New York Independent System Operator

Request for Proposal

for a

Demand Response Information System

Proposal Release Date: Monday, December 22, 2008

Proposal Due Date: Monday, January 26, 2009

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1 Introduction

1.1 Purpose

The New York Independent System Operator (NYISO) is seeking proposals for a system to automate the registration, notification, and processing functions of its demand response programs. This RFP describes the NYISO's demand response programs below and provides an overview of the current functionality in Section 2. Section 3 outlines the functional requirements, data models, functional process flows, and user roles of the new system. Section 4 explains vendor instructions. Vendor response requirements are defined in Section 5.

1.2 Background of NYISO Demand Response Program

The NYISO has developed and implemented several demand response programs for the New York State electricity market:

- The Special Case Resources (ICAP/SCR) classification of the Installed Capacity (ICAP) Market, which allows resources not otherwise visible to the market to participate as suppliers in the ICAP Market. SCRs that sell capacity in the ICAP Market receive capacity payments in return for agreeing to reduce demand when called upon. SCRs are also eligible to receive payment for demand side resource energy reductions during called events;

- The Emergency Demand Response Program (EDRP), developed to provide demand reduction during operating reserve deficiencies, which allows registered Curtailment Service Providers (CSPs) to be paid for demand side resource energy reduction;

- The Day-Ahead Demand Response Program (DADRP) which allows demand resources to offer load reduction to compete with generation for energy "supply" in the day-ahead market; and

- The Demand-Side Ancillary Services Program (DSASP) allows demand-side resources to offer load reductions to provide operating reserve and regulation.

Since 2001, enrollment in these programs has grown from a few hundred to more than 3,000 participants. The NYISO manages all program enrollments, processing, and reporting for demand response programs through a series of worksheets and an Access database that interfaces with other NYISO systems. As the volume of resources continues to increase, operations performed on a regular basis will become even more labor intensive, increasing risk exposure and limiting new program development. Centralizing the functions of the NYISO demand response programs will improve overall efficiency and processing accuracy.

2 Current Demand Response System Overview

This section is meant to provide background on the current processing for demand response. Requirements for the replacement system may differ from what is described below.

Curtailment Service Providers (CSP) and Responsible Interface Parties (RIP) are registered NYISO customers who enroll resources in NYISO's EDRP and ICAP/SCR demand response programs, respectively. Throughout this document the abbreviation CSP/RIP will be used to identify either an action required by a CSP or by a RIP.

2.1 Registration Management

CSP/RIP recruits resources to participate in NYISO's demand response programs and submit the resource registration data to the NYISO. Depending on the demand response program, the registration of a resource may be done individually via registration forms or as part of an Excel workbook submitted by the CSP/RIP. Registrations are manually entered or, in the case of the ICAP/SCR program, imported into the database.

Registration is an on-going process, and new data may be submitted at any time. In addition, re-enrollment for EDRP occurs each spring. During the re-enrollment process for EDRP, a list of resources is sent to each CSP/RIP and the CSP/RIP are asked to confirm whether the resource is re-enrolling in the program with them for the current year. CSP/RIP may make any changes to enrolled MW, etc. as appropriate. Updates resulting from the re-enrollment process are manually changed on the database record. Since a majority of resources are enrolled in the ICAP/SCR program, registration activities in this program are more frequent. ICAP/SCR resources are re-enrolled each capability period (6-month summer or winter season).

Resources may change CSP/RIP, enroll in multiple programs with different CSP/RIP (subject to each program's rules), change enrolled MW or make other changes at any time. Resources have a unique ID so that their activity history is traceable and duplicate registrations with multiple CSP/RIP are not permitted.

Registration data for DADRP and DSASP resources, who are modeled as generators in NYISO's MIS, are manually entered in the database to facilitate demand response reporting from a single source. New registration data for DADRP and DSASP is communicated to Auxiliary Market Operations by Customer Relations.

2.2 Notification

On a monthly basis, the notification system is updated with the current list of resources and registered MW in EDRP and ICAP/SCR so that all active resources will be notified when an event or audit occurs. When program activation occurs, either as an actual demand response event or as an audit, the notification system sends the appropriate message to the CSP/RIP with resources in the affected zone(s). The CSP/RIP are expected to respond with an estimate of the amount of load reduction that will be provided for the activation. The notification system tracks the response estimates from the CSP/RIP and prepares a file that is automatically transmitted and uploaded into the NYISO's MIS for purposes of Scarcity Pricing activation. In addition, when an event or audit activation occurs, the notification system transmits a notification file to MIS for identifying DSASP resources who also participate in EDRP or ICAP/SCR.

2.3 Reporting

Several reports are produced from the database and are used for internal purposes or reporting of demand response program registration and events to the market place. Reports provide information at an individual resource level (performance reports), zonal level, CSP/RIP level, hourly level (event reporting), and program detail. In addition, there are summary reports that produce various counts and statistics.

Examples of reports are available on the NYISO website at:
http://www.nyiso.com/public/products/demand_response/dr_registration.jsp and
http://www.nyiso.com/public/webdocs/documents/regulatory/filings/2008/01/nyiso_dms_icap_dc_cmplnc_011508.pdf

2.4 Performance Factor Processing, Event Performance Measurement and Settlement Preparation

ICAP to UCAP Processing

The NYISO calculates UCAP values for each of the resources participating in the ICAP/SCR program using the registration information submitted and applying a Performance Factor to each resource. Once the NYISO has processed a CSP/RIP registration workbook, each CSP/RIP is provided with a summary registration (UCAP report) that provides them with the amount of UCAP they have registered, with aggregated totals if applicable. CSP/RIP manually enters these UCAP values into the ICAP Automated Market System in preparation for the auction. NYISO staff verifies the UCAP amounts entered by CSP/RIP in the ICAP Automated Market System; the NYISO must approve these UCAP amounts in order for the CSP/RIP to use the capacity in the certification process of the auction. After the auction, detailed files containing all ICAP/SCR resource workbook data, plus the auction results, are imported into the database, where the complete ICAP/SCR resource history resides.

ICAP/SCR Performance

After events or audits, CSP/RIP submit hourly metered data. The NYISO uses this data to calculate individual performance factors for each resource. In addition, CSP/RIP performance factors are calculated which reflect the performance of each CSP/RIP total portfolio and an ICAP/SCR Program Performance Factor is calculated which reflects the overall performance of all registered resources.

Event Performance and Settlement

After an event or audit, the CSP/RIP submit calculated hourly performance data, including the dates used to compute the customer baseline load (CBL), hourly CBL, hourly meter reads and hourly performance in Excel spreadsheets or comparable CSV output format via e-mail for payment processing. The NYISO computes the amount of payment by applying the zonal hourly LBMP to the hourly performance and submits a batch file to the Settlements department for invoice processing and cost allocation.

2.5 System Users and Transaction Volume

Currently, there are two internal users within Auxiliary Market Operations responsible for manual maintenance of the registrations, calculations and reporting functions on a daily basis. Additional users require access to the data for analysis and reporting.

The new system will allow external users, CSP/RIP, to interface with the system for registration, resource maintenance and reporting. Considering enrollment levels, the current number of external users is approximately 40-50 CSP/RIP who will maintain approximately 3500 resources in EDRP and ICAP/SCR programs. Activities in the ICAP/SCR program require processing multiple times per month, with significant activity occurring prior to each auction and Capability Period. The makeup of the 3500 resources changes over time, with different resources moving in and out of the DR programs or associating with different CSP/RIP. Resources with an Inactive status remain in the system for historical reporting purposes.

2.6 Market Rule Changes Under Consideration

The NYISO makes changes to market rules for the demand response programs through the governance process and by direction of FERC Orders. Business rules to support these changes, often within specified time frames, must be supported by the DRIS.

For more information about current market rule changes under consideration, refer to the Installed Capacity Working Group (ICAPWG) and the Price Responsive Load Working Group (PRLWG) meeting materials under the Committee page on the NYISO website:

ICAPWG: http://www.nyiso.com/public/committees/documents.jsp?com=bic_icapwg

PRLWG: http://www.nyiso.com/public/committees/documents.jsp?com=bic_prlwg

3 Proposed Demand Response Information System (DRIS)

The NYISO is seeking an integrated system of applications to support multiple demand response products and functions.

The Demand Response Information System illustrated below, will consist of the core functionality of Registration Processing, Event Notification, and Reporting. It will also automate the ICAP/SCR Processing and the Event Performance, Management and Settlement Preparation calculations. Additionally, it will provide for new functionality in Event and Meter Data Management, Market Place functions and non-functional requirements.

The architecture and design of the DRIS will include the long-term vision to have configurable business rules to support new DR products, evolving market rules, internal and/or external user requests, and FERC orders.

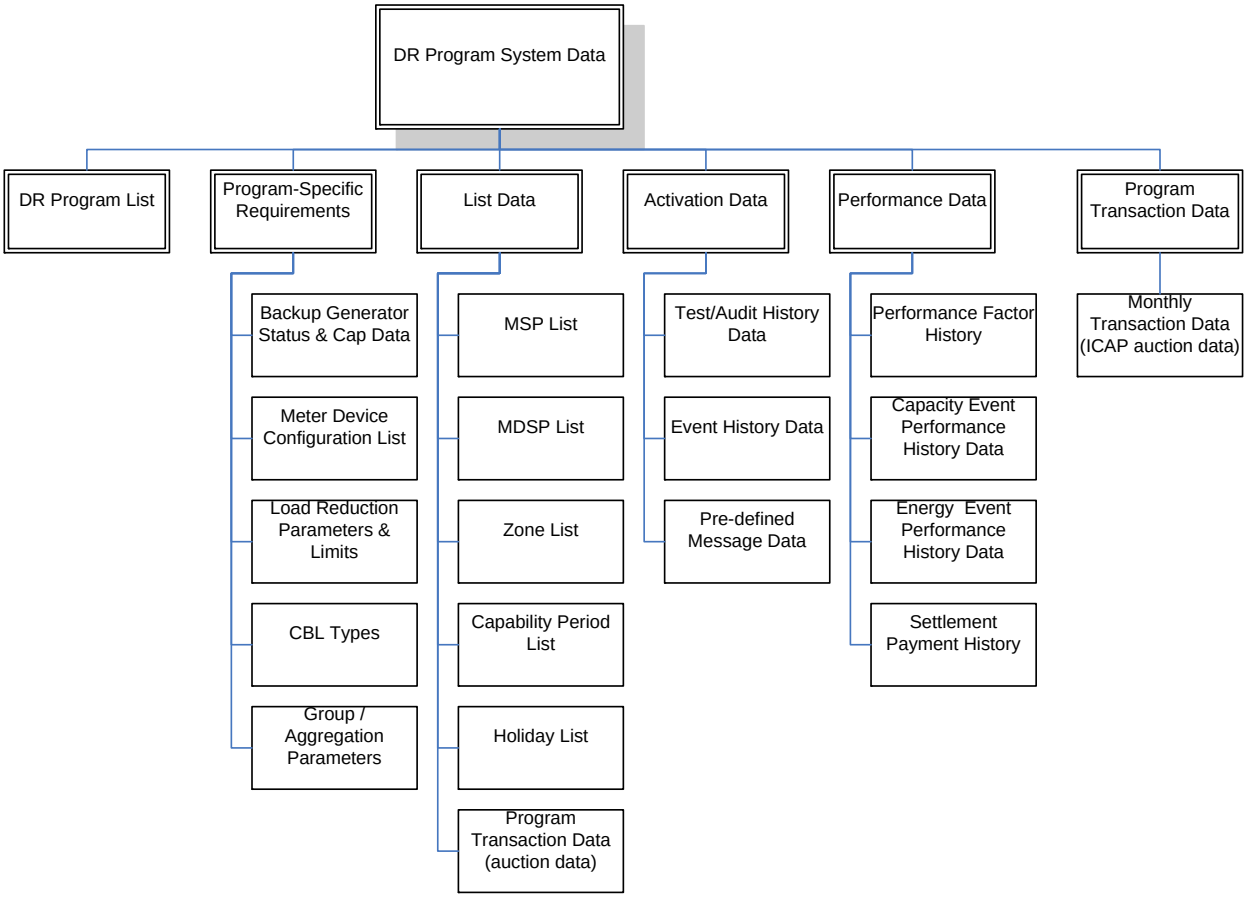
The DRIS should meet the following requirements:

1. **Demand Response Registration Processing:** Processing registration applications for all Demand Response programs.
2. **Event Notification:** Providing for event notification functionality and communication with CSP/RIP.
3. **Reporting:** Standard reports, ad-hoc capabilities, imports/exports.
4. **ICAP/SCR Processing:** Calculation of performance factors, ICAP to UCAP processing, and tracking of ICAP/SCR auction results.
5. **Event Performance, Management and Settlement Preparation:** Calculation of hourly capacity and energy reduction values for settlements.
6. **Event and Meter Data Management:** Obtaining and storing resource data.
7. **Market Place Functions:** Providing Market Participants the ability to process program registrations, verify enrollments, and access reporting capabilities.
8. **Non-functional Requirements:** Flexible architecture, connectivity capabilities, multiple user roles, availability, data retention and historical retrieval.

3.1 Data Model

This section provides information on the system's data requirements. Three data models are presented: DR Program System Data, CSP/RIP Data, and Resource Data. Each data model below is followed by a description of the types of data identified in the diagram. While the same data requirements may appear on multiple data models the specific data requirements may vary.

Figure 1. Data Model: DR Program System Data



DR PROGRAM SYSTEM DATA

DR Program System Data includes any configuration data, activation information and lists required to support the operation of the DRIS. This data would be maintained by the NYISO Administrator.

DR Program List: The list of NYISO demand response programs by effective date, including short names. The list would also identify whether resource-level data is stored within the DRIS (e.g., EDRP and ICAP/SCR) or in MIS (e.g., DADRP and DSASP).

Program-specific Requirements: The specific parameters and rules for each NYISO demand response program. These requirements may be used to generate lists or otherwise facilitate data entry for Resource or CSP/RIP records.

Backup Generator Status and Cap Data: Contains information about whether backup generation and/or cogeneration are permitted for the specified DR program. Includes any reporting requirements that NYISO would be required to provide to DEC (subject to final ruling on DG subpart 222).

Meter Device Configuration List: Contains information about approved meter configurations for the specified DR program.

Load Reduction Parameters and Limits: Contains information about the minimum load reduction requirements and any other types of limits associated with the specified DR program.

CBL Types: Identifies the types of CBLs that are acceptable for the specified DR program. Each CBL Type would have an associated algorithm which would be a configurable business rule.

Group/Aggregation Parameters: Specifies whether groups, aggregations and/or Small Customer Aggregations are permitted for the specified DR Program.

List Data: These lists would be used to facilitate data entry for Resource or CSP/RIP records.

MSP List: The current list of PSC-approved Meter Service Providers as published on the PSC website. This list should be updated at least monthly.

MDSP List: The current list of PSC-approved Meter Data Service Providers as published on the PSC website. This list should be updated at least monthly.

Zone List: A list of valid NYISO zones, sub-load pockets (currently only applies to zone J), and superzones.

Capability Period List: A list of capability periods with effective dates.

Holiday List: A list of NYISO holidays.

Activation Data: Any data required for the activation or audit of DR programs. Refer to: http://www.nyiso.com/public/webdocs/products/demand_response/general_info/event_history.pdf for an example of the event history data required.

Test/Audit History Data: Contains details on the activation of a test or audit, including communication tests.

Event History Data: Contains details on the activation of an event.

Pre-defined Message Data: Data used to generate notification messages for activations.

Performance Data: Any DR program-specific performance data. Refer to: http://www.nyiso.com/public/webdocs/products/demand_response/general_info/Historical_EDRP_SCR_performance.pdf for an example of zonal event performance data. System would be required to report on a program-specific basis for reliability programs.

Performance Factor History: Contains zonal and program-wide performance factors by program, event, and capability period.

Capacity Event Performance History Data: Contains zonal and program-wide performance factors for SCR (and any other capacity program) by event, zone, and capability period.

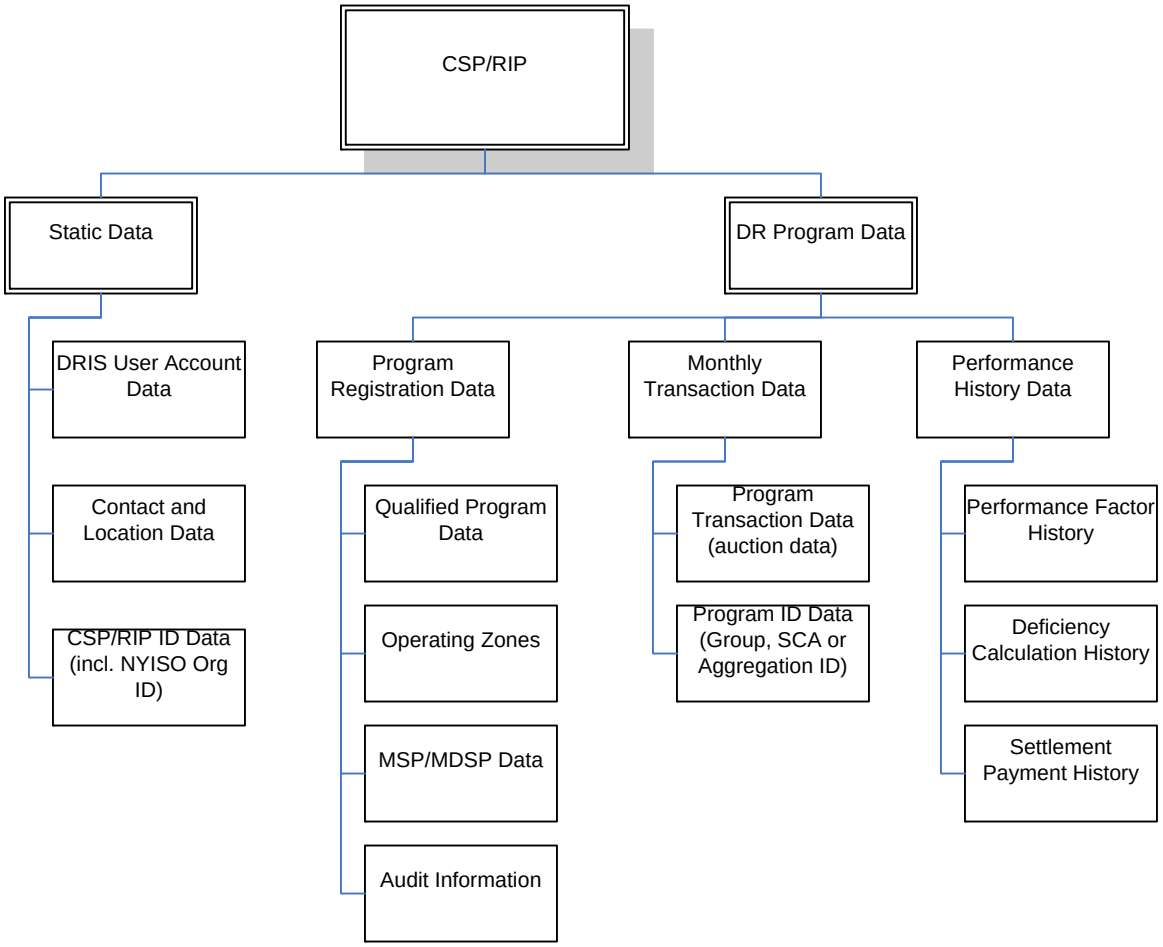
Energy Event Performance History Data: Contains zonal and program-wide performance factors for EDRP and any other program that reports energy performance (e.g., SCR) by event, zone, and capability period.

Settlement Payment History: Contains zonal and program-wide payment history by program, event, zone, and capability period.

Program Transaction Data: This data store will be used initially to store any data that is imported from other systems, such as the monthly auction results from ICAP AMS.

ICAP Auction Data: Contains the results of each ICAP auction for ICAP/SCR resources.

Figure 2. Data Model: CSP/RIP



CSP/RIP DATA

CSP/RIP Data includes Static Data and DR Program Data.

Static Data: Static Data includes data that is not transactional. Changes to any data should include the effective date of the change and all previous data should be retained. For a CSP/RIP, Static Data includes DRIS User Account Data, Contact and Location Data, and other identifiers, such as the NYISO Org ID that is stored in MIS.

DRIS User Account Data: Contains details on each DRIS user. The Market Participant Administrator role and temporary password are entered by the NYISO Administrator. All CSP/RIP users are managed by the Market Participant Administrator.

Contact and Location Data: Contains contact information, types of contacts and addresses of the CSP/RIP.

CSP/RIP ID Data: Contains information about any IDs required for the DRIS, including the NYISO Organization ID.

DR Program Data: The DR Program Data stored for a CSP/RIP is program-specific registration and transaction information for the CSP/RIP.

Program Registration Data: Contains information about the programs the CSP/RIP is qualified to participate in (based on NYISO customer status), the zones in which the CSP/RIP has resources, the MSPs/MDSPs that the CSP/RIP uses to provide those services and Audit Information.

Qualified Program Data: Identifies, by effective date, which programs the CSP/RIP is qualified to offer demand response resources in, based on data from MIS. Data is updated with an effective date when there is a change from the previous information provided by MIS. A CSP/RIP may not offer resources into a DR program for which it is not qualified in MIS.

Operating Zones: Identifies the zones in which a CSP/RIP will offer resources. If a resource is offered in a zone that is not selected, the CSP/RIP should be prompted to update the Operating Zones table immediately. A resource may not be added for the zone until the Operating Zones table is updated.

MSP/MDSP Data: Identifies the MSPs and MDSPs that the CSP/RIP will use for meter installations and/or data collection. The CSP/RIP will choose from the master MSP/MDSP lists stored under the system DR Program Data. The CSP/RIP will see the subset of MSPs/MDSPs when registering resources.

Audit Information: Stores information about any audit of the CSP/RIP, other than a program test.

Monthly Transaction Data: Contains information about the groups, aggregations and Small Customer Aggregations as well as offered and sold capacity by each group, aggregation or Small Customer Aggregation on a monthly basis.

Program Transaction Data: Stores the information about the groups, aggregations, and Small Customer Aggregations that the CSP/RIP enters into the auctions, with offered and sold capacity on a monthly basis.

Program ID Data: Stores the list of group, aggregation and Small Customer Aggregation IDs associated with a CSP/RIP.

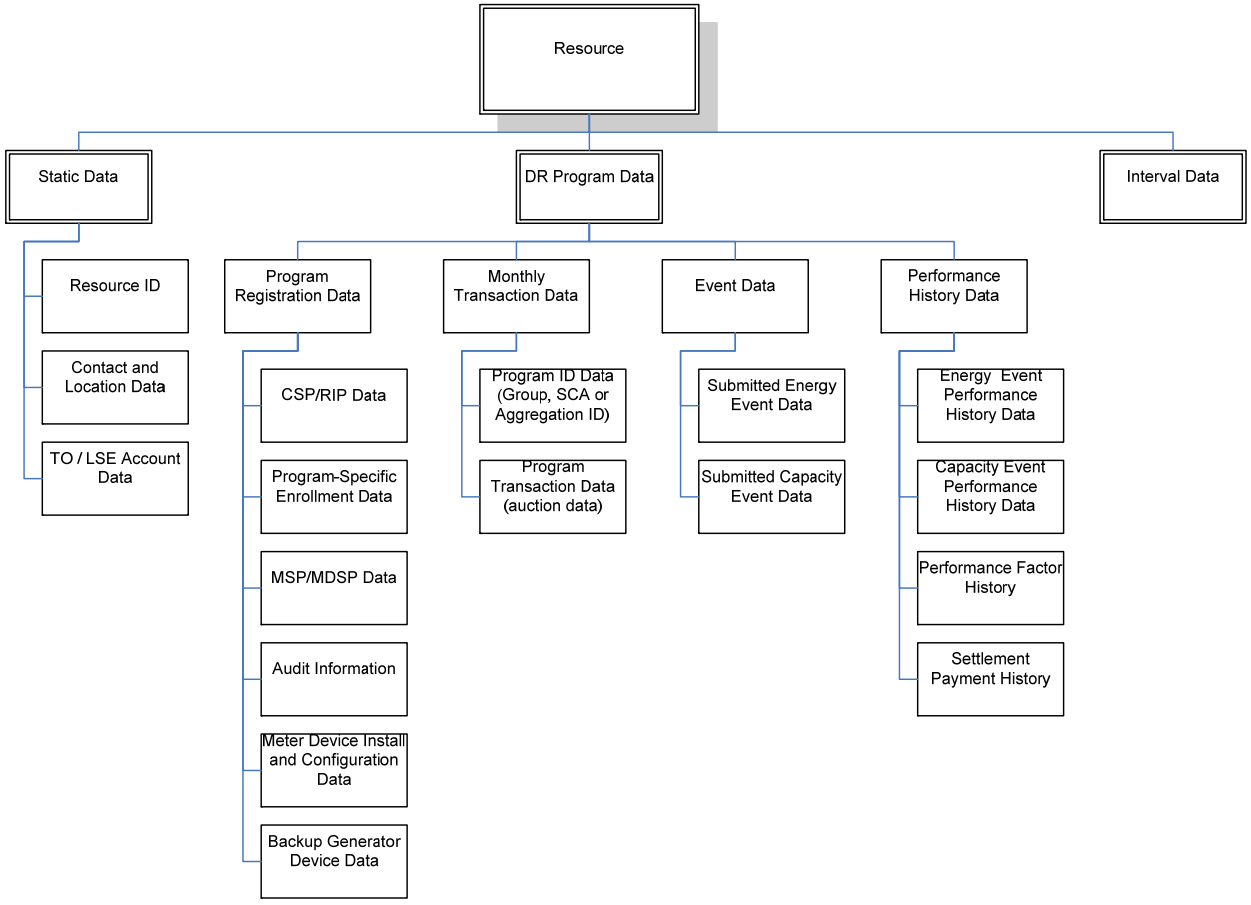
Performance History Data: Contains information about performance of its portfolio, results of each deficiency calculation (monthly or by capability period) and energy event payment history.

Performance Factor History: Stores portfolio performance on an event and capability period basis.

Deficiency Calculation History: Stores deficiency calculation results on a monthly and/or capability period basis.

Settlement Payment History: Stores portfolio energy settlement payment history on an event basis.

Figure 3. Data Model: Resource



RESOURCE DATA

Resource Data includes Static Data, DR Program Data and Interval Data.

Static Data: Static Data includes data that is not transactional. Changes to any data should include the effective date of the change and all previous data should be retained. For a Resource, Static Data includes the Resource ID, Contact and Location Data, and TO/LSE Account Data.

Resource ID: The Resource ID is assigned by the DRIS and remains the same, regardless of which DR programs the resource participates in and which CSP/RIP the resource is associated for any program at any time.

Contact and Location Data: Contains address and contact information of the Resource.

TO/LSE Account Data: Contains information about the zone, Transmission Owner and Load Serving Entity associated with the resource.

DR Program Data: The DR Program Data stored for a Resource is program-specific registration and transaction information for the Resource.

Program Registration Data: Contains information about the programs the Resource is participating in (subject to eligibility and exclusivity rules described in the DR Program System

Data), the program-specific enrollment parameters, the MSP/MDSP that provides services to that resource and Audit Information.

CSP/RIP Data: Identifies, by effective date, which programs the Resource is enrolled in and the CSP/RIP which has enrolled the Resource. Data must be updated at least once each capability period. A Resource may not be enrolled in the same program with more than one CSP/RIP for the same month/capability period. Additional rules about Resource enrollment limitations are specified in the Registration Approval Process.

Program-Specific Enrollment Data: Identifies all the program-specific enrollment parameters for participation in a DR program. Data must be stored by effective date. Program-specific enrollment parameters are defined in the DR Program System Data.

MSP/MDSP Data: Identifies the MSPs and MDSPs that will have access to the Resource meter and/or meter data by effective date.

Audit Information: Stores information about any audit of the Resource, other than a program test.

Meter Device Install and Configuration Data: Contains information about the meter installed for participation in the DR program and meter configuration information.

Backup Generator Device Data: Contains information about the backup generator installed for participation in the DR program and any metering on the generator.

Monthly Transaction Data: Contains information about the groups, aggregations and Small Customer Aggregations the Resource has participated in, by effective date, as well as the program parameters associated with capacity (offered and sold, if applicable) and strike price of the resource on a monthly basis.

Program ID Data: Stores the list of group, aggregation and Small Customer Aggregation ID that the Resource has participated in, by effective date.

Program Transaction Data: Stores the information about the groups, aggregations, and Small Customer Aggregations that the Resource participated in during each auction, with capacity (offered and sold, if applicable) and strike price on a monthly basis.

Event Data: Contains the resource event performance information submitted by the CSP/RIP. The data stored is the pre-processed information submitted through the current data submission process. The DRIS must be capable of storing submitted Event Data as well as interval data.

Submitted Energy Event Data: Stores the Energy Event Data in the current format used to report energy event performance. Current energy event data submission forms may be found on the NYISO website at:
http://www.nyiso.com/public/products/demand_response/edrp.jsp

Submitted Capacity Event Data: Stores the Capacity Event Data in the current format used to report capacity event performance. Current capacity event data submission forms are included in the SCR Workbook, which may be found on the NYISO website at:
http://www.nyiso.com/public/products/demand_response/scr_icap.jsp

Performance History Data: Contains information about performance, results of each deficiency calculation (monthly or by capability period) and energy event payment history.

Energy Event Performance History Data: Stores the detailed information used to calculate hourly energy event performance (current method of event performance reporting which is submitted by the CSP/RIP).

Capacity Event Performance History Data: Stores the detailed information used to calculate hourly capacity event performance (current method of event performance reporting which is submitted by the CSP/RIP).

Performance Factor History: Stores Resource performance on an event and capability period basis.

Settlement Payment History: Stores Resource energy settlement payment history on an event basis.

Interval Data: Stores hourly interval data for the Resource for use in the calculation of event performance. Interval data may be submitted by the CSP/RIP, the MDSP associated with the Resource, or may be collected through remote communications. Determination on whether requirements for submitted interval data should be contiguous or event-driven has not been specified yet.

3.2 DRIS User Roles

The NYISO has identified three types of roles for the DRIS and sublevels within each type. DRIS roles consist of NYISO users, Market Participant users, and System roles. The information below describes the types of permissions or activities related to each sublevel. Within the Vendor Response Workbook the vendor will be invited to describe how its system's user roles can support the types of roles and sublevels described below.

NYISO User Roles

- **Administrator:** Provides access to add, update, edit, or delete NYISO users in the DRIS, create initial CSP/RIP record, assign CSP/RIP and Resource approval status, handle exceptions, initiate calculations, initiate imports/exports, and all NYISO Observer privileges
- **Observer:** Provides access to view, track, and extract data from the system
- **Operations Department:** Provides access and authorization to send notices/activations for ICAP/SCR and EDRP events/tests and run applicable event reports

Market Participant User Roles

- **Administrator:** Provides access to add, update, edit, or delete their organization users in the DRIS, assign privileges to DRIS users, specify new DR program participation, and all MP Event Responder privileges - specific to their organization. Each organization must have at least one Administrator.
- **Event Responder:** Provides access to receive and respond to events and all MP User privileges – specific to their organization
- **User:** Provides access to enter/edit data, establish aggregations/groups, reenroll resources, submit data, and all MP Observer privileges - specific to their organization
- **Observer:** Provides access to view, track, and extract data from the system - specific to their organization

DRIS System Roles

The DRIS System Roles identify different system operations or processing that occurs within the DRIS. These roles are independent of one another and may either generate the data that goes into the database or use the data in a calculation or process.

- **Auto Generate:** Data for a specific field is generated by the system

- **Auto Calculate:** The system performs a calculation based on input of specified fields
- **Data Validation:** A system function which ensures that required data is complete and correct, optionally within specified parameters
- **Operation:** The system processes data according to business rules
- **Update/Refresh:** The system updates any calculated fields or displays changed information on demand by the user
- **Read and Display:** A "show" function of existing data

3.3 Functional Process Flows

This section contains the functional process flows for the Demand Response Information System. The High Level Functional Overview diagrams below show the primary operations of the DRIS. Additional functional process flows provide more detail to each of the high level functions.

Actors/Roles

All functional process flows use the following actors/roles to indicate who is interacting with the system for a given process.

Market Participant Role – any processes, tasks, or interfaces which the Market Participant controls or receives

NYISO Role - any processes, tasks, or interfaces which the NYISO users control or receive

System Role – any processes involving automated functions such as calculated fields, lookups, etc.

System Process and/or Data Storage – any processes that evaluate, change and/or save the data

NYISO System Interface – any processes that exchange data between DRIS and a NYISO system

High Level Functional Overview

Registration includes all processes involved in capturing and maintaining resource information and participation requirements (Figure 4**).**

ICAP Auction Preparation includes pre-auction and post-auction processes for ICAP SCR resources. NOTE: The DRIS is not required to perform any of the ICAP AMS system functions illustrated by the tan boxes with dotted lines in Figure 4.

Event Notification includes all processes required to prepare and distribute notifications, monitor and collect response estimates and prepare and deliver files for NYISO's MIS (Figure 4).

Data Submission and Settlement illustrates the processes for collecting event or meter data, computing performance for each resource and preparing files for settlement (Figure 5).

ICAP SCR Processing shows the types of processing operations for performance factor and deficiency calculations of the ICAP SCR program (Figure 5).

Reports simply shows the need for Market Participant and NYISO users to have access to standardized and ad hoc reports and the ability to export reports (Figure 5).

Figure 4. Functional Overview - Registration, ICAP Auction interface, and Event Notification

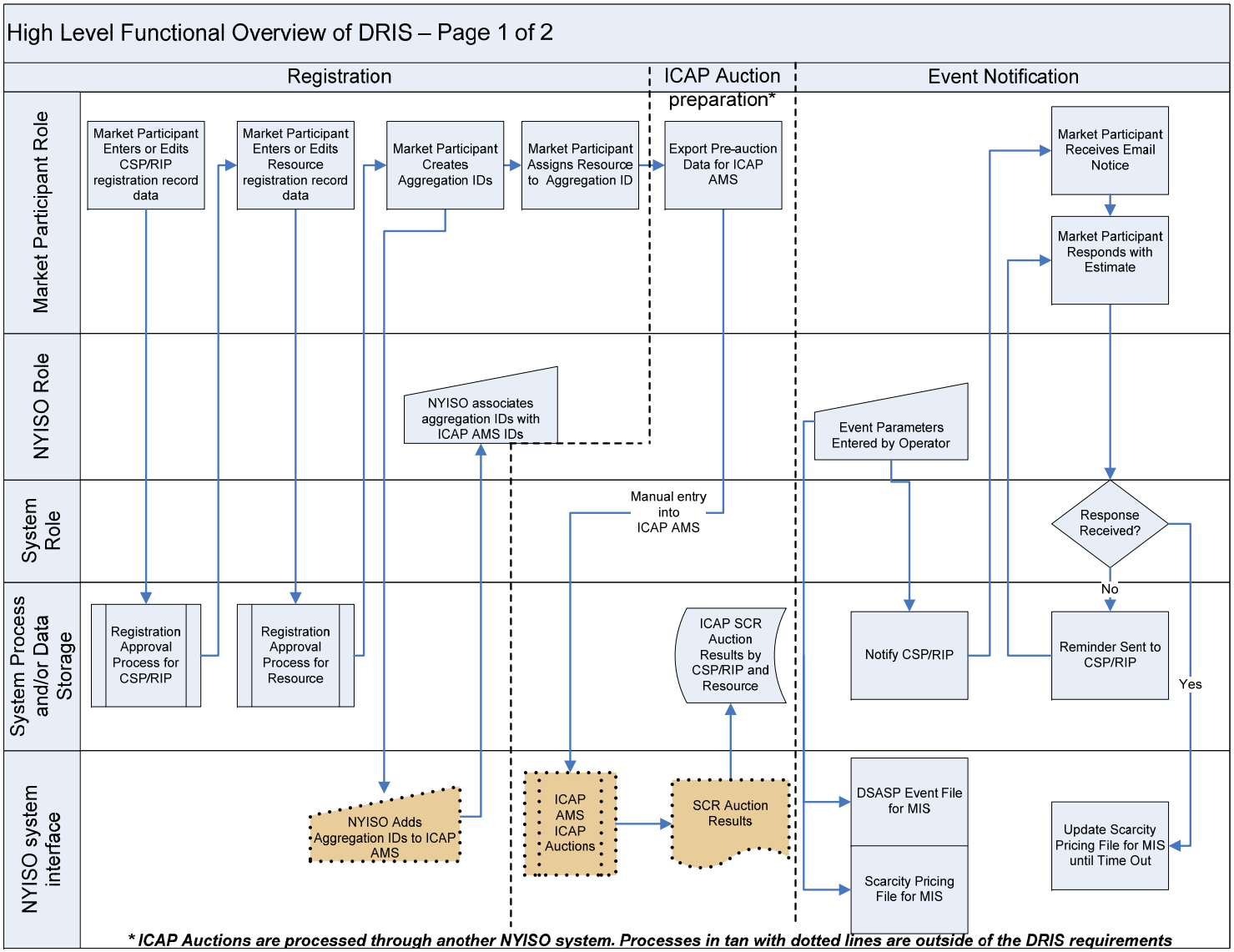
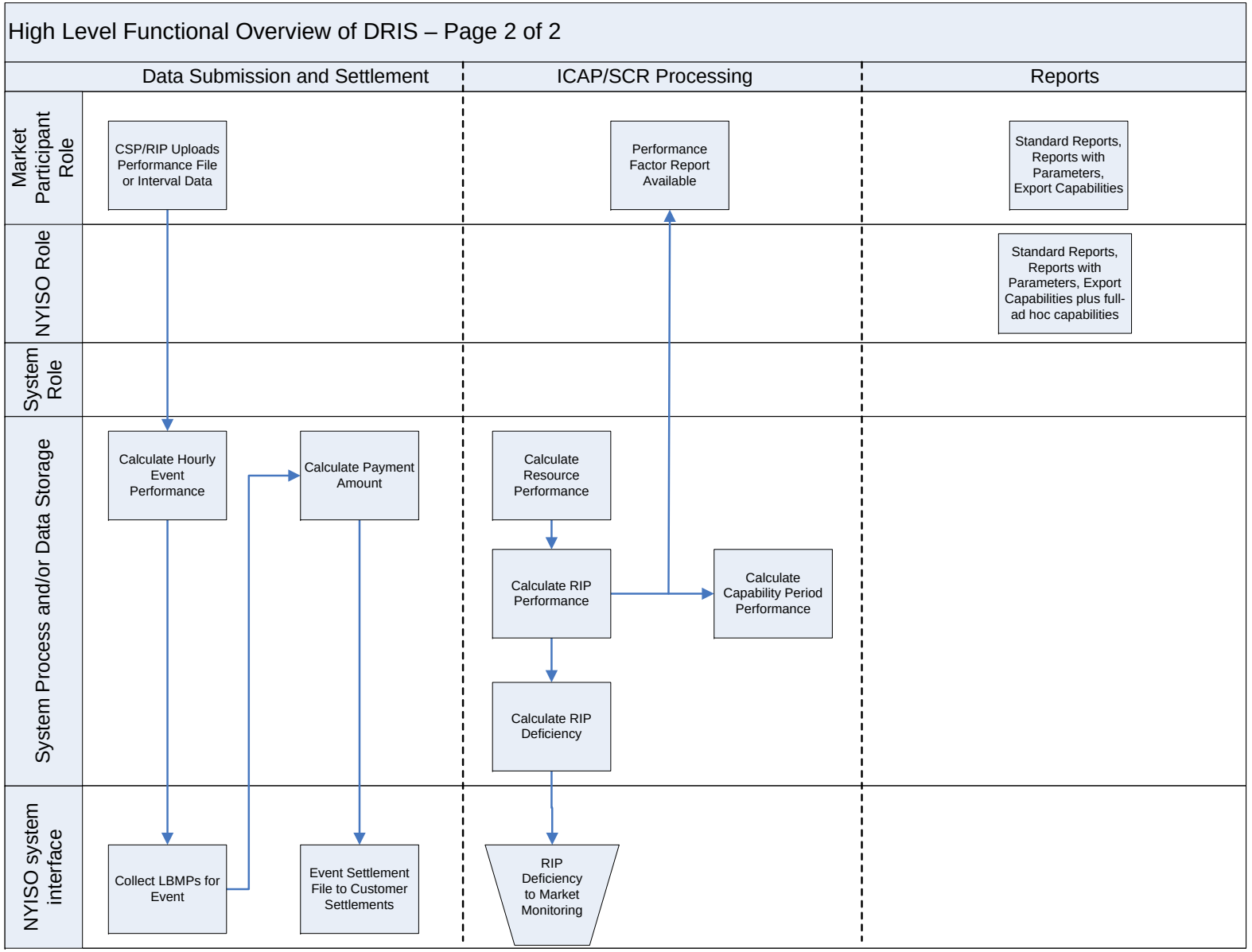
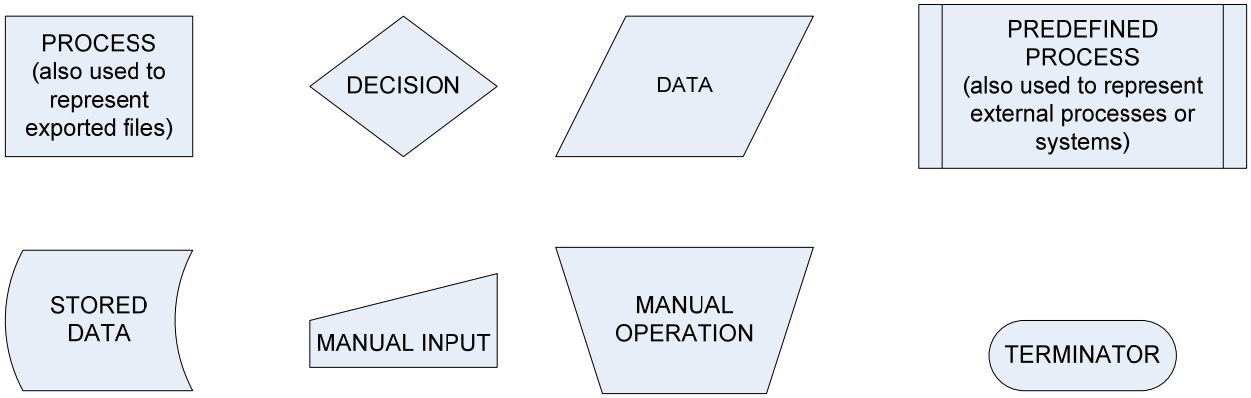


Figure 5. Functional Overview - Data Submission and Settlement, ICAP/SCR Processing and Reports



Detailed Functional Process Flows

Detailed functional process flows provide an in-depth view of the operations necessary to accomplish a specific task within the DRIS. Where the same functional process may differ for NYISO users and Market Participants, the process is shown for both in the same figure and labeled accordingly. For simplicity, any pre-processing, setup, data validation, error handling or more detailed decision processing has not been included in these diagrams. The following standard flowchart symbols have been used:



The start and end points of each functional process flow can be identified by the thick black line outlining the symbol. End points are be indicated by the terminator symbol; start point symbols may vary.

The following detailed functional process flows are included in this document:

- System Logins
- Define DRIS Users
- Registration Processing – New CSP/RIP
- Edit CSP/RIP Registration
- Registration Processing – New Resource
- Edit Resource Registration
- Registration Approval Process – CSP/RIP
- Registration Approval Process - Resource
- Associate Resource with Aggregation ID
- Re-enrollment – CSP/RIP and Resource
- Event Notification and Communication Test
- Data Submission
- Event Performance Processing – Hourly Energy Reduction Value
- Event Performance Processing – Hourly Capacity Reduction Value
- ICAP/SCR Processing
- Reports

Figure 6. Functional Process Flow: System Login

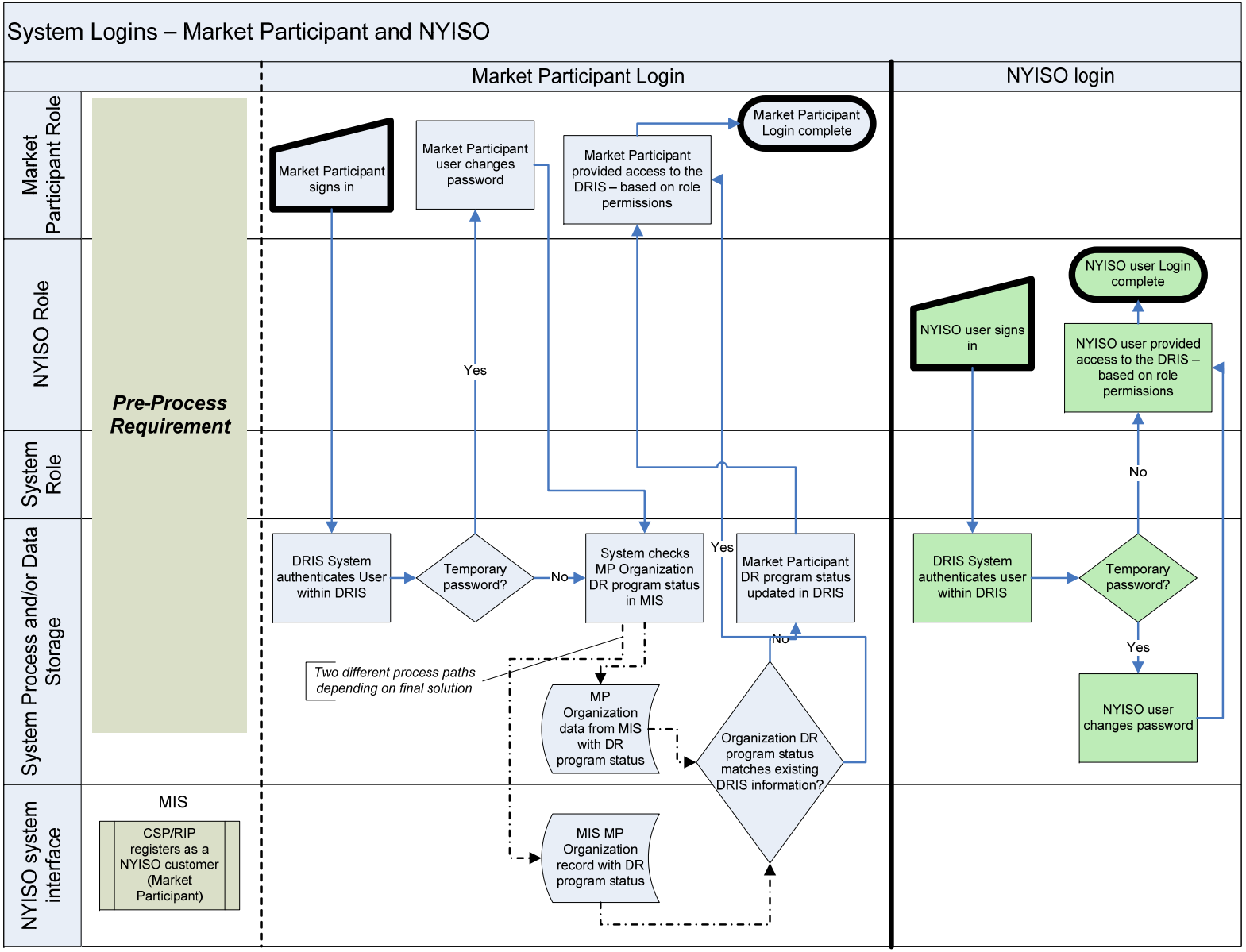


Figure 7. Functional Process Flow: Define DRIS Users

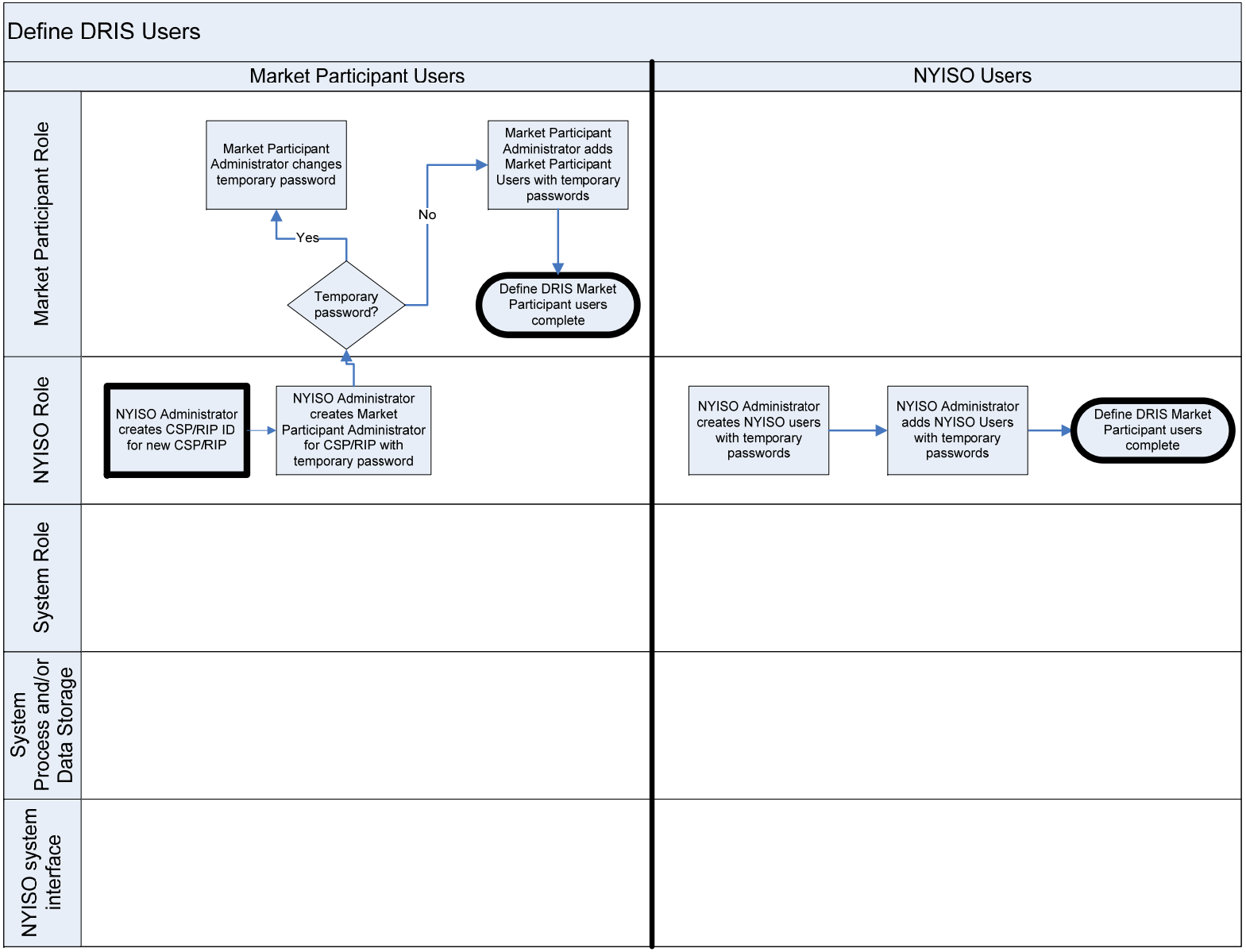


Figure 8. Functional Process Flow: Registration Processing - New CSP/RIP

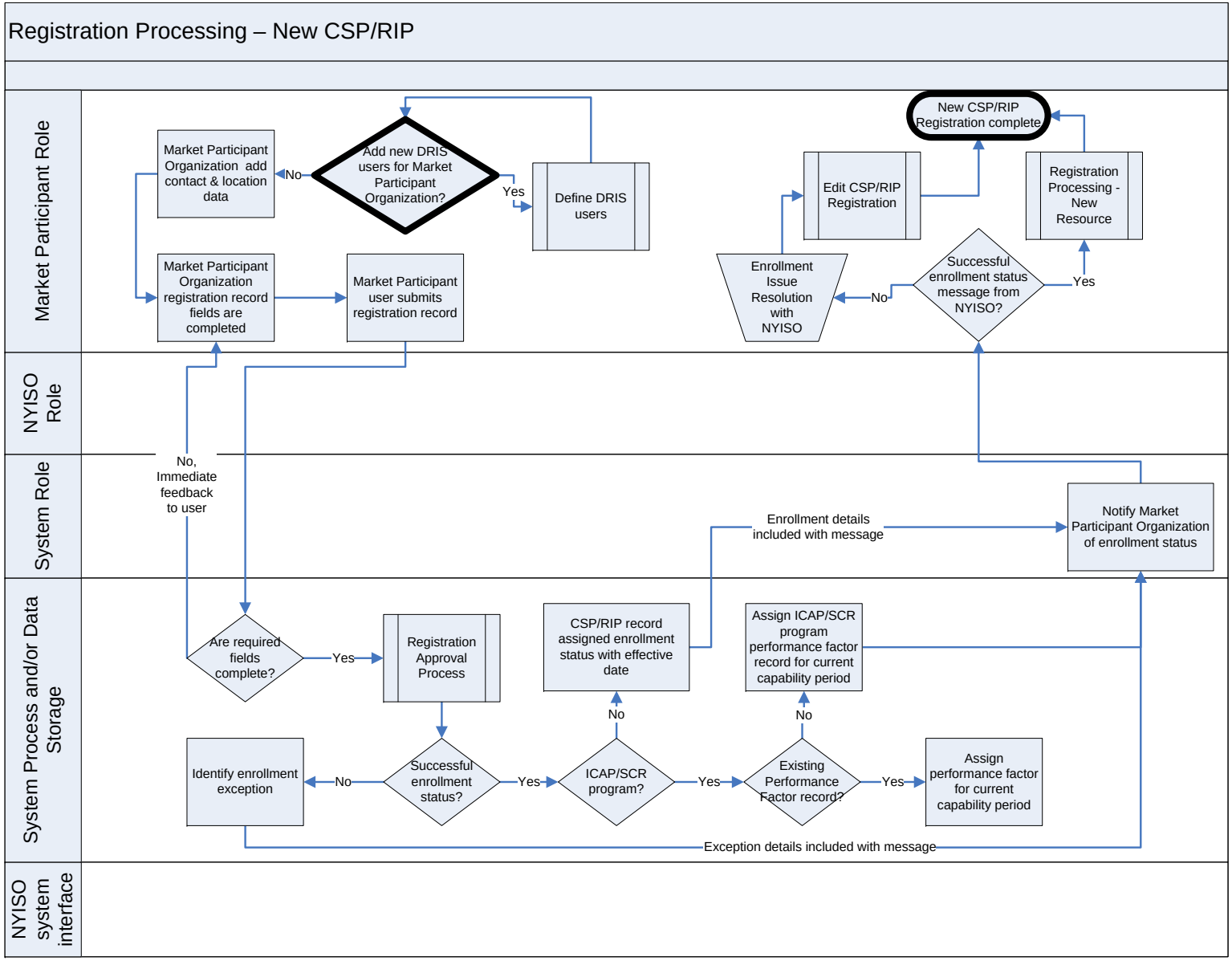


Figure 9. Functional Process Flow: Edit CSP/RIP Registration

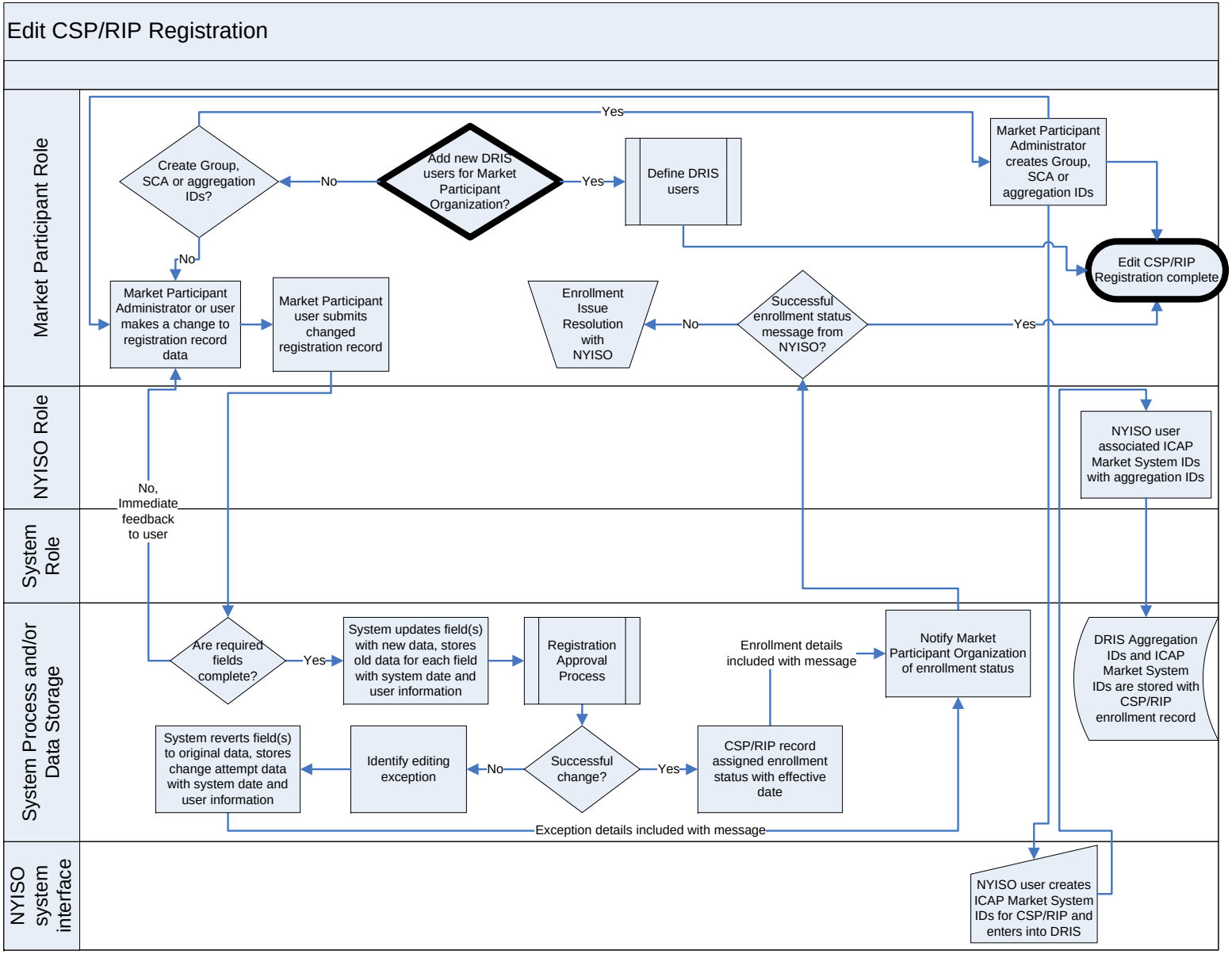


Figure 10. Functional Process Flow: Registration Processing – New Resource

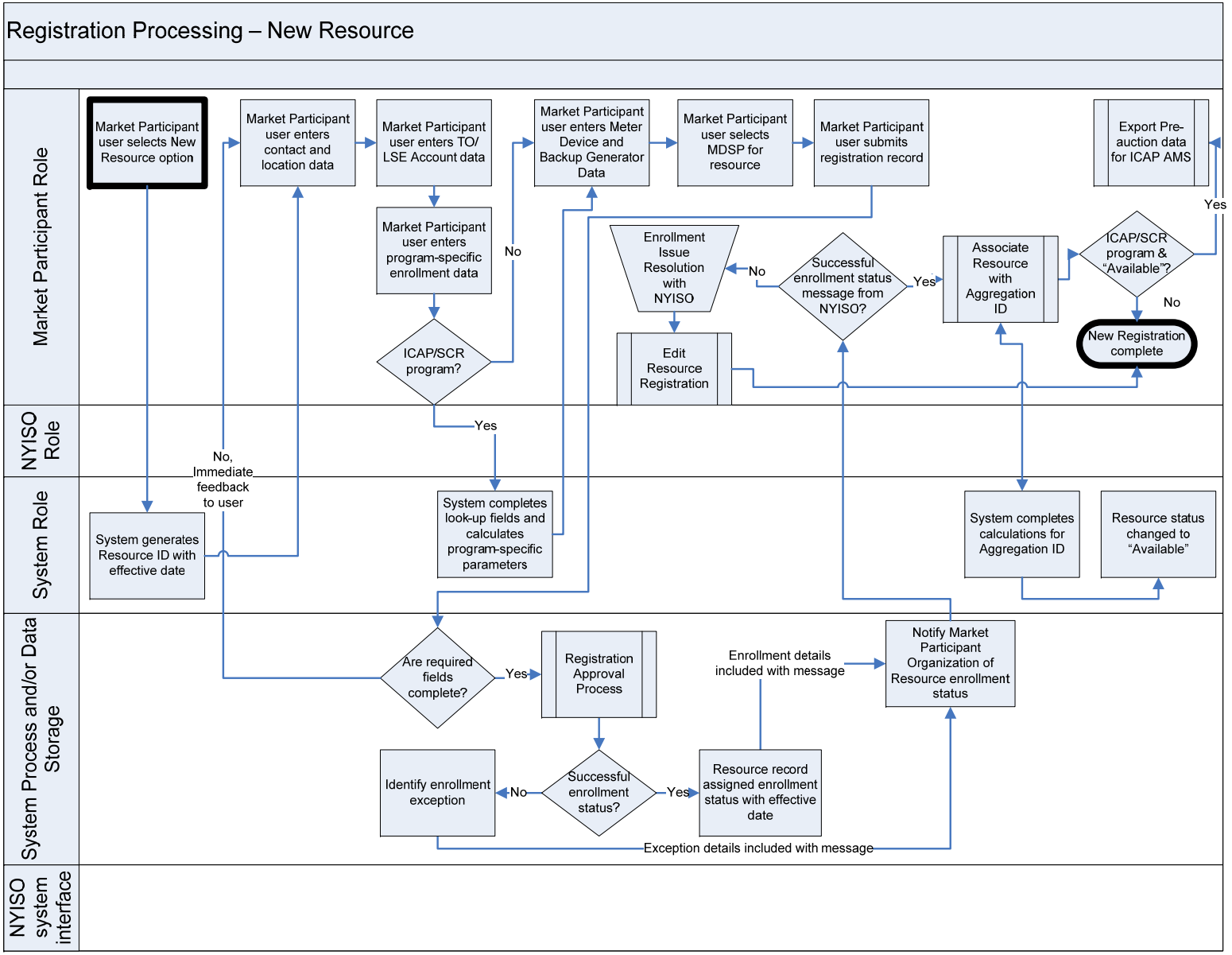


Figure 11. Functional Process Flow: Edit Resource Registration

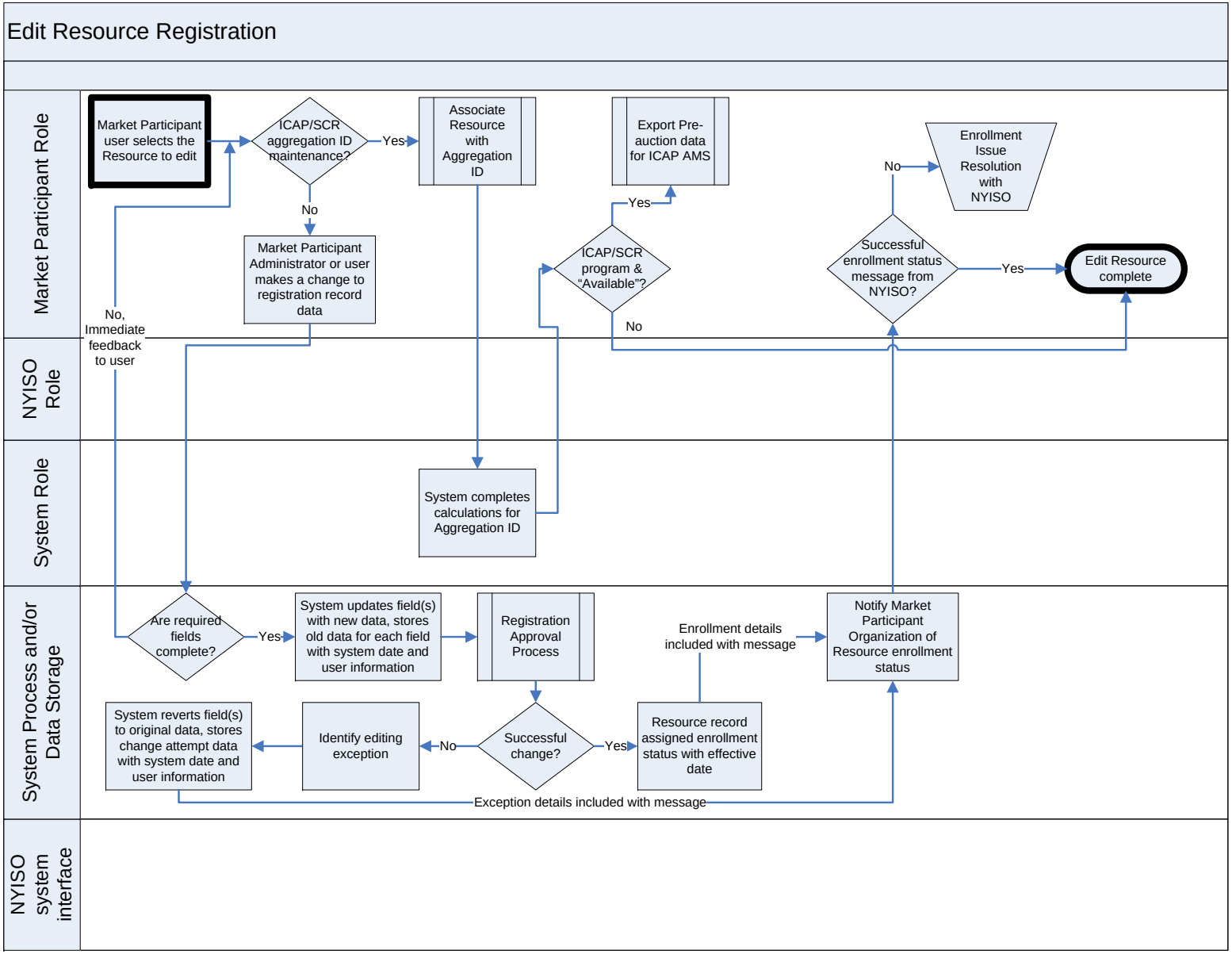


Figure 12. Functional Process Flow: Registration Approval Process – CSP/RIP

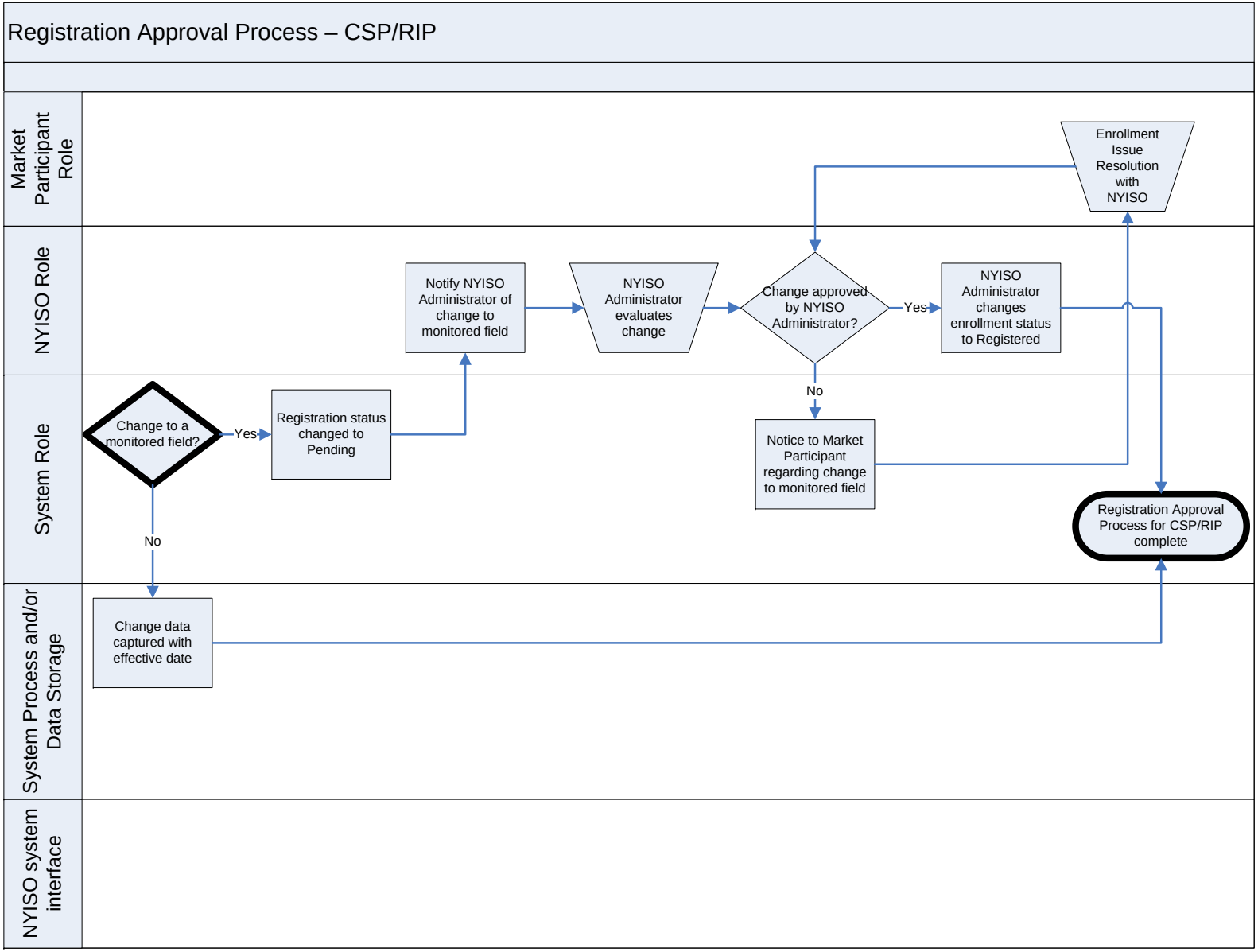


Figure 13. Functional Process Flow: Registration Approval Process - Resource

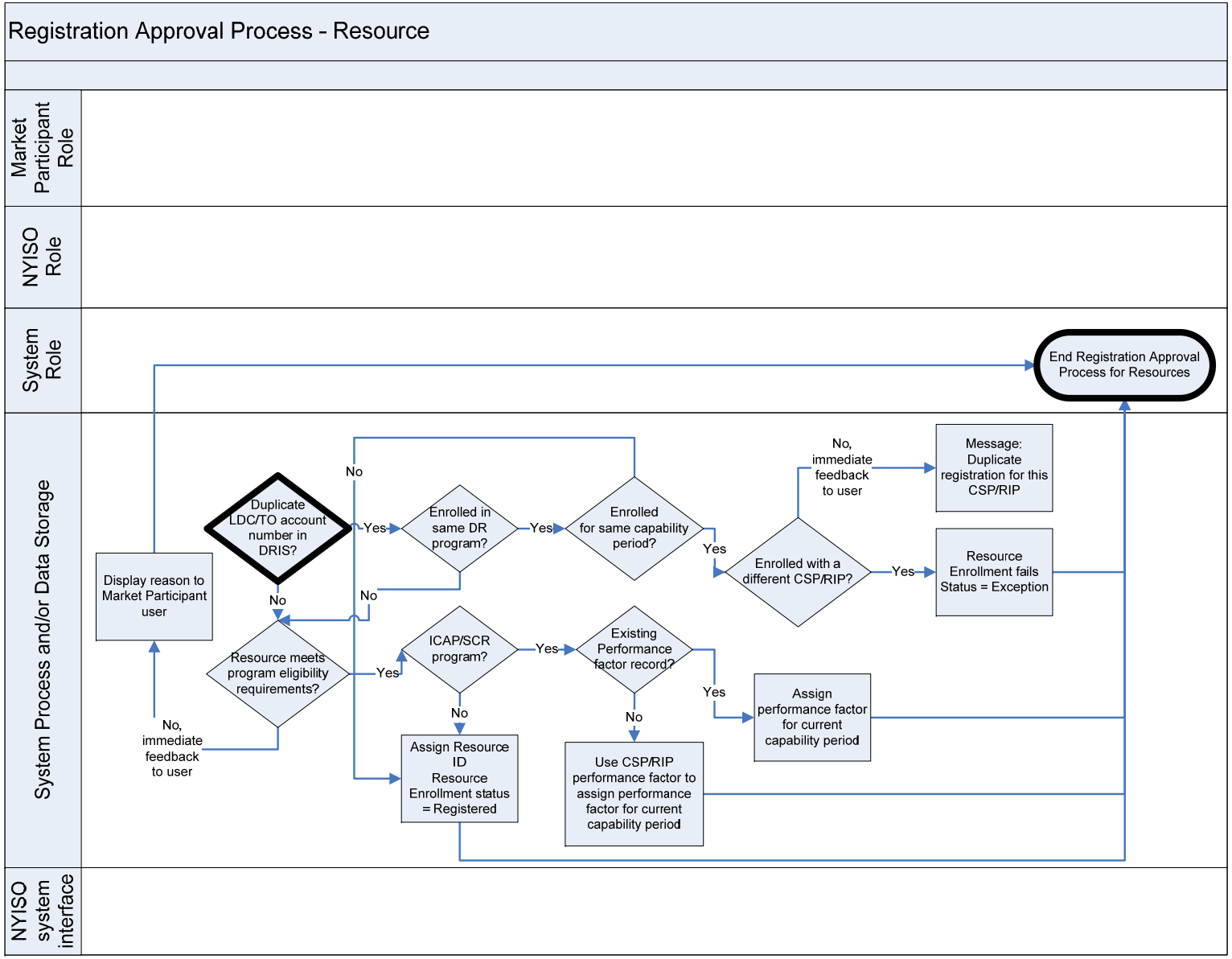


Figure 14. Functional Process Flow: Associate Resource with Aggregation ID

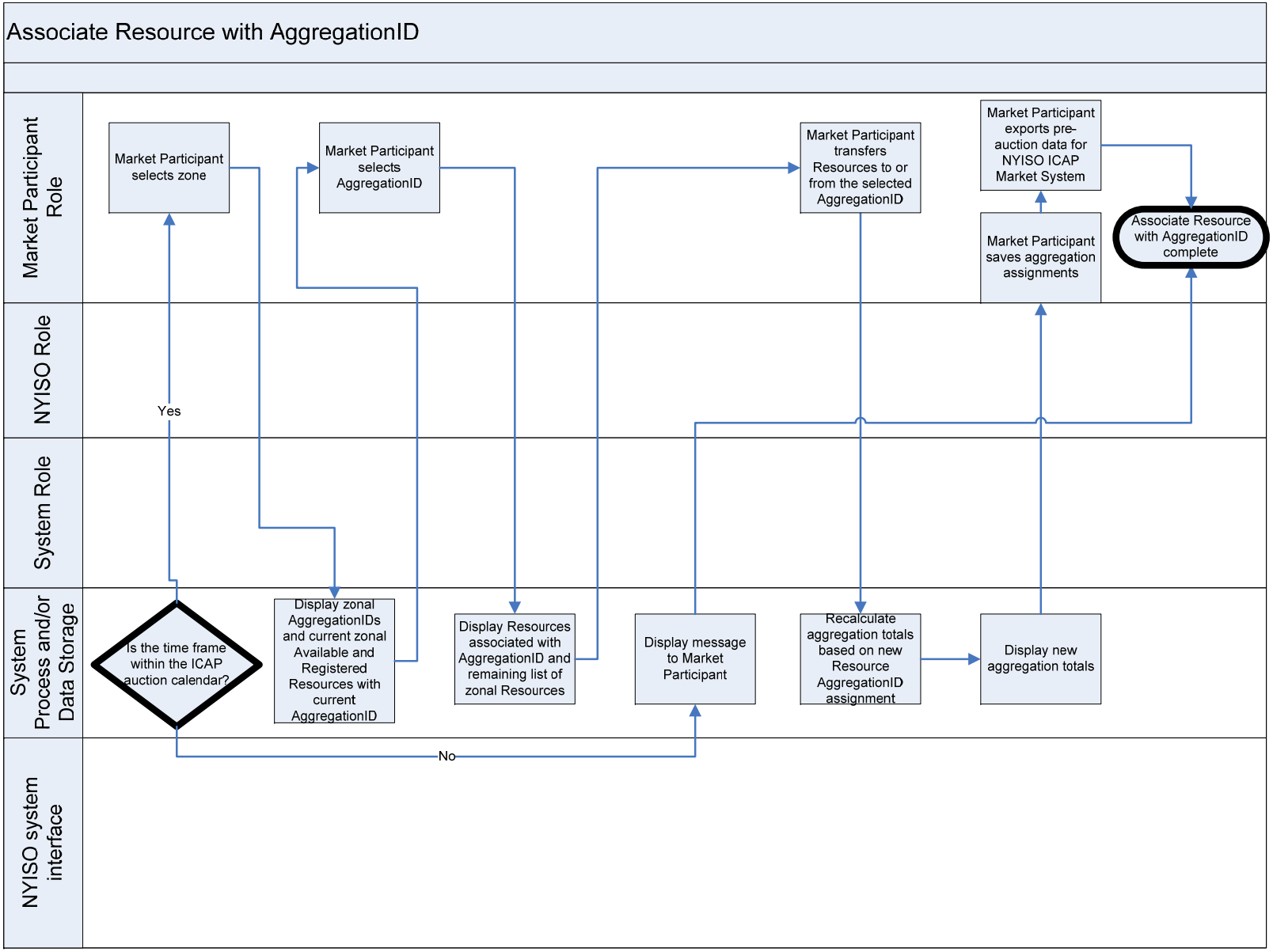


Figure 15. Functional Process Flow: Re-enrollment

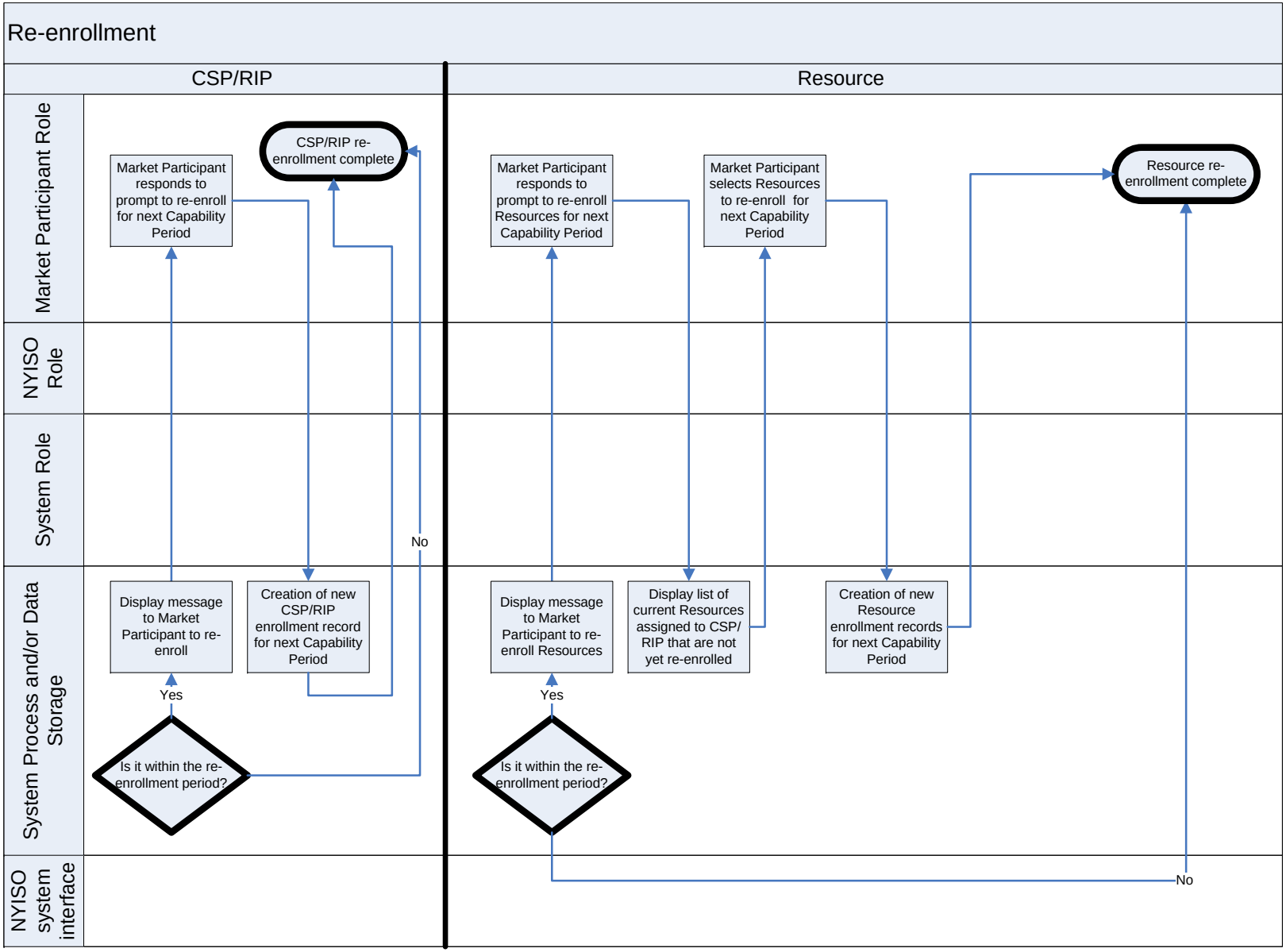


Figure 16. Functional Process Flow: Event Notification

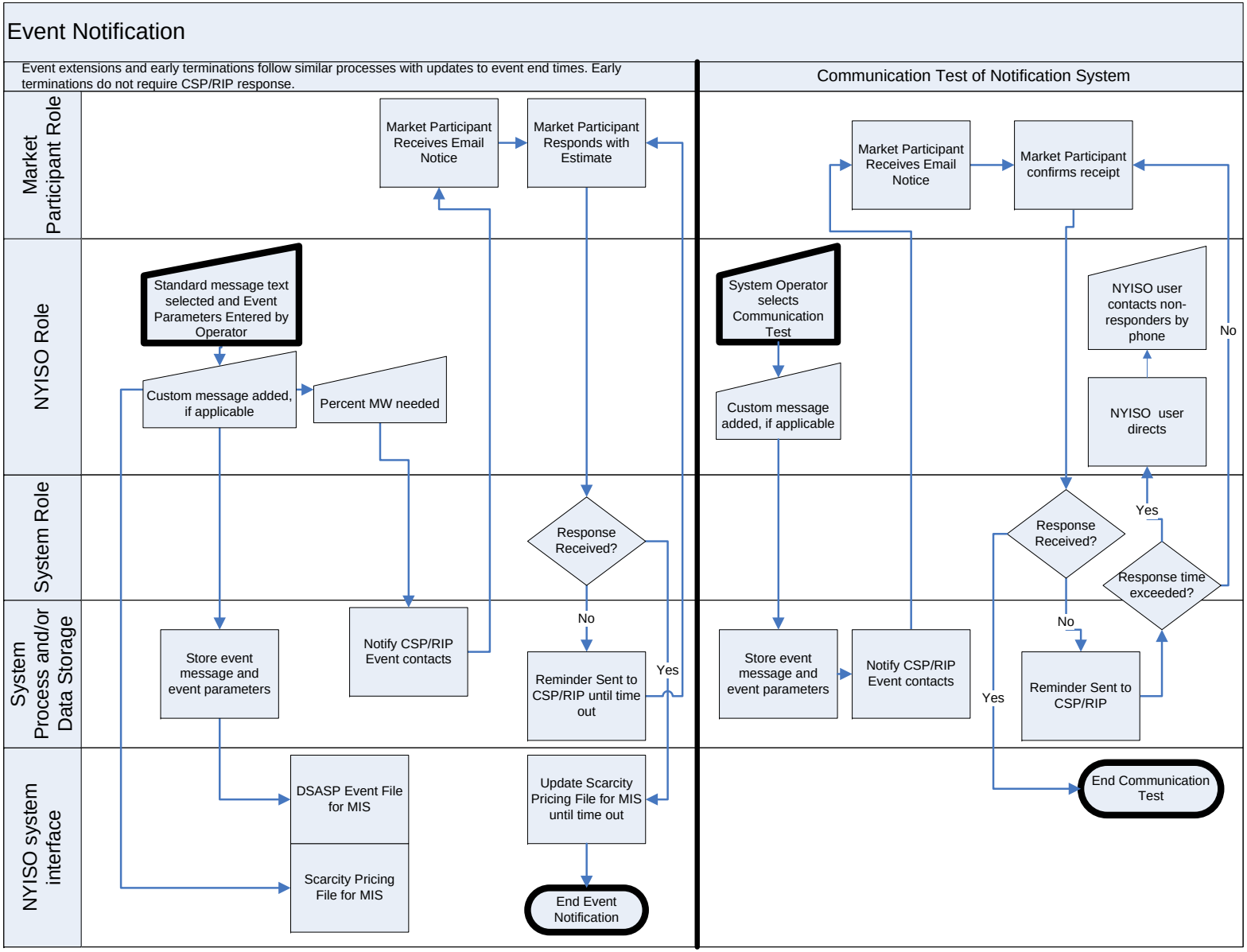


Figure 17. Functional Process Flow: Data Submission

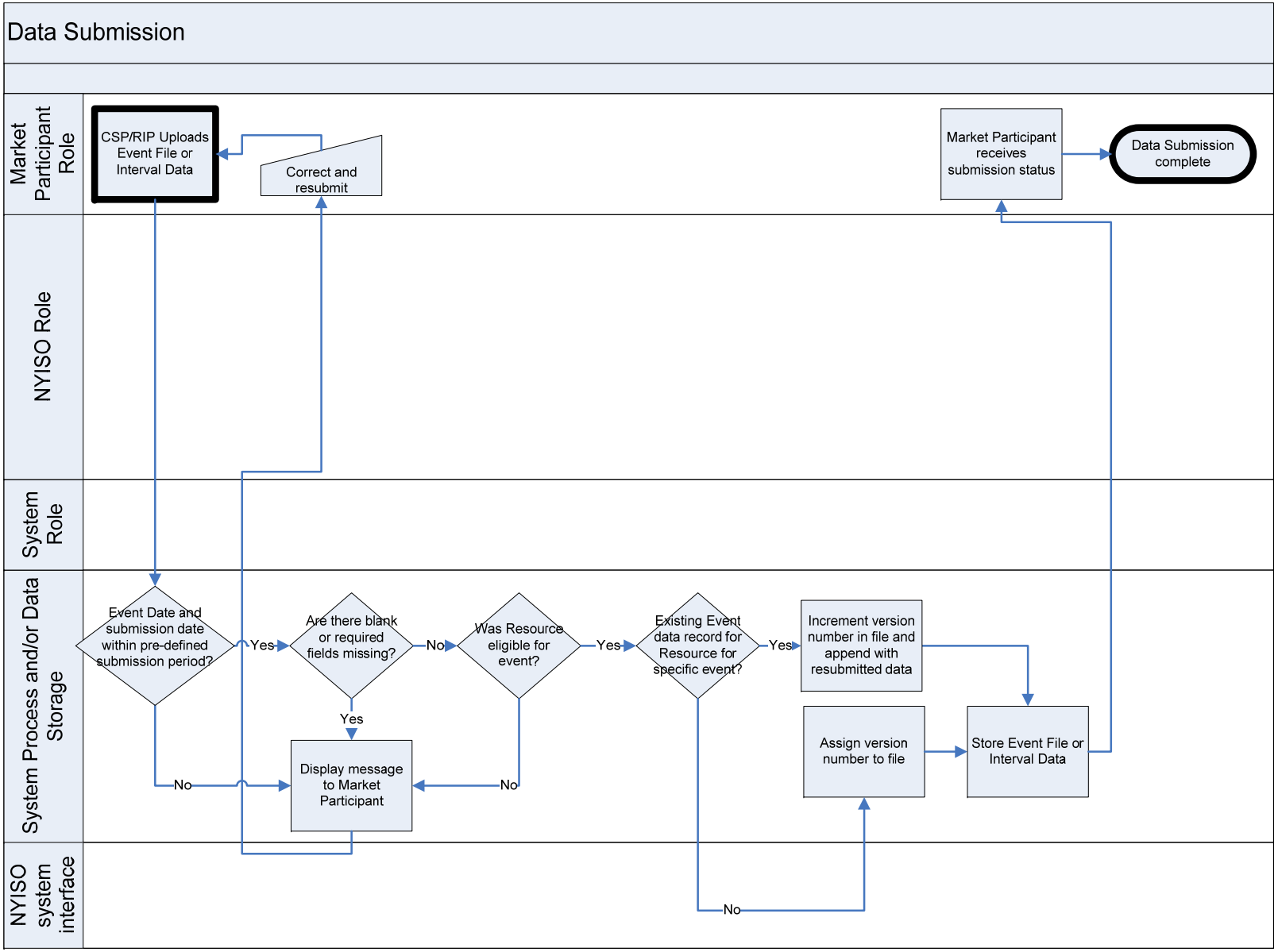


Figure 18. Functional Process Flow: Event Performance Processing – Hourly Energy Reduction Value

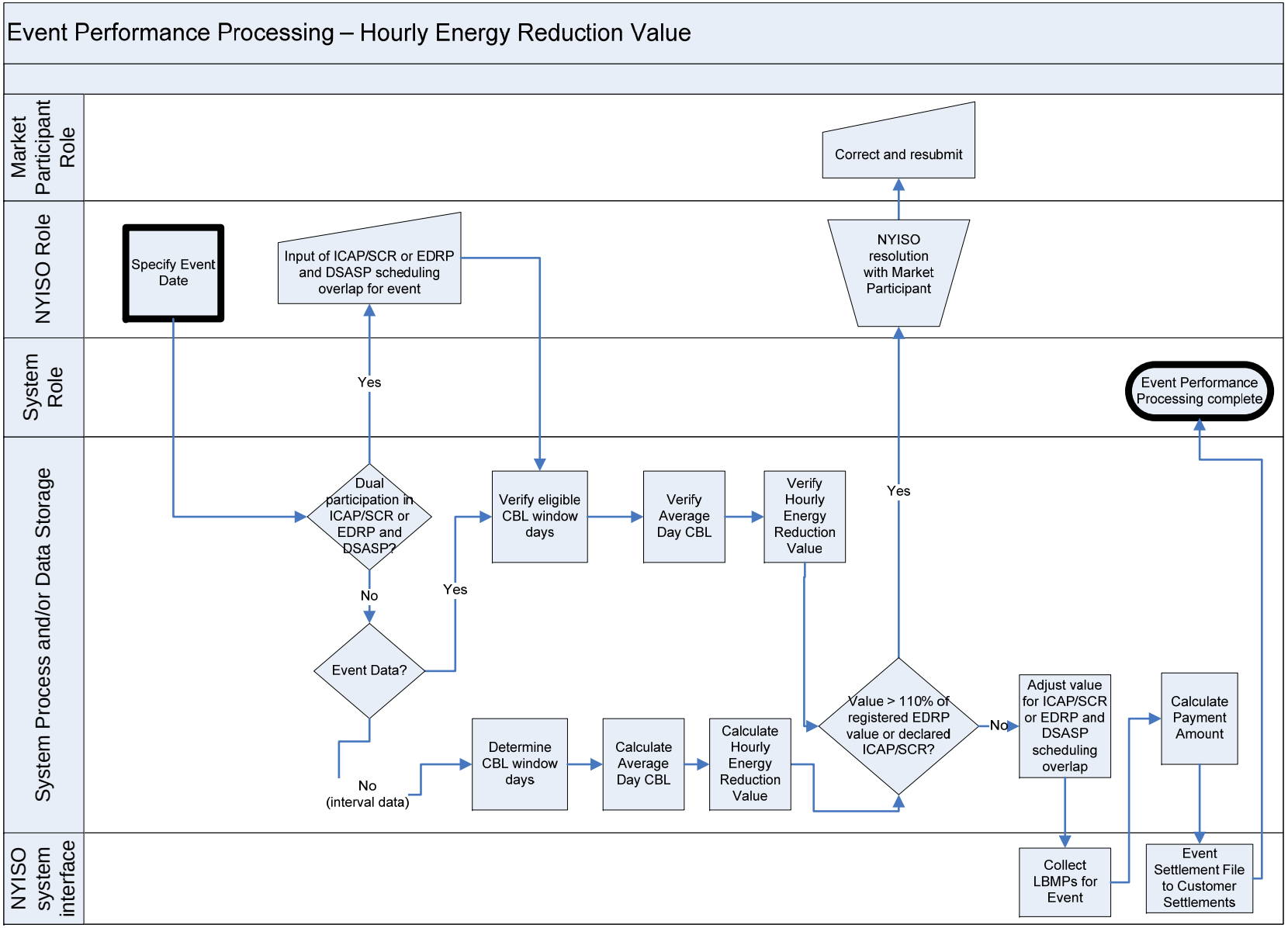


Figure 19. Functional Process Flow: Event Performance Processing – Hourly Capacity Reduction Value

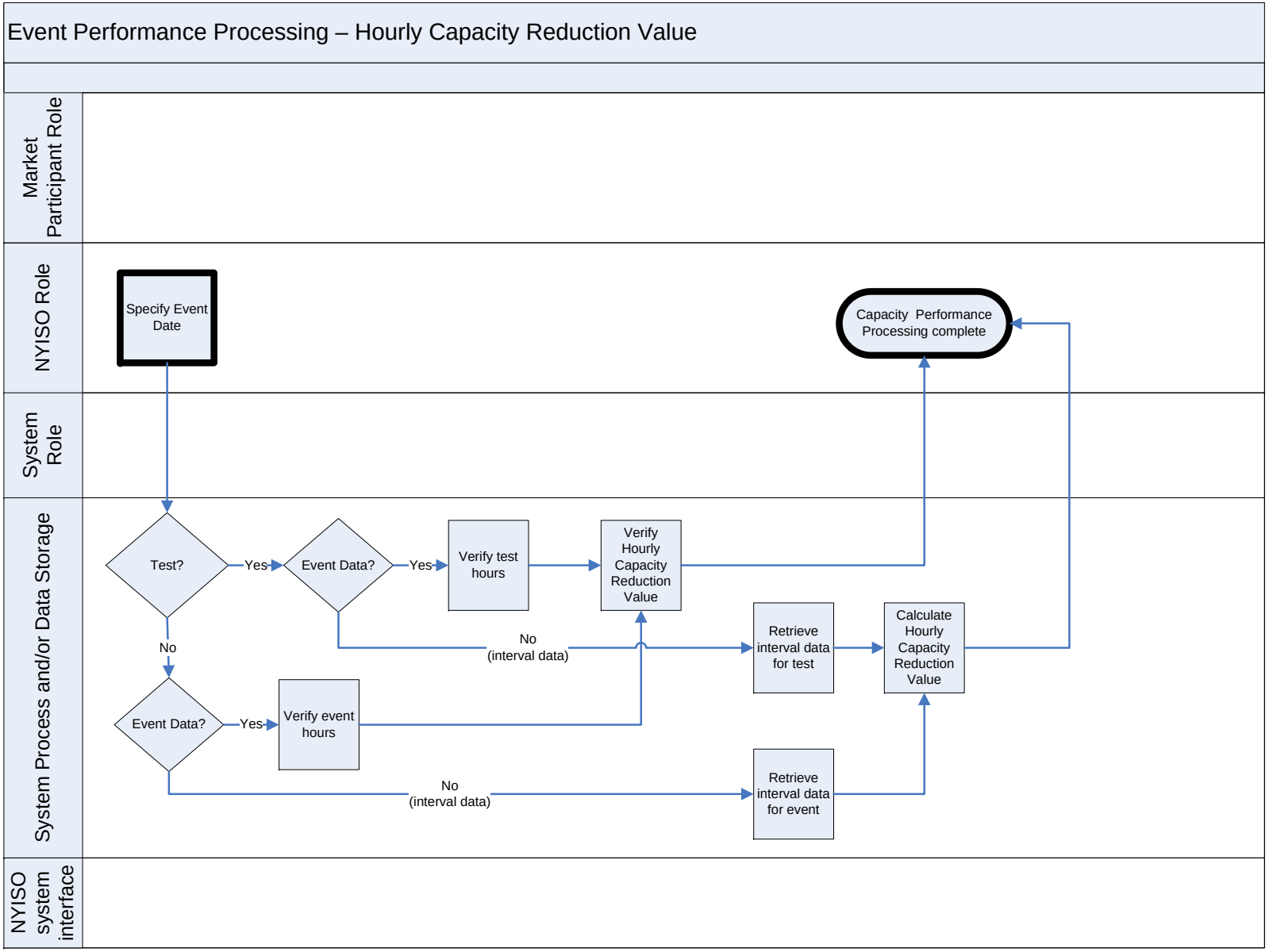


Figure 20. Functional Process Flow: ICAP/SCR Processing

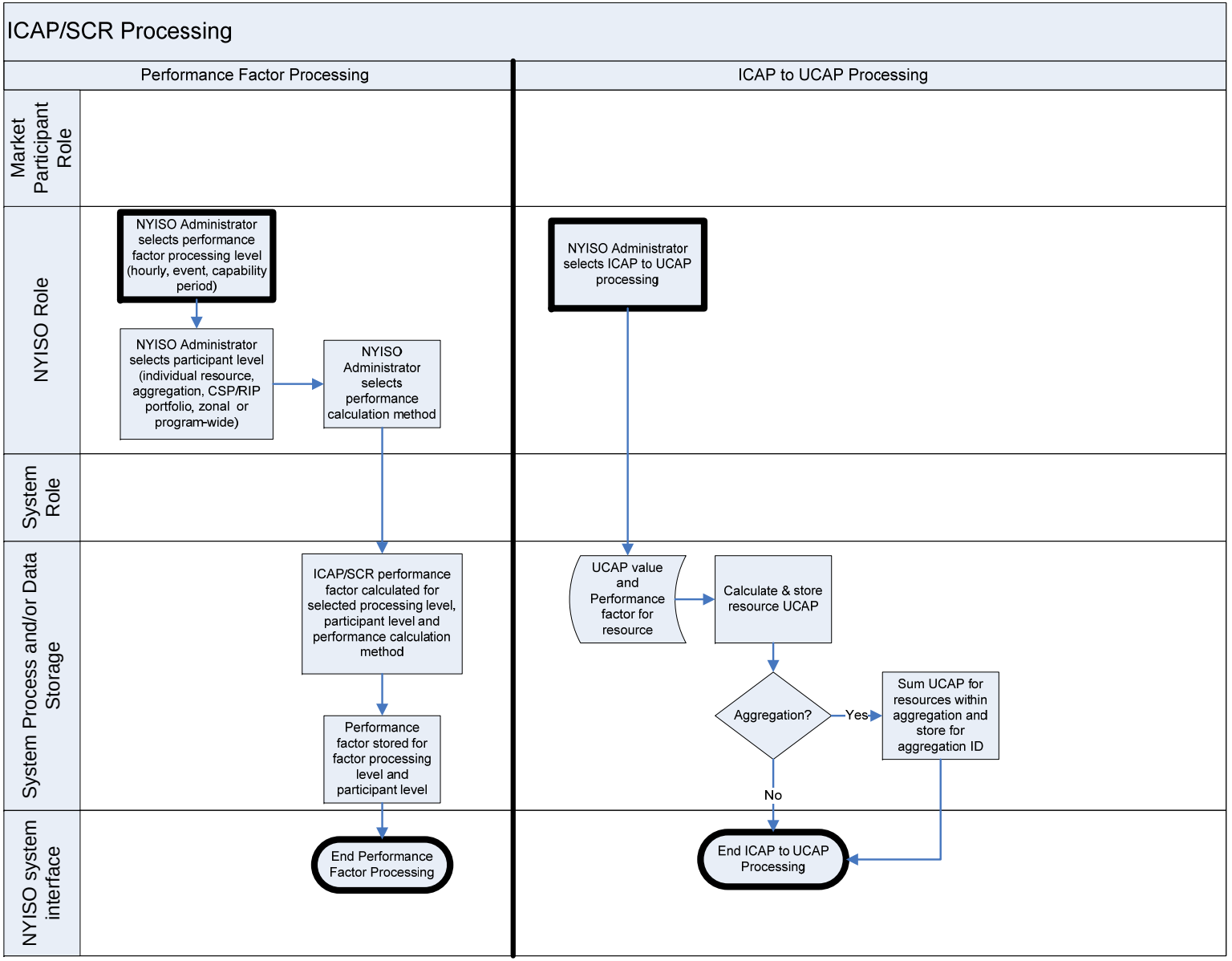
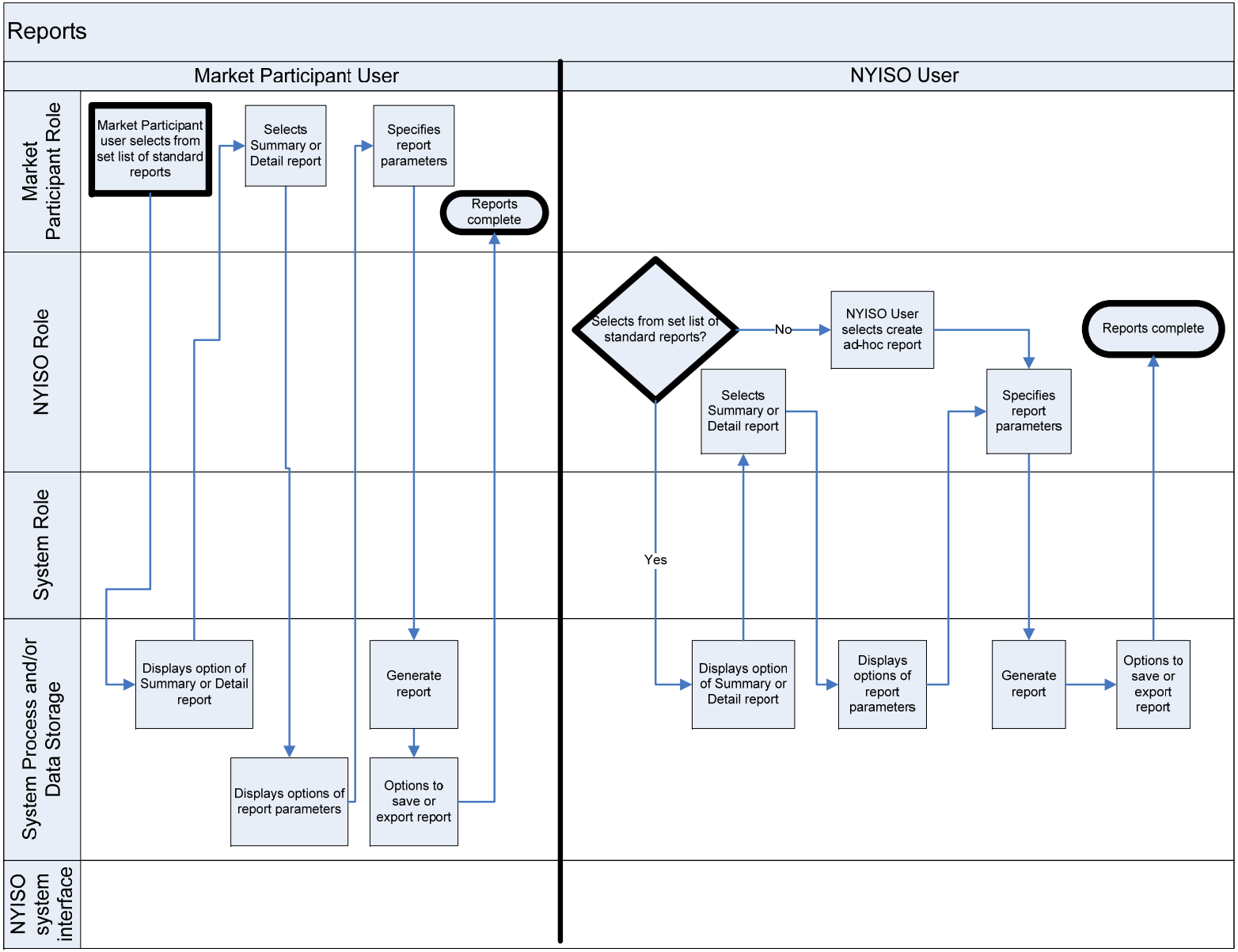


Figure 21. Functional Process Flow: Reports



4 Vendor Instructions

This section includes the response timeline, response submittal instructions and lists the requirements for vendors who wish to respond to this RFP. A qualified response includes the following according to the timeline in Table 1:

- Submittal of Intent to Respond Form
- Participation in the teleconference to respond to vendor questions
- A completed Vendor Response Workbook

Information should be provided by vendors whose system supports the core functions of the Demand Response Information System as outlined in this RFP and further detailed in the attached Vendor Response Workbook. While customization to accommodate NYISO program rules and processes will be necessary, the NYISO seeks a system that can be deployed in a phased approach over the next 12 – 18 months. Vendors with complementary components that meet the core functions described are invited to respond as a team.

Table 1. Relevant RFP Dates

Function	Date
Request for Proposal sent to vendors	Monday, December 22, 2008
Vendor Intent to Respond Form	Monday, January 5, 2009
Vendors submit questions to NYISO	Friday, January 9, 2009
NYISO returns consolidated list of questions to vendors	Tuesday, January 13, 2009
NYISO teleconference to answer vendor questions	Thursday, January 15, 2009
RFP responses due to NYISO	Monday, January 26, 2009
RFP status notice to vendors	Monday, February 9, 2009
RFP finalist presentations	Week of February 23, 2009
Vendor selection	By end of First Quarter 2009

4.1 Vendor Intent to Respond

Each vendor is required to complete the Intent to Respond Form that accompanies this RFP. The Intent to Respond Form must be completed and returned via fax no later than 5:00 PM EST on Monday, January 5, 2009. **Failure to return the Intent to Respond Form shall disqualify the vendor's response.**

4.2 Vendor Questions

Vendors are invited to submit their questions regarding this RFP via e-mail to the contact address listed below by 5:00 PM EST on Friday, January 9, 2009.

Ms. Donna Pratt
New York Independent System Operator
10 Krey Blvd
Rensselaer, NY
518-356-8758
dpratt@nyiso.com

The NYISO shall combine all vendor questions without attribution and return the entire list of questions to all vendors by Tuesday, January 13, 2009.

The NYISO will host a teleconference on Thursday, January 15, 2009 at 2:00 PM EST to respond to the submitted questions. **Vendors are required to participate in the call.**

Dial-in number: 866-280-1753

Participant code: 4254104

4.3 Response Submittal

The vendor response must include the Vendor Response Workbook. Further information about the Vendor Response Workbook is included in Section 5. Supplemental information may be provided; however, it should be clearly separate from the Workbook. A table of contents must accompany supplemental information.

Vendor Response Workbook and supplemental information must be submitted via e-mail and received no later than 5:00 PM EST on Monday, January 26, 2009.

Please direct all questions of a technical nature to:

Ms. Donna Pratt
New York Independent System Operator
10 Krey Blvd
Rensselaer, NY
518-356-8758
dpratt@nyiso.com

5 Vendor Response Workbook

This section provides a description of the information required in the Vendor Response Workbook. Topics are associated with the specific worksheet names within the Workbook.

5.1 Vendor Company Information

Provide a profile of your organization to include but not limited to company background, financials, organizational chart, and proposed project team.

Vendor Response Workbook Worksheets:

1. Background Information
2. Financial Information
3. Organizational Chart and Project Team

5.2 Qualifications / References

Describe prior or current experience which qualifies you for the DRIS. Include project comparisons and customer references.

Vendor Response Workbook Worksheets:

4. Project Comparisons
5. References

5.3 System Architecture

Describe your software system architecture including operating system, database and the services it will support. Information about NYISO's database standards for an in-house solution is provided in the attached document titled: "NYISO-Database Standards.PDF".

Vendor Response Workbook Worksheet:

6. System Architecture

5.4 System and Site Security

Describe your security measures and processes in place for both software security and physical site security. Include information on security and data retrieval. Information about NYISO's security standards for an in-house solution is provided in the attached document titled: "NYISO-Security Standards_rv1.1.PDF".

Vendor Response Workbook Worksheet:

7. System and Site Security

5.5 Functional Requirements

Identify if the functional requirement is available as part your current software, expected in a future release of your software (include release date), or will require customization. Be specific with each sub requirement.

Vendor Response Workbook Worksheet:

8. Functional Requirements

5.6 Non-functional Requirements

Describe how the proposed solution will meet the non-functional requirements of the DRIS. These include flexible architecture, connectivity capabilities, and multiple user roles.

Vendor Response Workbook Worksheet:

9. Non-functional Requirements

5.7 Project Timeline

Indicate how you envision the Functional Requirements of the DRIS being delivered (sequence and timeline) based on a 12 month project. Include the following milestones, expanding when necessary; understanding and defining the customization requirements, application configuration, development, development testing, user acceptance testing, documentation, and software system training. Indicate parallel or overlapping milestones when they occur.

Vendor Response Workbook Worksheet:

10. Project Timeline

5.8 Pricing Structure / Project Costs

Identify the project costs before, during, and after implementation. Include all payment timelines and applicable sign-off milestones.

Vendor Response Workbook Worksheet:

11. Pricing Structure

5.9 Invoicing

Indicate the billing cycle, amount, and terms for both the software solution and implementation services.

Vendor Response Workbook Worksheet:

12. Invoicing

6 Evaluation Criteria

The Vendor Response Workbook is designed to provide the NYISO with the ability to determine which vendor will provide the best system in response to this RFP. The Workbook contains the evaluation criteria which rates the specific categories and requirements as to their level of importance in the decision process. All vendors are provided with this knowledge and the opportunity to respond accordingly. In this way, all vendors will be evaluated using the same known criteria.

Category	Description	Workbook Location	Evaluation Weight
Functional Requirements	**Total Evaluation Weight for Functional Requirements**	**8. Functional Requirements**	**60**
	Demand Response Registration Processing		12
	Event Notification		8
	Reporting		8
	ICAP/SCR Processing		12
	Event Performance, Measurement, and Settlement Preparation		12
	Event and Meter Data Management		8
Non-functional Requirements	**Total Evaluation Weight for Non-functional Requirements**	**9. Non-functional Requirements**	**25**
	Flexible Architecture		5
	Multiple Access / Connectivity Capabilities		5
	Multiple Roles		5
	Availability		5
	Data Retention and Historical Retrieval		5
System and Site Security	**Total Evaluation Weight for System and Site Security**	**7. System and Site Security**	**15**