

2016 Project Prioritization & Budgeting Process

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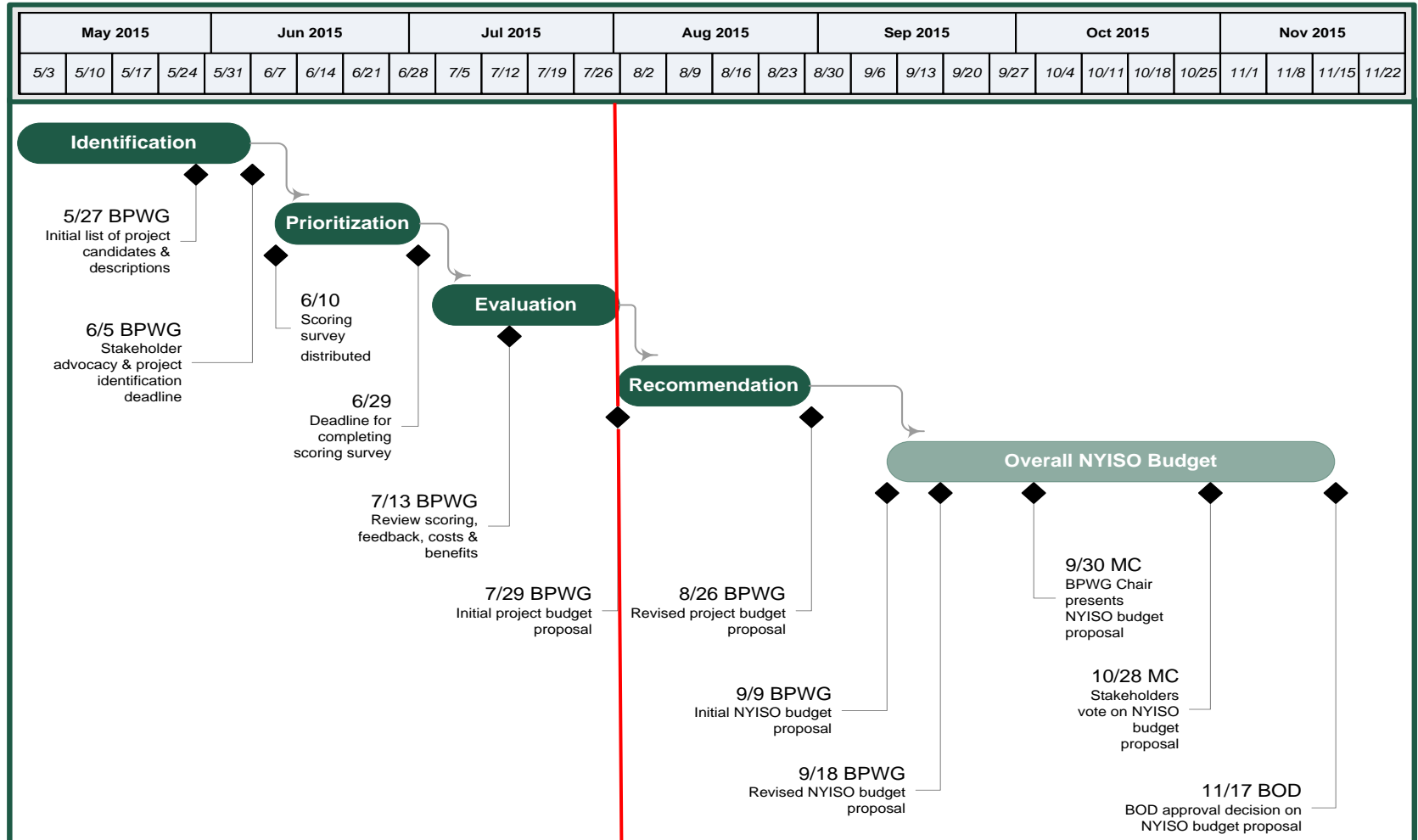
July 29, 2015

Krey Corporate Center

2016 Project Selection Process

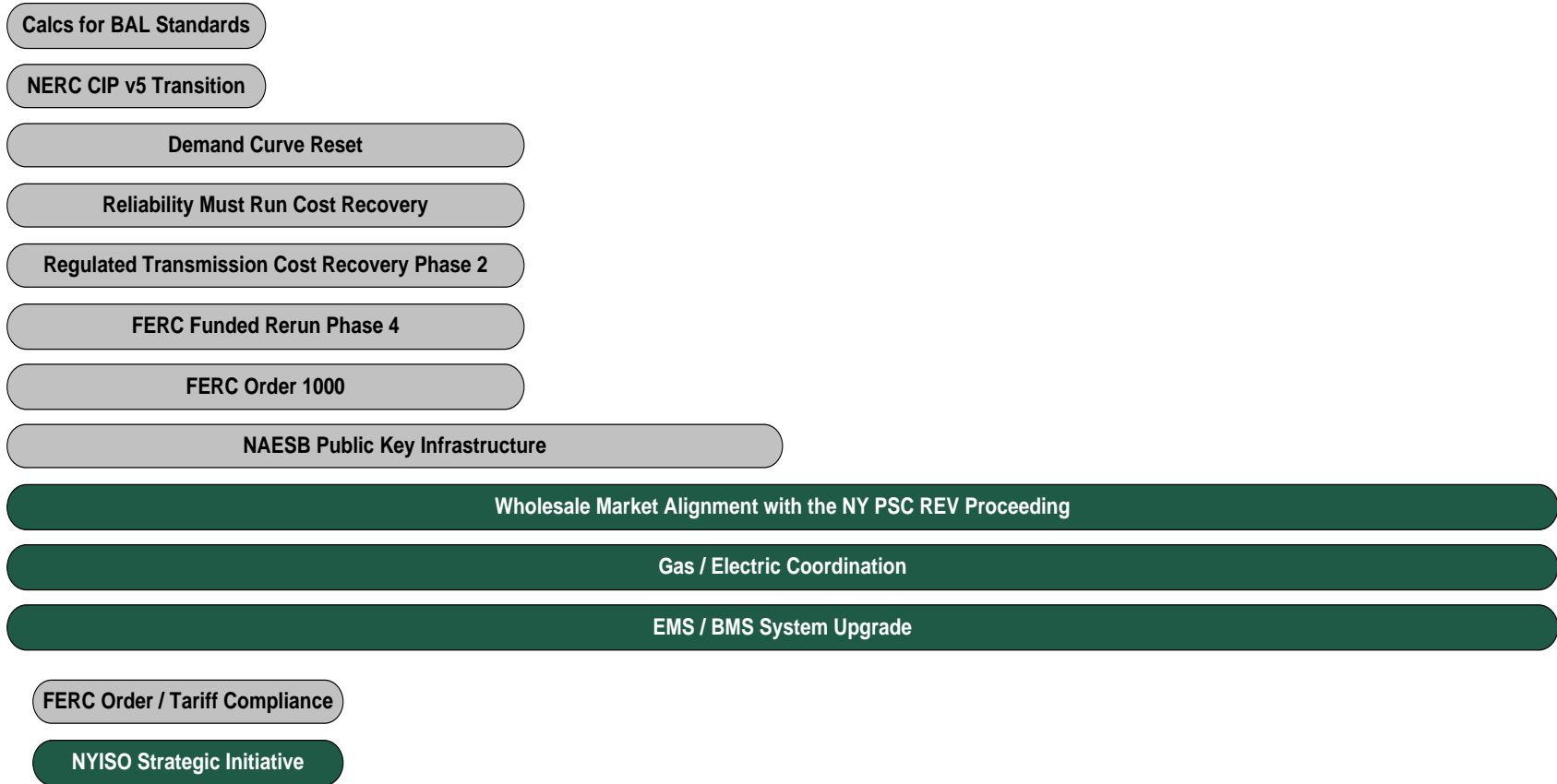
Phase	Description
Identification	This phase involves developing the list of project candidates taking into consideration regulatory obligations, strategic initiatives, State of the Market recommendations, necessary infrastructure enhancements, product plans, stakeholder feedback, etc.
Prioritization	The phase involves the NYISO and stakeholder scoring of projects. The NYISO scores projects using objective criteria that reflects strategic alignment, expected outcomes, risks, and ability to execute. Stakeholders score projects based on their organizational priorities via a survey mechanism.
Evaluation	This phase involves performing a feasibility assessment based on detailed direct cost and labor estimates.
Recommendation	This phase involves proposing a feasible set of project deliverables and related budget requirements. The proposal is refined as needed based on stakeholder feedback.

2016 Project Prioritization & Budgeting Timeline



2016 – 2018 Strategic Initiatives & FERC Orders

2016	2017	2018
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Recommended 2016 Projects



Project	Deliverable	Estimated Cost (in millions \$)			Total
		NYISO Labor	Capital	Consultants	
Business Intelligence Products					
Enterprise Information Management: Data Integration Phase 2	Deploy	0.23	0.11	0.02	0.35
Enterprise Information Management: Analytics Environments	Deploy	0.06	0.08	0.06	0.19
Capacity Market Products					
ICAP AMS Enhancements Phase 3	Deploy	0.34	0.00	0.00	0.34
Reactive Test Data Management System	Deploy	0.22	0.00	0.00	0.22
Automate ICAP Import Rights	Functional Requirements	0.10	0.00	0.00	0.10
Demand Curve Reset*	Study Complete	0.65	0.00	1.10	1.75
Winter DMNC Temperature Adjustments	Market Design Approved	0.02	0.00	0.00	0.02
Performance Assurance – Study	Study Complete	0.07	0.00	0.00	0.07
Alternative Methods for Calculating the Locational Capacity Requirements	Market Design Concept	0.11	0.00	0.00	0.11
Behind the Meter: Net Generation Integration	Deploy	0.68	0.05	0.23	0.96
Develop Rules for the Elimination of Capacity Zones or Achievement of Price Convergence	Market Design Approved	0.08	0.00	0.00	0.08
Model Zone K as Export Constrained	Market Design Concept	0.07	0.00	0.00	0.07
Renewables Exemption	Market Design Approved	0.04	0.00	0.00	0.04
Modify the Pivotal Supplier Test (SOM)	Market Design Approved	0.03	0.00	0.00	0.03

* (Asterisks) denote mandatory projects required to comply with a FERC Order or Tariff Obligation

Bold Red text indicates revised estimates and/or deliverables

Recommended 2016 Projects



Project	Deliverable	Estimated Cost (in millions \$)			Total
		NYISO Labor	Capital	Consultants	
Capacity Market Products (continued)					
Modify Treatment of Units Being Replaced, Mothballed and Retired in Forecasts of ICAP Prices and Net Revenues (SOM)	Market Design Approved	0.05	0.00	0.00	0.05
RMR Cost Recovery*	Deploy	0.56	0.00	0.24	0.80
Energy Market Products					
Fuel Assurance ☐Constrained Fuel Supply Bidding (SOM)	Functional Requirements	0.08	0.00	0.00	0.08
Energy Storage Optimization	Market Design Concept	0.06	0.00	0.00	0.06
Linked Virtual Buy☐Sell Transactions	Functional Requirements	0.09	0.00	0.00	0.09
Hybrid GT Pricing Improvements (SOM)	Market Design Approved	0.07	0.00	0.00	0.07
RTC☐RTD Forward Horizon Coordination Improvements (SOM)	Market Design Approved	0.07	0.00	0.00	0.07
Wholesale Market Alignment with the NY PSC REV Proceeding	Market Design Concept	0.14	0.25	0.20	0.59
Enterprise Products					
NERC CIP v5 Planning & Conversion ☐Phase II*	Study Complete	0.49	0.20	0.16	0.85
NAESB Public Key Infrastructure*	Deploy	0.27	0.03	0.00	0.29
Market Test Environment	Deploy	0.08	0.29	0.00	0.37
Storage Infrastructure Redesign Phase II	Deploy	0.13	3.32	0.27	3.72
Identity and Access Management (IAM) ☐Phase V	Deploy	0.27	0.32	0.10	0.69
Application Platform Upgrade Phase III	Deploy	0.59	0.00	0.00	0.59

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Recommended 2016 Projects



Project	Deliverable	Estimated Cost (in millions \$)			
		NYISO Labor	Capital	Consultants	Total
Enterprise Products (continued)					
Enterprise Monitoring Phase III	Deploy	0.28	0.16	0.05	0.49
Stakeholder Services Suite Phase II	Functional Requirements	0.06	0.00	0.09	0.14
Database Upgrades and Performance Improvements	Deploy	0.51	0.40	0.00	0.91
Telephony System Upgrade	Deploy	0.40	0.70	0.34	1.44
Finance Products					
Regulated Transmission Cost Recovery - Phase 2*	Software Design	0.21	0.00	0.00	0.21
Day Ahead Margin Assurance Payment (DAMAP) Enhancements	Development Complete	0.13	0.00	0.00	0.13
North Subzone Redistricting	Functional Requirements	0.12	0.00	0.00	0.12
Rate Schedule 1 Technology Automation	Deploy	0.35	0.00	0.00	0.35
Settlements Sub Accounts	Functional Requirements	0.09	0.00	0.00	0.09
CMS Financial Risk Assessment Tools	Deploy	0.29	0.00	0.00	0.29
CMS Ratings Automation	Deploy	0.24	0.00	0.00	0.24
Foreign Guarantees	Market Design Concept	0.05	0.00	0.00	0.05

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Recommended 2016 Projects



Project	Deliverable	Estimated Cost (in millions \$)			Total
		NYISO Labor	Capital	Consultants	
Operations & Reliability Products					
Calculations of BAL Standards*	Deploy	0.05	0.00	0.07	0.12
Breaker Level Market Modeling	Deploy	0.07	0.00	0.23	0.29
Transmission Outage Application Platform Upgrade	Deploy	0.18	0.30	0.10	0.58
EMS BMS System Upgrade	Functional Requirements	2.29	1.70	2.78	6.77
Coordinated Transaction Scheduling with ISO-NE (SOM)	Deploy	0.17	0.00	0.00	0.17
MetrixIDR (Load Forecaster Upgrade)	Deploy	0.16	0.00	0.10	0.26
Scheduling & Pricing ☐ Comprehensive Scarcity Pricing (SOM)	Deploy	0.45	0.00	0.15	0.60
Transmission Service Charges Rate Update	Deploy	0.20	0.00	0.00	0.20
NERC Certification Task Management	Deploy	0.06	0.00	0.25	0.31
FERC Funded Rerun Phase 4*	Development Complete	0.22	0.00	0.00	0.22
2016 Reference Level Software Enhancements	Deploy	0.25	0.00	0.15	0.40
Planning Products					
Order 1000*	Study Complete	0.08	0.00	0.00	0.08
Solar Forecasting Initiatives	Development Complete	0.23	0.00	0.20	0.43
TCC Products					
TCC AMS Round Type and Upgrade	Deploy	0.16	0.00	0.00	0.16
TCC Balance-of-Period (TCC AMS, TCC AVS & CMS)	Development Complete	0.83	0.13	0.11	1.07

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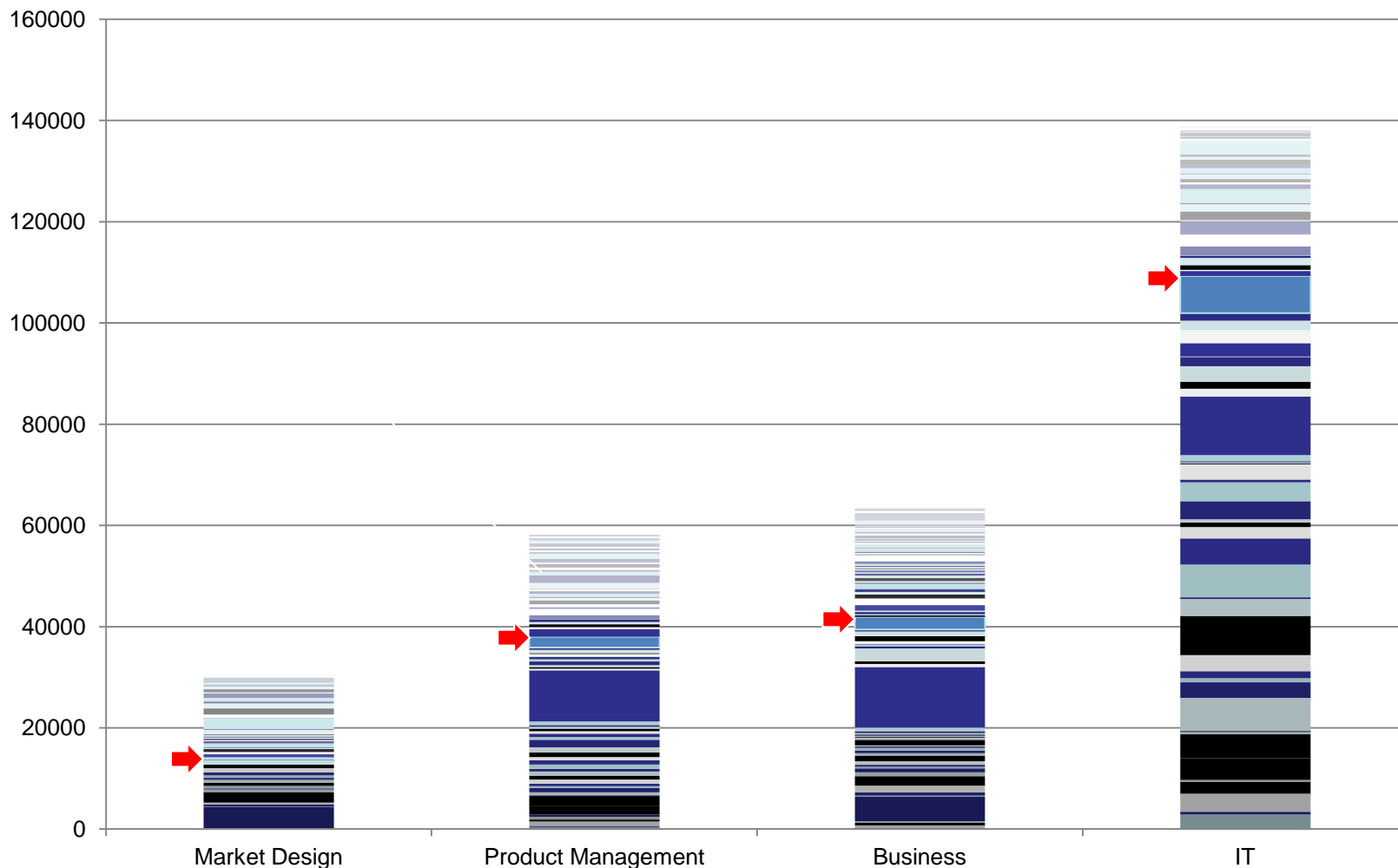
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Estimated Costs by Product Area

Product Area	Estimated Cost (in millions \$)				*Mandatory
	NYISO Labor	Capital	Consultants	Total	
Business Intelligence	\$0.29	\$0.19	\$0.07	\$0.55	-
Capacity Markets	\$3.03	\$0.05	\$1.57	\$4.65	\$0.80
Demand Response	-	-	-	-	-
Energy Market	\$0.52	\$0.25	\$0.20	\$0.97	-
Enterprise	\$3.07	\$5.41	\$1.00	\$9.48	\$1.14
Finance	\$1.49	-	-	\$1.49	\$0.21
Operations and Reliability	\$4.09	\$2.00	\$3.82	\$9.91	\$0.34
Planning	\$0.32	-	\$0.20	\$0.52	\$0.08
TCC Market	\$0.98	\$0.13	\$0.11	\$1.22	-
Total Cost	\$13.79	\$8.02	\$6.98	\$28.79	\$3.52

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Resource Allocations (in Hours)



➡ Indicates maximum available capacity for each resource type. Projects below this indicator are included in the set of recommended 2016 projects. Everything above this indicator represent projects candidates that are not recommended for inclusion in the budget.

Each color variation on the bars represents a specific project and the number of hours required for the specified resource type.

Next Steps

- ◆ **Ongoing dialogue with stakeholders**
- ◆ **Review revised project budget proposal at August 26th BPWG**

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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