Proposed Deliverable</i> | <i>Strategic Objective</i> | Estimated Cost (in millions) | | | |
| | | | <i>NYISO Labor</i> | <i>Capital</i> | <i>Consultancy</i> | <i>Total</i> |
| NERC CIP v5 Planning & Conversion | Study Complete | Excellence in Execution | \$0.29 | \$0.00 | \$0.32 | \$0.61 |
| NERC CIP-005 v5 Electronic Security Perimeter | Deployment | Excellence in Execution | \$0.16 | \$0.28 | \$0.07 | \$0.51 |
| NERC CIP-010 v5 Configuration Management | Deployment | Excellence in Execution | \$0.37 | \$0.03 | \$0.00 | \$0.40 |
| NERC CIP-011 v5 Information Protection | Deployment | Excellence in Execution | \$0.18 | \$0.00 | \$0.00 | \$0.18 |
| Enterprise Project Management Phase IV | Deployment | Excellence in Execution | \$0.19 | \$0.00 | \$0.21 | \$0.40 |
| Stakeholder Services Suite Phase II | Deployment | Excellence in Execution | \$0.27 | \$0.00 | \$0.27 | \$0.54 |
| Identity and Access Management Phase IV | Deployment | Leader in Technology Innovation | \$0.54 | \$0.05 | \$0.10 | \$0.69 |
| Enterprise Technology Monitoring Phase II | Deployment | Leader in Technology Innovation | \$0.28 | \$0.69 | \$0.12 | \$1.09 |
| Application Platform Upgrade Phase II (Linux) | Deployment | Leader in Technology Innovation | \$0.31 | \$0.07 | \$0.00 | \$0.38 |

| Enterprise Products (continued) | | | | | | |
|--|-----------------------------|---------------------------------|-------------------------------------|----------------|--------------------|---------------|
| | <i>Proposed Deliverable</i> | <i>Strategic Objective</i> | Estimated Cost (in millions) | | | |
| | | | <i>NYISO Labor</i> | <i>Capital</i> | <i>Consultancy</i> | <i>Total</i> |
| Windows Server Upgrades | Deployment | Excellence in Execution | \$0.19 | \$0.10 | \$0.00 | \$0.29 |
| Integration Platform Availability Improvements | Software Design | Leader in Technology Innovation | \$0.13 | \$0.04 | \$0.11 | \$0.28 |
| Storage Infrastructure Redesign | Deployment | Leader in Technology Innovation | \$0.40 | \$3.50 | \$0.00 | \$3.90 |
| Market Test Environment | Architecture Design | Excellence in Execution | \$0.04 | \$0.00 | \$0.00 | \$0.04 |
| Total | | | \$3.35 | \$4.76 | \$1.20 | \$9.31 |

| Finance Products | | | | | | |
|---|-----------------------------|----------------------------|-------------------------------------|----------------|--------------------|--------------|
| | <i>Proposed Deliverable</i> | <i>Strategic Objective</i> | Estimated Cost (in millions) | | | |
| | | | <i>NYISO Labor</i> | <i>Capital</i> | <i>Consultancy</i> | <i>Total</i> |
| Regulated Transmission Cost Recovery Implementation | Deployment | Leader in Market Design | \$0.14 | \$0.00 | \$0.00 | \$0.14 |
| Procurement Enhancements | Deployment | Excellence in Execution | \$0.07 | \$0.00 | \$0.02 | \$0.09 |
| Manual Adjustments Redesign | Deployment | Excellence in Execution | \$0.17 | \$0.00 | \$0.00 | \$0.17 |
| CMS True-up Exposure | Deployment | Excellence in Execution | \$0.16 | \$0.00 | \$0.00 | \$0.16 |
| Oracle Financials - Fixed Assets | Deployment | Excellence in Execution | \$0.08 | \$0.00 | \$0.10 | \$0.18 |
| RFP Evaluation Tool | Deployment | Excellence in Execution | \$0.14 | \$0.03 | \$0.10 | \$0.27 |
| North Subzone Redistricting | Market Design Concept | Leader in Market Design | \$0.08 | \$0.00 | \$0.00 | \$0.08 |
| Rate Schedule 1 Technology Automation | Market Design Concept | Leader in Market Design | \$0.12 | \$0.00 | \$0.00 | \$0.12 |
| CMS Financial Risk Assessment Tools | Functional Requirements | Excellence in Execution | \$0.07 | \$0.00 | \$0.00 | \$0.07 |

| Finance Products (continued) | | | | | | |
|--|-----------------------------|----------------------------|-------------------------------------|----------------|--------------------|---------------|
| | <i>Proposed Deliverable</i> | <i>Strategic Objective</i> | Estimated Cost (in millions) | | | |
| | | | <i>NYISO Labor</i> | <i>Capital</i> | <i>Consultancy</i> | <i>Total</i> |
| CMS Ratings Automation | Functional Requirements | Excellence in Execution | \$0.07 | \$0.00 | \$0.00 | \$0.07 |
| CMS External Transactions Timing Adjustments | Deployment | Excellence in Execution | \$0.25 | \$0.00 | \$0.00 | \$0.25 |
| CMS ICAP Spot Market Offers Enhancement | Deployment | Excellence in Execution | \$0.12 | \$0.00 | \$0.00 | \$0.12 |
| Total | | | \$1.47 | \$0.03 | \$0.22 | \$1.72 |

| Operations & Reliability Products | | | | | | |
|--|-----------------------------|----------------------------|-------------------------------------|----------------|--------------------|---------------|
| | <i>Proposed Deliverable</i> | <i>Strategic Objective</i> | Estimated Cost (in millions) | | | |
| | | | <i>NYISO Labor</i> | <i>Capital</i> | <i>Consultancy</i> | <i>Total</i> |
| FERC Funded Rerun Phase 2 | Deployment | Excellence in Execution | \$0.07 | \$0.00 | \$0.00 | \$0.07 |
| FERC Funded Rerun Phase 3 | Development Complete | Excellence in Execution | \$0.30 | \$0.00 | \$0.00 | \$0.30 |
| EMS/BMS System Upgrade | RFP Initiated | Leader in Reliability | \$0.18 | \$0.00 | \$1.63 | \$1.81 |
| BES: Contingency Analysis Updates | Deployment | Leader in Reliability | \$0.15 | \$0.00 | \$0.62 | \$0.77 |
| BES: Interconnection Reliability Operating Limits (IROL) Visualization | Deployment | Leader in Reliability | \$0.07 | \$0.00 | \$0.05 | \$0.12 |
| Gas-Electric Coordination: Fuel Availability Self Reporting (SOM) | Deployment | Leader in Reliability | \$0.22 | \$0.00 | \$0.00 | \$0.22 |
| MMA Market Operations Report Automation | Functional Requirements | Excellence in Execution | \$0.14 | \$0.00 | \$0.00 | \$0.14 |
| 2015 Reference Level Software (RLS) Enhancements | Deployment | Leader in Market Design | \$0.30 | \$0.00 | \$0.10 | \$0.40 |
| Total | | | \$1.43 | \$0.00 | \$2.40 | \$3.83 |

| Planning Products | | | | | | |
|------------------------------------|-----------------------------|---|-------------------------------------|----------------|--------------------|---------------|
| | <i>Proposed Deliverable</i> | <i>Strategic Objective</i> | Estimated Cost (in millions) | | | |
| | | | <i>NYISO Labor</i> | <i>Capital</i> | <i>Consultancy</i> | <i>Total</i> |
| Economic Planning Model Management | Functional Requirements | Sustain & Enhance Robust Planning Processes | \$0.11 | \$0.00 | \$0.14 | \$0.25 |
| Total | | | \$0.11 | \$0.00 | \$0.14 | \$0.25 |

| TCC Products | | | | | | |
|-----------------------------------|-----------------------------|---------------------------------|-------------------------------------|----------------|--------------------|---------------|
| | <i>Proposed Deliverable</i> | <i>Strategic Objective</i> | Estimated Cost (in millions) | | | |
| | | | <i>NYISO Labor</i> | <i>Capital</i> | <i>Consultancy</i> | <i>Total</i> |
| TCC Revenue Allocation Automation | Deployment | Excellence in Execution | \$0.33 | \$0.00 | \$0.00 | \$0.33 |
| Balance-of-Period AMS | Software Design | Leader in Market Design | \$0.11 | \$0.00 | \$0.00 | \$0.11 |
| Balance-of-Period AVS | Functional Requirements | Leader in Market Design | \$0.17 | \$0.00 | \$0.00 | \$0.17 |
| Balance-of-Period CMS | Functional Requirements | Leader in Market Design | \$0.07 | \$0.00 | \$0.00 | \$0.07 |
| TCC AMS Round Type and Upgrade | Development Complete | Leader in Technology Innovation | \$0.11 | \$0.00 | \$0.00 | \$0.11 |
| Total | | | \$0.79 | \$0.00 | \$0.00 | \$0.79 |

ESTIMATED TOTAL PROJECT COST BY PRODUCT AREA

| (\$ in millions) | | | | |
|----------------------------|----------------|----------------------|----------------|-------------------|
| Product Area | NYISO Labor | Capital/ Consultancy | Total | Mandatory Budget* |
| Business Intelligence | \$0.92 | \$0.78 | \$1.70 | \$0.21 |
| Capacity Market | \$0.97 | \$0.00 | \$0.97 | \$0.06 |
| Demand Response | \$0.51 | \$0.10 | \$0.61 | \$0.00 |
| Energy Market | \$2.26 | \$2.94 | \$5.20 | \$3.56 |
| Enterprise | \$3.35 | \$5.96 | \$9.31 | \$1.70 |
| Finance | \$1.47 | \$0.25 | \$1.72 | \$0.14 |
| Operations and Reliability | \$1.43 | \$2.40 | \$3.83 | \$0.00 |
| Planning | \$0.11 | \$0.14 | \$0.25 | \$0.00 |
| TCC Market | \$0.79 | \$0.00 | \$0.79 | \$0.00 |
| Total Cost | \$11.81 | \$12.57 | \$24.38 | \$5.67 |

*Mandatory = FERC Order, Strategic Initiative, Tariff Obligation, or Dependency To Support Order, Initiative, or Obligation: these funds do not reflect projects required for necessary upgrades or projects necessary to mitigate undesirable risks

Next Steps

- ◆ **Ongoing dialogue with Market Participants**

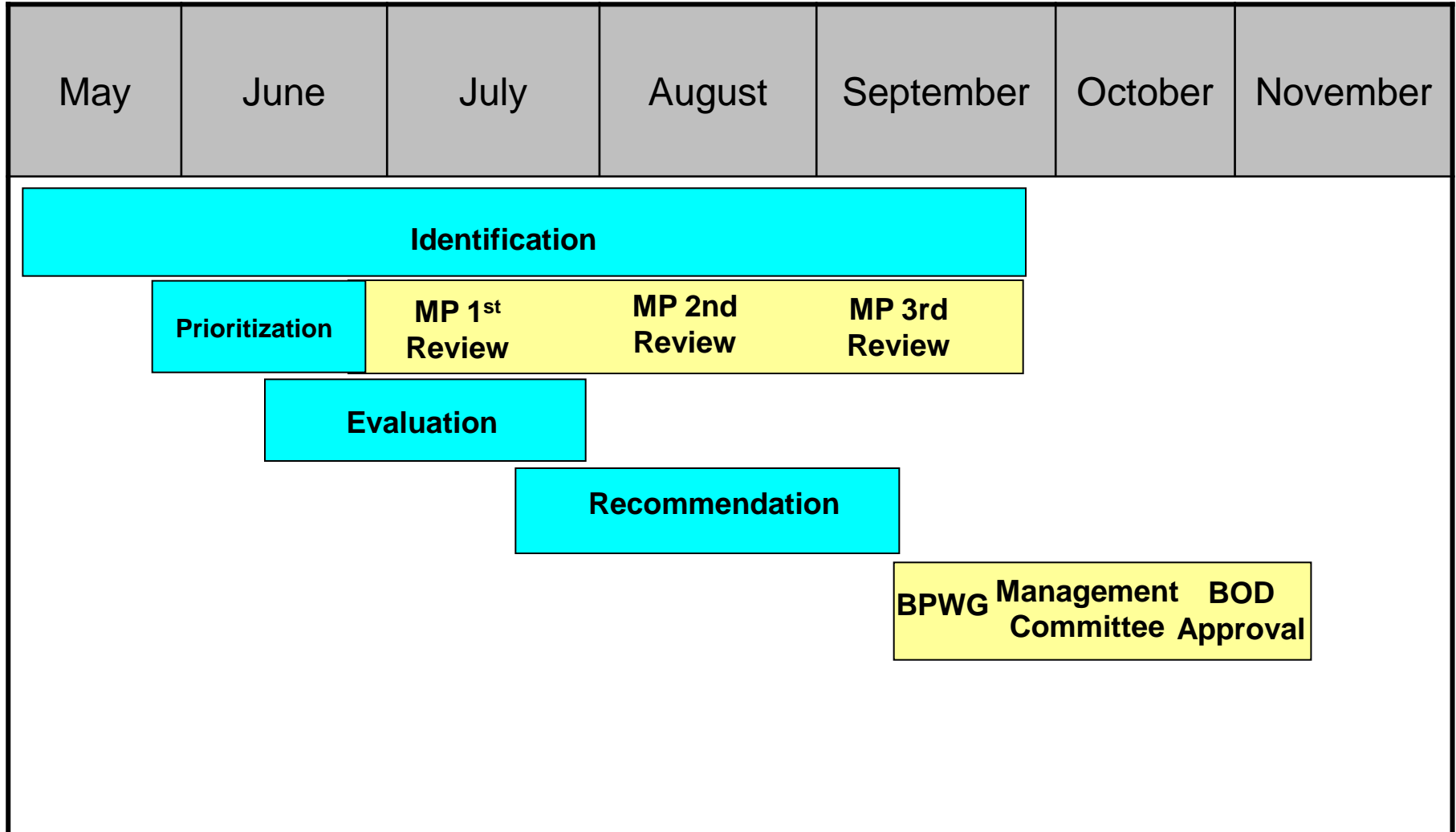
APPENDICES

Appendix A: 2015 Selection Process and Timeline

2015 Project Selection Process

| Phase | Definition |
|----------------|---|
| Identification | <ul style="list-style-type: none"> ◆ FERC Orders ◆ Existing tariff obligations ◆ Strategic Initiatives ◆ State of the Market recommendations ◆ Necessary infrastructure enhancements ◆ Feedback from MPs throughout the year ◆ Product Plans, Market Design Evolution and Strategic Plan |
| Prioritization | Evaluate projects using objective criteria that reflects the NYISO strategy, stakeholder interest, and potential impacts to budget and resources |
| Evaluation | Conduct feasibility assessment – detailed estimates of hardware, software, consultancy and staff |
| Recommendation | Refine 2015 proposed projects based on feasibility assessment |

2015 Project Prioritization and Budgeting Timeline



Appendix B: 2015 Project Prioritization

2015 Prioritization Criteria

| PRIORITIZATION CRITERIA | | | | | | | |
|-------------------------|--|---|------------------------|--|---|--|--|
| # | Category | Criteria | Criteria Weight (1-10) | HIGH | MEDIUM | LOW | NONE |
| | | | | 10 | 7 | 3 | 0 |
| 1 | Strategy (if we do this project) | Leader in Reliability | 10 | Significantly improves NYISO ability to maintain NYCA Reliability | Moderately improves NYISO ability to maintain NYCA Reliability | Minimally improves NYISO ability to maintain NYCA Reliability | None |
| 2 | | Leader in Market Design | 10 | Significantly improves NYISO Market Design | Moderately improves NYISO Market Design | Minimally improves NYISO Market Design | None |
| 3 | | Leader in Technology Innovation | 6 | Significantly advances the IT strategy or technology improvement | Moderately advances the IT strategy or technology improvement | Minimally advances the IT strategy or technology improvement | None |
| 4 | | Sustain and Enhance Robust Planning Processes | 9 | Supports tariff, FERC, NPCC, or NYSERC compliance requirements for Planning Process | Supports reliability planning and/or Business Plan objectives | Required for SRP planning study efficiency or continuous improvement initiatives | None |
| 5 | Outcome (if we do this project) | NYISO Annual Cost Reduction | 10 | >\$500k savings-Direct and soft (labor) | >\$100k, <\$500k savings-Direct and soft (labor) | >\$10k, <\$100k savings - Direct and soft (labor) | <\$10k savings - Direct and soft (labor) |
| 6 | | Appeal | 10 | Broad Customer and NYISO desirability. | Desired by Customer | Desired by NYISO | Not Desired by Customer & Not Desired by NYISO |
| 7 | | Market Efficiency | 10 | Significant improvement | Moderate improvement | Minimal improvement | No impact |
| 8 | | Post Production Sustainability | 5 | Existing support structure and skills | Support structure exists but needs minimal modifications | Support structure exists but needs major modifications | No skills or support structure in place |
| 9 | Risk (if we do NOT do this project) | Compliance | 10 | Significant risk of compliance violation | Moderate risk of compliance violation | Minimal risk of compliance violation | None |
| 10 | | Business Process (inclusive of technology impact on business process) | 10 | Enterprise Wide and/or Bid to Bill Impact. The project impacts processes in most departments | Multiple Department Impact. | Department Wide Impact The project impacts many processes within a department | Only one or two processes impacted |
| 11 | | Reliability and Market | 10 | Mission-critical systems becoming non operational or above \$1 million market impact | Non mission-critical systems becoming non operational or \$100,000 - \$1 million market impact | Non mission-critical systems affected or \$10,000 - \$100,000 market impact | No or less than 10,000 impact |
| | | Sum | 100 | | | | |
| Execution | | | | | | | |
| 1 | Execution (if we do this project) | Cost | 4 | project, <\$100k | >\$100k, <\$500k | >\$500, <\$1M | >\$1M |
| 2 | | Multi-Year Dependency | 6 | Continuation of a multi-year project - postponement significantly disrupts value of previous investments | Continuation of a multi-year project - postponement moderately disrupts value of previous investments | Continuation of a multi-year project - postponement minimally disrupts value of previous investments | None |
| 3 | | Complexity of Business and Technology | 4 | One area/technology | Cross-functional < 3 Areas/Technology | Highly Cross-functional/ Re-engineering | Complex, solution and impact unknown |
| 4 | | Compliance | 10 | Non-appealable, ordered by FERC / desired by NYISO and MP | Ordered by FERC, undesired by NYISO or MP | Potential order identified by FERC | No regulatory impact |

Priority Scores

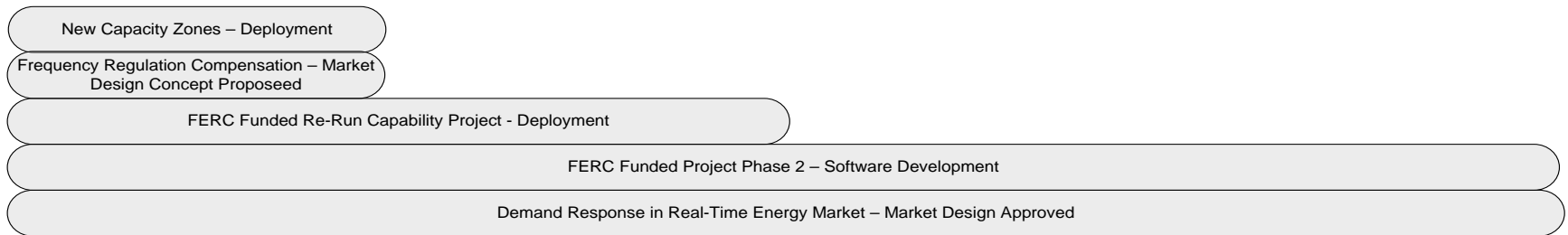
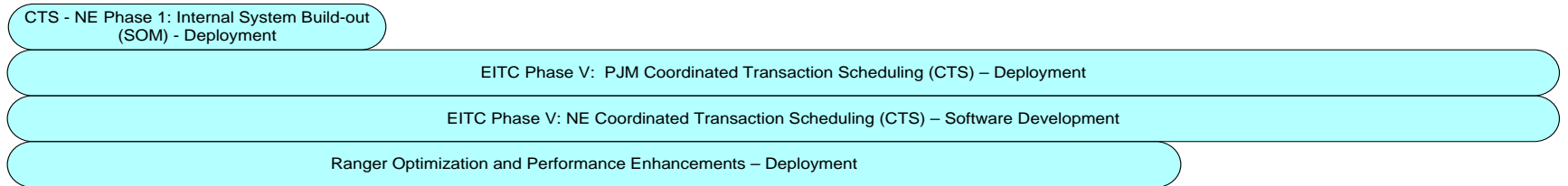
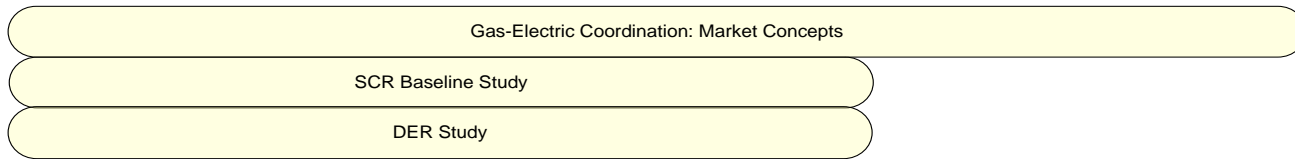
- ◆ **Individual projects scored against objective criteria**
- ◆ **Objective criteria aligned with NYISO Strategic Plan**
- ◆ **High level project descriptions utilized as a basis for potential scope for evaluation purposes**
- ◆ **Individual project priority scores provide indication of relative ranking**

Appendix C: Strategic Initiatives and Stakeholder Input

2014 – 2016 Product Plan: Strategic Initiatives and FERC Orders

2014 Product Plan - Strategic Initiatives and FERC Orders

| Q1-2014 | Q2-2014 | Q3-2014 | Q4-2014 |
|---------|---------|---------|---------|
|---------|---------|---------|---------|



- NYISO Strategic Initiatives
- Broader Regional Markets
- FERC Order

2015 - 2016 Product Plan - Strategic Initiatives and FERC Orders

| 2015 | 2016 |
|------|------|
|------|------|

- Expanded Gas-Electric Coordination
- Robust Planning
- Capacity Markets and Generator Retirements
- Technology and Smart Grid
- Demand Response

- EITC Phase I: HQ on Dispatch (5-Minute)
- EITC Phase IV: ISO-NE CTS – Deployment

- Demand Response in RT Energy Market – Development and Testing
- Demand Response in RT Energy Market – Implementation
- FERC Funded Project Phase 2 - Deployment
- FERC Funded Project Phase 3 - Deployment
- NERC Critical Infrastructure Protection v5 - Implementation
- Regulated Transmission Cost Recovery

- NYISO Strategic Initiatives
- Broader Regional Markets
- FERC Order

Stakeholder Input Received

| Stakeholder Input | NYISO Response |
|---|---|
| <p>Noted that the NYISO committed to FERC that it would address ROS Mitigation for Uneconomic Entry in the stakeholder process. Request to add this to the project candidate list.</p> | <p>The NYISO disagrees that it committed to pursue such a project.</p> |
| <p>Request to add Annual Capacity Market to project candidate list to continue the development work that may result from this year's effort.</p> | <p>Both Annual and Forward Capacity Market (FCM) concepts and feasibility will be discussed with stakeholders in 2014. If there is sufficient stakeholder support to move forward, the NYISO will include an Annual or FCM detailed market design for 2015 before the NYISO project list and budget is finalized.</p> |
| <p>Request to add Minimum Criteria for Capacity Provider to project candidate list.</p> | <p>Included in Fuel Assurance: Market Design Concepts under Capacity Markets.</p> |
| <p>Request to break out Locational Planning Requirements - Pre-Define Capacity Zones (SOM) and Rules to Eliminate Zones separately in the project candidate list.</p> | <p>Determining rules to eliminate zones is linked to the criteria for creating zones, therefore, these two issues should not be treated as separate projects.</p> |

Stakeholder Input Received

| Stakeholder Input | NYISO Response |
|--|---|
| Request to expand the naming of Rules to Eliminate Capacity Zones to include “or achieve price convergence”. | Updated under Capacity Products. |
| Request to rename Incremental External CRIS Rights for Non-UDR Transmission Expansion “Grant EXTERNAL CRIS Rights” through the Class Year studies and note that there is a process to obtain “internal” CRIS through the Class Year studies. | Updated under Capacity Products. |
| Request to rename Comprehensive Shortage Pricing – Phase II to reflect that it is addressing Scarcity pricing. | Updated under Energy Market Products. |
| <p>FERC Order No. 1000 / Methodology for Allocating the Costs of Resolving Transmission Security Violations</p> <p>The NYISO will initiate a stakeholder review process to develop a cost allocation methodology and file with Commission through a Section 205 filing by the end of the third quarter of 2014. This will enable the methodology to be in place by the time the NYISO begins to consider possible solutions to needs identified in the next RNA. If FERC grants a delay in the implementation of these procedures and it does not get done this year than it should be put on the project list for next year.</p> | Included in Regulated Transmission Cost Recovery under Finance Products. |
| Request to add Post Day Ahead and Real-Time Line De-rates Daily to project candidate list. | Added under Operations & Reliability Products. |

Appendix D: Cost/Benefit Analysis for 2015 Preliminary Project Candidates

2015 PRELIMINARY PROJECT CANDIDATES: COST/BENEFIT ANALYSIS*

***All projects in the following list are currently being evaluated on an individual basis according to priority, cost and resource availability for 2015. NYISO does not have the resource and budget capacity to feasibly do all of the following projects. NYISO will propose a feasible list of projects and a budget at the September BPWG**

| Business Intelligence Products | | | | | | | |
|---|-----------------------------|---|-----------------------|-------------------------------------|-----------------------------|--------------|--|
| | <i>Proposed Deliverable</i> | <i>Strategic Objective</i> | <i>Priority Score</i> | <i>Estimated Cost (in millions)</i> | | | <i>Benefits</i> |
| | | | | <i>NYISO Labor</i> | <i>Capital/ Consultancy</i> | <i>Total</i> | |
| Mandatory Projects* | | | | | | | |
| NY Generator Attribute Tracking System (GATS) Data Feed | Deployment | Authoritative Source of Information on Key Issues | 293 | \$0.208 | \$0.000 | \$0.208 | <ul style="list-style-type: none"> Mandated by NYS Legislature Reduce current NYISO processes for EDP and RPS programs |
| Continuing from 2014 | | | | | | | |
| OASIS Postings Technology Upgrade Phase 2 | Deployment | Excellence in Execution | 338 | \$0.176 | \$0.000 | \$0.176 | <ul style="list-style-type: none"> Improve supportability Remove reliance on older technology |
| DSS Business Objects Upgrade | Deployment | Excellence in Execution | 214 | \$0.166 | \$0.145 | \$0.311 | <ul style="list-style-type: none"> Upgrade to latest vendor version Improve supportability |
| Projects for Prioritization | | | | | | | |
| Public Website Renewables Page | Deployment | Authoritative Source of Information on Key Issues | 230 | \$0.109 | \$0.000 | \$0.109 | <ul style="list-style-type: none"> Provide public visibility to different fuel types |
| Public Website NYISO Budget and Value Proposition Pages | Deployment | Authoritative Source of Information on Key Issues | 230 | \$0.033 | \$0.071 | \$0.104 | <ul style="list-style-type: none"> Ease of locating and accessing NYISO budget information |
| Enterprise Information Mgmt: Data Integration | Deployment | Leader in Technology Innovation | 305 | \$0.223 | \$0.564 | \$0.787 | <ul style="list-style-type: none"> Improve management of NYISO data Reduce time and costs for external data feeds |

| Capacity Products | | | | | | | |
|---|-------------------------|---------------------------------|----------------|------------------------------|----------------------|---------|---|
| | Proposed Deliverable | Strategic Objective | Priority Score | Estimated Cost (in millions) | | | Benefits |
| | | | | NYISO Labor | Capital/ Consultancy | Total | |
| Mandatory Projects* | | | | | | | |
| Modify the Pivotal Supplier Tests (SOM) | Deployment | Excellence in Execution | 790 | \$0.058 | \$0.000 | \$0.058 | <ul style="list-style-type: none"> Satisfies compliance requirement May prevent large supplier from circumventing mitigation and benefiting from withholding capacity |
| Continuing from 2014 | | | | | | | |
| ICAP AMS Enhancements Phase 2 | Deployment | Excellence in Execution | 783 | \$0.106 | \$0.000 | \$0.106 | <ul style="list-style-type: none"> Automates ICAP Market functions that were previously completed manually via spreadsheets and e-mail, reducing risk of errors. |
| Projects for Prioritization | | | | | | | |
| DMNC Test Validation Automation | Functional Requirements | Excellence in Execution | 396 | \$0.067 | \$0.000 | \$0.067 | <ul style="list-style-type: none"> Automates manual processes and reduces risk of errors. |
| Reactive Test Data Collection and Tracking | Software Design | Excellence in Execution | 609 | \$0.148 | \$0.000 | \$0.148 | <ul style="list-style-type: none"> Automates manual processes and reduces risk of errors. |
| ICAP Reference System Phase 2 | Functional Requirements | Excellence in Execution | 467 | \$0.062 | \$0.000 | \$0.062 | <ul style="list-style-type: none"> Improves transparency Expands functionality to additional processes |
| ICAP Auction Validating and Reporting Phase 2 | Deployment | Leader in Technology Innovation | 781 | \$0.140 | \$0.000 | \$0.140 | <ul style="list-style-type: none"> Provides efficient access to ICAP Auction Data, supporting Auction validation and report automation |

| Capacity Products (continued) | | | | | | | |
|--|-------------------------------|-------------------------|----------------|------------------------------|----------------------|---------|--|
| | Proposed Deliverable | Strategic Objective | Priority Score | Estimated Cost (in millions) | | | Benefits |
| | | | | NYISO Labor | Capital/ Consultancy | Total | |
| Projects for Prioritization (continued) | | | | | | | |
| External CRIS Rights for Non-UDR Transmission Expansion | Market Design Concept | Leader in Market Design | 199 | \$0.080 | \$0.000 | \$0.080 | <ul style="list-style-type: none"> Grant MPs funding upgrades a capacity benefit associate with the upgrade May incent economic transmission |
| Locational Planning Requirements - Pre-define Capacity Zones (SOM) and Develop Rules for the Elimination of Capacity Zones or Achievement of Price Convergence | Market Design Approved | Leader in Market Design | 329 | \$0.148 | \$0.000 | \$0.148 | <ul style="list-style-type: none"> May provide more timely price signals to incent investment needed to meet reliability requirements. May address price convergence issues associated with Locational requirements. |
| Behind the Meter: Net Generator Model+ | Market Design Approved | Leader in Market Design | 533 | \$0.095 | \$0.000 | \$0.095 | <ul style="list-style-type: none"> Allow surplus energy and capacity to participate in the wholesale market |
| Expand BSM measures to Address the Effects of Uneconomic Transmission Investment (SOM) | Market Design Concept | Leader in Market Design | 185 | \$0.096 | \$0.000 | \$0.096 | <ul style="list-style-type: none"> Enhance market efficiency May defer investment in uneconomic transmission projects |
| Modify Demand Curve to Minimize Costs of Satisfying LCR & Incent Siting Capacity Where It | Market Design Concept | Leader in Market Design | 199 | \$0.166 | \$0.000 | \$0.166 | <ul style="list-style-type: none"> Enhance market efficiency May reduce costs of meeting LCRs |

*Mandatory = FERC Order, Strategic Initiative, Tariff Obligation, or Dependency To Support Order, Initiative, or Obligation

+ = Project may be applicable to the implementation of REV directed outcomes.

| Capacity Products (continued) | | | | | | | |
|---|-------------------------------|--------------------------------|-----------------------|-------------------------------------|-----------------------------|----------------|---|
| | <i>Proposed Deliverable</i> | <i>Strategic Objective</i> | <i>Priority Score</i> | <i>Estimated Cost (in millions)</i> | | | <i>Benefits</i> |
| | | | | <i>NYISO Labor</i> | <i>Capital/ Consultancy</i> | <i>Total</i> | |
| Projects for Prioritization (continued) | | | | | | | |
| Winter DMNC Temperature Adjustments | Market Design Approved | Excellence in Execution | 430 | \$0.021 | \$0.000 | \$0.021 | <ul style="list-style-type: none"> Enhance measurement of Installed Capacity available for typical winter peak conditions |
| ICAP Import Rights Design Re-assessment | Market Design Approved | Excellence in Execution | 311 | \$0.030 | \$0.000 | \$0.030 | <ul style="list-style-type: none"> Automate FCFS fax process Enhance market efficiency |
| Locational Planning Requirements - Grant Internal Capacity Deliverability Rights for Transmission Upgrades into a Local Area (SOM) | Market Design Concept | Leader in Market Design | 199 | \$0.082 | \$0.000 | \$0.082 | <ul style="list-style-type: none"> Allow for Capacity Market incentive for economic transmission investments |
| Fuel Assurance: Market Design Concepts | Market Design Concept | Leader in Market Design | 563 | \$0.096 | \$0.000 | \$0.096 | <ul style="list-style-type: none"> Incent intra-day operational flexibility Promote increased resource availability and performance |
| ICAP AMS Enhancements Phase 3 | Development Complete | Excellence in Execution | 471 | \$0.309 | \$0.000 | \$0.309 | <ul style="list-style-type: none"> Automates manual processes and reduces risk of errors. |
| External CRIS Right (4 strike rule) Rule | Market Design Approved | Leader in Market Design | 239 | \$0.093 | \$0.000 | \$0.093 | <ul style="list-style-type: none"> Enhance market efficiency |
| Discuss concept for applying BSM measures in the NYCA | Market Design Concept | Excellence in Execution | 228 | \$0.189 | \$0.000 | \$0.189 | <ul style="list-style-type: none"> May enhance market efficiency |

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| Demand Response Products | | | | | | | |
|--|------------------------------|----------------------------|-----------------------|-------------------------------------|-----------------------------|--------------|--|
| | <i>Proposed Deliverable</i> | <i>Strategic Objective</i> | <i>Priority Score</i> | <i>Estimated Cost (in millions)</i> | | | <i>Benefits</i> |
| | | | | <i>NYISO Labor</i> | <i>Capital/ Consultancy</i> | <i>Total</i> | |
| Mandatory Projects* | | | | | | | |
| Demand Response in Real-Time Energy Market | Functional Requirements | Leader in Market Design | 737 | \$0.158 | \$0.000 | \$0.158 | <ul style="list-style-type: none"> Provides opportunity for demand response to participate in NYISO's hour-ahead market |
| FERC Order 745: Monthly Net Benefits Test | Deployment | Leader in Market Design | 437 | \$0.005 | \$0.000 | \$0.005 | <ul style="list-style-type: none"> Variable offer floor and improved cost allocation |
| Continuing from 2014 | | | | | | | |
| SCR Performance Obligations | Deployment | Leader in Reliability | 653 | \$0.217 | \$0.000 | \$0.217 | <ul style="list-style-type: none"> Increased reliability of the grid Event response may be used to satisfy the test requirement Option to retest |
| Metering Infrastructure Requirements for Demand Response+ | Functional Requirements | Excellence in Execution | 485 | \$0.106 | \$0.095 | \$0.201 | <ul style="list-style-type: none"> Improve administration of DR programs with increased measurement, verification and audit capabilities Improve operational visibility of demand side resources |
| Projects for Prioritization | | | | | | | |
| DRIS Enhancements for DR Program Administration | Deployment | Excellence in Execution | 492 | \$0.141 | \$0.000 | \$0.141 | <ul style="list-style-type: none"> Increased efficiency and accuracy for DR program administration |
| Market Rule Changes to SCR Baselines | Market Design Approved | Excellence in Execution | 646 | \$0.064 | \$0.000 | \$0.064 | <ul style="list-style-type: none"> Improve methodologies for estimating available capacity and load reductions of demand response resources |
| Expanding on Selected DER Concepts to Further Align with REV+ | Market Design Concept | Leader in Market Design | 396 | \$0.043 | \$0.000 | \$0.043 | <ul style="list-style-type: none"> Alignment with the New York State Public Service Commission's "Reforming the Energy Vision (REV) proceeding |

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+ = Project may be applicable to the implementation of REV directed outcomes.

| Energy Products | | | | | | | |
|--|------------------------|-------------------------|----------------|------------------------------|----------------------|---------|---|
| | Proposed Deliverable | Strategic Objective | Priority Score | Estimated Cost (in millions) | | | Benefits |
| | | | | NYISO Labor | Capital/ Consultancy | Total | |
| Mandatory Projects* | | | | | | | |
| Coordinated Transaction Scheduling with ISO-NE (SOM) | Deployment | Leader in Market Design | 741 | \$1.144 | \$2.423 | \$3.567 | <ul style="list-style-type: none"> \$17M/year in Production Cost Savings (D. Patton – Potomac Economics) |
| Continuing from 2014 | | | | | | | |
| Scheduling & Pricing: Comprehensive Shortage Pricing (SOM) | Deployment | Leader in Market Design | 628 | \$0.657 | \$0.228 | \$0.885 | <ul style="list-style-type: none"> Increase in the efficiency of price signals More efficient scheduling |
| Scheduling & Pricing: Comprehensive Scarcity Pricing (SOM) | Development Complete | Leader in Market Design | 626 | \$0.364 | \$0.261 | \$0.625 | <ul style="list-style-type: none"> Increase in the efficiency of internal and external price signals Incenting fuel assurance |
| Projects for Prioritization | | | | | | | |
| Fuel Assurance: Market Concepts | Market Design Concept | Leader in Market Design | 563 | \$0.040 | \$0.024 | \$0.064 | <ul style="list-style-type: none"> Incent intra-day operational flexibility Promote increased resource availability and performance |
| Gas-Electric Coordination: Constrained Fuel Supply Bidding (SOM) | Market Design Concept | Leader in Market Design | 483 | \$0.050 | \$0.000 | \$0.050 | <ul style="list-style-type: none"> Greater efficiency for dispatch Improved Gas-Electric coordination |
| Behind the Meter: Net Generation Model+ | Market Design Approved | Leader in Market Design | 533 | \$0.062 | \$0.010 | \$0.072 | <ul style="list-style-type: none"> Allow surplus energy and capacity to participate in the wholesale market |

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+ = Project may be applicable to the implementation of REV directed outcomes.

| Energy Products (continued) | | | | | | | |
|---|-------------------------------|----------------------------|-----------------------|-------------------------------------|-----------------------------|--------------|---|
| | <i>Proposed Deliverable</i> | <i>Strategic Objective</i> | <i>Priority Score</i> | <i>Estimated Cost (in millions)</i> | | | <i>Benefits</i> |
| | | | | <i>NYISO Labor</i> | <i>Capital/ Consultancy</i> | <i>Total</i> | |
| Projects for Prioritization (continued) | | | | | | | |
| Disaggregated Virtual Trading | Market Design Approved | Leader in Market Design | 100 | \$0.165 | \$0.095 | \$0.260 | <ul style="list-style-type: none"> Improved market efficiency Enhanced market functionality |
| External Transaction Balancing Protection | Market Design Concept | Excellence in Execution | 483 | \$0.009 | \$0.000 | \$0.009 | <ul style="list-style-type: none"> Improve market performance |
| Energy Storage Optimization | Market Design Concept | Leader in Market Design | 361 | \$0.035 | \$0.000 | \$0.035 | <ul style="list-style-type: none"> Improved market efficiency through better utilization of storage resources |
| 5 minute Transaction Scheduling | Market Design Concept | Leader in Market Design | 359 | \$0.077 | \$0.000 | \$0.077 | <ul style="list-style-type: none"> Improved price signals More efficient scheduling Reduce residuals |
| Scheduling & Pricing: RTD/RTC Forward Horizon Coordination Improvements (SOM) | Market Design Concept | Leader in Market Design | 303 | \$0.064 | \$0.000 | \$0.064 | <ul style="list-style-type: none"> Improved price signals More efficient scheduling |
| Long Island PAR Optimization (SOM) | Market Design Approved | Leader in Market Design | 291 | \$0.044 | \$0.000 | \$0.044 | <ul style="list-style-type: none"> \$20M in Production Cost Savings (D. Patton – Potomac Economics) |
| Scheduling & Pricing: Hybrid GT Pricing Improvements (SOM) | Market Design Approved | Leader in Market Design | 301 | \$0.046 | \$0.000 | \$0.046 | <ul style="list-style-type: none"> Improved price signals More efficient scheduling Reduce residuals |
| Virtual Trading using Spread Bids | Market Design Concept | Leader in Market Design | 100 | \$0.050 | \$0.000 | \$0.050 | <ul style="list-style-type: none"> Improved market efficiency Enhanced market functionality |

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| Enterprise Products | | | | | | | |
|---|-----------------------------|---------------------------------|-----------------------|-------------------------------------|-----------------------------|--------------|---|
| | <i>Proposed Deliverable</i> | <i>Strategic Objective</i> | <i>Priority Score</i> | <i>Estimated Cost (in millions)</i> | | | <i>Benefits</i> |
| | | | | <i>NYISO Labor</i> | <i>Capital/ Consultancy</i> | <i>Total</i> | |
| Mandatory Projects* | | | | | | | |
| NERC CIP v5 Planning & Conversion | Study Complete | Excellence in Execution | 629 | \$0.289 | \$0.323 | \$0.612 | <ul style="list-style-type: none"> NERC CIP v5 compliance NERC CIP audit readiness |
| NERC CIP-005 v5 Electronic Security Perimeter | Deployment | Excellence in Execution | 612 | \$0.164 | \$0.347 | \$0.511 | <ul style="list-style-type: none"> NERC CIP v5 compliance NERC CIP audit readiness |
| NERC CIP-010 v5 Configuration Management | Deployment | Excellence in Execution | 623 | \$0.371 | \$0.025 | \$0.396 | <ul style="list-style-type: none"> NERC CIP v5 compliance NERC CIP audit readiness |
| NERC CIP-011 v5 Information Protection | Deployment | Excellence in Execution | 619 | \$0.175 | \$0.000 | \$0.175 | <ul style="list-style-type: none"> NERC CIP v5 compliance NERC CIP audit readiness |
| Continuing from 2014 | | | | | | | |
| Enterprise Project Management Phase IV | Deployment | Excellence in Execution | 365 | \$0.190 | \$0.214 | \$0.404 | <ul style="list-style-type: none"> Improve resource capacity and utilization data for project decision making |
| Stakeholder Services Suite Phase II | Deployment | Excellence in Execution | 384 | \$0.272 | \$0.316 | \$0.588 | <ul style="list-style-type: none"> Improve data for managing customer interactions Reduce manual processing of duplicate data |
| Identity and Access Management Phase IV | Deployment | Leader in Technology Innovation | 464 | \$0.542 | \$0.145 | \$0.687 | <ul style="list-style-type: none"> Enhance security of critical cyber assets Enhance security of physical security systems |

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| Enterprise Products (continued) | | | | | | | |
|--|-----------------------------|---------------------------------|-----------------------|-------------------------------------|-----------------------------|----------------|--|
| | <i>Proposed Deliverable</i> | <i>Strategic Objective</i> | <i>Priority Score</i> | <i>Estimated Cost (in millions)</i> | | | <i>Benefits</i> |
| | | | | <i>NYISO Labor</i> | <i>Capital/ Consultancy</i> | <i>Total</i> | |
| Continuing from 2014 (continued) | | | | | | | |
| Enterprise Technology Monitoring Phase II | Deployment | Leader in Technology Innovation | 523 | \$0.277 | \$0.814 | \$1.091 | <ul style="list-style-type: none"> Enhance IT situational awareness of critical applications and infrastructure Reduce unplanned service interruptions |
| Application Platform Upgrade Phase II (Linux) | Deployment | Leader in Technology Innovation | 453 | \$0.311 | \$0.070 | \$0.381 | <ul style="list-style-type: none"> Replace obsolete hardware running NYISO applications Maintain product support |
| Windows Server Upgrades | Deployment | Excellence in Execution | 381 | \$0.190 | \$0.100 | \$0.290 | <ul style="list-style-type: none"> Maintain product support Maintain NYISO security posture |
| Projects for Prioritization | | | | | | | |
| Improve MP Access Security | Architecture Design | Excellence in Execution | 365 | \$0.063 | \$0.000 | \$0.063 | <ul style="list-style-type: none"> Improve access security to NYISO market systems Maintain NYISO security posture |
| Integration Platform Availability Improvements | Deployment | Leader in Technology Innovation | 402 | \$0.168 | \$0.229 | \$0.397 | <ul style="list-style-type: none"> Enhance platform capabilities Improve platform availability Maintain product support |
| Storage Infrastructure Redesign | Deployment | Leader in Technology Innovation | 457 | \$0.404 | \$3.500 | \$3.904 | <ul style="list-style-type: none"> Utilize more efficient technologies to meet growing data storage requirements Maintain product support |
| Market Test Environment | Deployment | Excellence in Execution | 255 | \$0.100 | \$0.400 | \$0.500 | <ul style="list-style-type: none"> Increased availability of "sandbox" environment for MP testing and training |

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| Finance Products | | | | | | | |
|---|-----------------------------|----------------------------|-----------------------|-------------------------------------|-----------------------------|--------------|---|
| | <i>Proposed Deliverable</i> | <i>Strategic Objective</i> | <i>Priority Score</i> | <i>Estimated Cost (in millions)</i> | | | <i>Benefits</i> |
| | | | | <i>NYISO Labor</i> | <i>Capital/ Consultancy</i> | <i>Total</i> | |
| Mandatory Projects* | | | | | | | |
| Regulated Transmission Cost Recovery Implementation | Deployment | Leader in Market Design | 651 | \$0.143 | \$0.000 | \$0.143 | <ul style="list-style-type: none"> Support planning Meet reliability, economic and/or public policy needs |
| Continuing from 2014 | | | | | | | |
| Procurement Enhancements | Deployment | Excellence in Execution | 238 | \$0.071 | \$0.024 | \$0.095 | <ul style="list-style-type: none"> Improve efficiencies for creating and approving purchase requests |
| Manual Adjustments Redesign | Deployment | Excellence in Execution | 406 | \$0.167 | \$0.000 | \$0.167 | <ul style="list-style-type: none"> Provide automation for processes which are currently manual |
| Projects for Prioritization | | | | | | | |
| CMS True-up Exposure | Deployment | Excellence in Execution | 408 | \$0.157 | \$0.000 | \$0.157 | <ul style="list-style-type: none"> Reduce potential financial exposure |
| Oracle Financials Fixed Assets | Deployment | Excellence in Execution | 238 | \$0.080 | \$0.095 | \$0.175 | <ul style="list-style-type: none"> Enhance processes Consolidate processes into one system |
| Budget versus Actual Automation | Functional Requirements | Excellence in Execution | 233 | \$0.075 | \$0.095 | \$0.170 | <ul style="list-style-type: none"> Improve usability Improve visibility |
| RFP Evaluation Tool | Deployment | Excellence in Execution | 143 | \$0.139 | \$0.120 | \$0.259 | <ul style="list-style-type: none"> Consolidation of information Standardization of process |
| DAMAP Enhancement | Deployment | Excellence in Execution | 293 | \$0.135 | \$0.000 | \$0.135 | <ul style="list-style-type: none"> Improve market design |

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| Finance Products (continued) | | | | | | | |
|---|-----------------------------|----------------------------|-----------------------|-------------------------------------|-----------------------------|--------------|---|
| | <i>Proposed Deliverable</i> | <i>Strategic Objective</i> | <i>Priority Score</i> | <i>Estimated Cost (in millions)</i> | | | <i>Benefits</i> |
| | | | | <i>NYISO Labor</i> | <i>Capital/ Consultancy</i> | <i>Total</i> | |
| Projects for Prioritization (continued) | | | | | | | |
| North Subzone Redistricting | Market Design Concept | Leader in Market Design | 215 | \$0.384 | \$0.000 | \$0.384 | <ul style="list-style-type: none"> • Reduce Unaccounted for Energy(UFE) |
| Rate Schedule 1 Technology Automation | Market Design Concept | Leader in Market Design | 365 | \$0.118 | \$0.000 | \$0.118 | <ul style="list-style-type: none"> • Reduce manual processes • Improve efficiencies and reduce risk |
| CMS Financial Risk Assessment Tools | Functional Requirements | Excellence in Execution | 308 | \$0.069 | \$0.000 | \$0.069 | <ul style="list-style-type: none"> • Reduce risk • Replace manual processes |
| CMS Ratings Automation | Functional Requirements | Excellence in Execution | 308 | \$0.074 | \$0.000 | \$0.074 | <ul style="list-style-type: none"> • Improve efficiency • Replace manual processes |
| CMS External Transactions Timing Adjustments | Deployment | Excellence in Execution | 348 | \$0.251 | \$0.000 | \$0.251 | <ul style="list-style-type: none"> • Improve Credit policy • Potential MP reduction in collateral |
| CMS ICAP Spot Market Offers Enhancement | Deployment | Excellence in Execution | 333 | \$0.120 | \$0.000 | \$0.120 | <ul style="list-style-type: none"> • Improve Credit policy • Potential MP reduction in collateral |
| CMS Unbalanced Trading Hubs | Deployment | Leader in Market Design | 213 | \$0.394 | \$0.000 | \$0.394 | <ul style="list-style-type: none"> • Improve market design |

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| Operations & Reliability Products | | | | | | | |
|--|-----------------------------|----------------------------|-----------------------|-------------------------------------|-----------------------------|--------------|--|
| | <i>Proposed Deliverable</i> | <i>Strategic Objective</i> | <i>Priority Score</i> | <i>Estimated Cost (in millions)</i> | | | <i>Benefits</i> |
| | | | | <i>NYISO Labor</i> | <i>Capital/ Consultancy</i> | <i>Total</i> | |
| Continuing from 2014 | | | | | | | |
| FERC Funded Rerun Phase 2 | Deployment | Excellence in Execution | 770 | \$0.073 | \$0.000 | \$0.073 | <ul style="list-style-type: none"> Improved efficiency of meeting FERC Office of Enforcement request |
| FERC Funded Rerun Phase 3 | Development Complete | Excellence in Execution | 770 | \$0.315 | \$0.000 | \$0.315 | <ul style="list-style-type: none"> Improved efficiency of meeting FERC Office of Enforcement request |
| Projects for Prioritization | | | | | | | |
| EMS/BMS System Upgrade | RFP Initiated | Leader in Reliability | 743 | \$0.178 | \$1.625 | \$1.803 | <ul style="list-style-type: none"> Increased supportability Increased Ranger platform stability |
| Breaker Level Market Modeling | Deployment | Leader in Reliability | 598 | \$0.057 | \$0.190 | \$0.247 | <ul style="list-style-type: none"> Improve price signals Reduce market inefficiency |
| Transmission Service Charges: Rate Update | Deployment | Excellence in Execution | 520 | \$0.046 | \$0.000 | \$0.046 | <ul style="list-style-type: none"> Improved supportability |
| BES: Contingency Analysis Updates | Deployment | Leader in Reliability | 618 | \$0.150 | \$0.618 | \$0.768 | <ul style="list-style-type: none"> Enhanced contingency processing Increased system reliability |
| BES: Interconnection Reliability Operating Limits (IROL) Visualization | Deployment | Leader in Reliability | 592 | \$0.074 | \$0.048 | \$0.122 | <ul style="list-style-type: none"> Improve operational awareness Redundancy for periods of Ranger unavailability |

| Operations & Reliability Products (continued) | | | | | | | |
|---|-----------------------------|---|-----------------------|-------------------------------------|-----------------------------|--------------|--|
| | <i>Proposed Deliverable</i> | <i>Strategic Objective</i> | <i>Priority Score</i> | <i>Estimated Cost (in millions)</i> | | | <i>Benefits</i> |
| | | | | <i>NYISO Labor</i> | <i>Capital/ Consultancy</i> | <i>Total</i> | |
| Projects for Prioritization (continued) | | | | | | | |
| Dispatcher Training System (DTS) Sustainability Phase II | Development Complete | Leader in Reliability | 578 | \$0.157 | \$0.150 | \$0.307 | <ul style="list-style-type: none"> Reduction in training downtime and rescheduling Continued compliance with NERC PER-005 |
| Gas-Electric Coordination: Fuel Availability Self Reporting (SOM) | Deployment | Leader in Reliability | 663 | \$0.222 | \$0.000 | \$0.222 | <ul style="list-style-type: none"> Improved situational awareness of grid and market conditions Improved reliability at times of high natural gas demand |
| MetrixIDR (Load Forecaster Upgrade) | Deployment | Leader in Reliability | 578 | \$0.223 | \$0.000 | \$0.223 | <ul style="list-style-type: none"> Supportability Allows Operators to focus on the forecast, not complex software |
| MMA Market Operations Report Automation | Functional Requirements | Excellence in Execution | 660 | \$0.140 | \$0.000 | \$0.140 | <ul style="list-style-type: none"> Improve efficiency of MMA tasks |
| 2015 Reference Level Software (RLS) Enhancements | Deployment | Leader in Market Design | 636 | \$0.304 | \$0.105 | \$0.409 | <ul style="list-style-type: none"> Improved alignment of Reference Prices with Gas Market Increased user flexibility |
| Posting of Line Derates / Uprates | Deployment | Authoritative Source of Information on Key Issues | 188 | \$0.109 | \$0.000 | \$0.109 | <ul style="list-style-type: none"> Increase Transparency Satisfies MP Request |

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| Planning Products | | | | | | | |
|------------------------------------|-----------------------------|---|-----------------------|-------------------------------------|-----------------------------|--------------|---|
| | <i>Proposed Deliverable</i> | <i>Strategic Objective</i> | <i>Priority Score</i> | <i>Estimated Cost (in millions)</i> | | | <i>Benefits</i> |
| | | | | <i>NYISO Labor</i> | <i>Capital/ Consultancy</i> | <i>Total</i> | |
| Continuing from 2014 | | | | | | | |
| Economic Planning Model Management | Deployment | Sustain & Enhance Robust Planning Processes | 637 | \$0.132 | \$0.143 | \$0.275 | <ul style="list-style-type: none"> Improved efficiency in development of Planning models through automation Reduced risk through development of standard procedures |

| TCC Products | | | | | | | |
|------------------------------------|-----------------------------|---------------------------------|-----------------------|-------------------------------------|-----------------------------|--------------|--|
| | <i>Proposed Deliverable</i> | <i>Strategic Objective</i> | <i>Priority Score</i> | <i>Estimated Cost (in millions)</i> | | | <i>Benefits</i> |
| | | | | <i>NYISO Labor</i> | <i>Capital/ Consultancy</i> | <i>Total</i> | |
| Continuing from 2014 | | | | | | | |
| TCC Revenue Allocation Automation | Deployment | Excellence in Execution | 744 | \$0.000 | \$0.000 | \$0.000 | <ul style="list-style-type: none"> Improves efficiency and reduces risk through automation of manual processes Required for multi-duration auction support |
| Projects for Prioritization | | | | | | | |
| Balance-of-Period AMS | Software Design | Leader in Market Design | 564 | \$0.111 | \$0.000 | \$0.111 | <ul style="list-style-type: none"> Evolves TCC Market to allow MPs to reconfigure remaining months in capability period Satisfies a top priority for MPs |
| Balance-of-Period AVS | Functional Requirements | Leader in Market Design | 564 | \$0.171 | \$0.000 | \$0.171 | <ul style="list-style-type: none"> New Validations associated with new Balance-of-Period processes are developed Automation of manual processes |
| Balance-of-Period CMS | Functional Requirements | Leader in Market Design | 564 | \$0.072 | \$0.000 | \$0.072 | <ul style="list-style-type: none"> Development of credit policy for Balance-of-Period auction format Identification of modifications to CMS |
| TCC AMS Round Type and Upgrade | Development Complete | Leader in Technology Innovation | 424 | \$0.106 | \$0.000 | \$0.106 | <ul style="list-style-type: none"> Allows AMS to be used for round analysis inquiries Improves efficiency Improves supportability |
| TCC On-Peak/Off-Peak | Market Design Concept | Leader in Market Design | 350 | \$0.023 | \$0.000 | \$0.023 | <ul style="list-style-type: none"> Investigates benefits of offering separate On-Peak / Off-Peak TCCs |

The New York Independent System Operator (NYISO) is a not-for-profit corporation responsible for operating the state's bulk electricity grid, administering New York's competitive wholesale electricity markets, conducting comprehensive long-term planning for the state's electric power system, and advancing the technological infrastructure of the electric system serving the Empire State.



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