



Southwest Power Pool

Transmission Congestion Rights

TCR System Market Participant User Manual

Version 2.0

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Non-Disclosure Release

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The intent of this ***TCR Market Participant User's Manual*** is to provide Market Participants and Asset Owners with an introduction to the Southwest Power Pool, Inc. (SPP) TCR system and its user interfaces. As such, this user manual is not intended to be a complete reference source of information about the SPP TCR system, or its interfaces, or any of its other component subsystems, *nor is this user manual intended to provide any guidance with respect to nomination and bidding strategies in the SPP ARR allocations and TCR auctions respectively.*

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ABBREVIATIONS AND ACRONYMS

AO	Asset Owner
ARR	Auction Revenue Rights
CARR	Candidate ARR
CMT	Management Tool
CSV	Comma Separated Values
DB	Database
EMS	Energy Management System
GUI	Graphical User Interface
MOI	Market Operator Interface
MP	Market Participant
MUI	Market User Interface
NITS	Network Integration Transmission Service
OATT	Open Access Transmission Tariff
OASIS	Open Access Same-Time Information System
OTDF	Outage Transfer Distribution Factor
PAR	Phase Angle Regulator
PTDF	Power Transfer Distribution Factor
PTP	Point to Point
TCR	Transmission Congestion Right
XML	Extensible Markup Language

1. Overview of this User Manual

This Southwest Power Pool (SPP) TCR Market Participants User's Manual is organized in chapters, which cover the following topics:

- ❑ **Introduction** gives an overview of ARR and TCRs, the SPP ARR allocations and TCR auctions.
- ❑ **SPP TCR System Overview** gives an overview of SPP TCR system and its components
- ❑ **SPP Portal Web Site** gives an overview of how to access SPP portal
- ❑ **Public and Private Functions of the TCR Interface** describes the information and functions available from the SPP portal TCR interface
- ❑ **Message Board** describes the functions of the message board and how to use it.
- ❑ **Managing TCR Portfolios** describes how to manage ARR and TCR auction portfolios via the Private TCR interface
- ❑ **Managing TCR Bids** describes how to manage ARR and TCR bids via the Private TCR interface
- ❑ **Trading in Secondary Market** describes how to trade TCRs on the secondary market via the Private TCR interface
- ❑ **Nomination Editor** describes how to manage Candidate ARR nominations via the Private TCR interface

The SPP Commercial Model calls for multiple Asset Owners to be represented by a single Market Participant. Access to the TCR System and ownership of ARRs and TCRs are in the name of Asset Owners. Hence, this user manual will refer to Asset Owners throughout the document, except when an explicit reference to a Market Participant is required.

2. Introduction

2.1 What is an ARR?

An **Auction Revenue Right (ARR)** is a financial instrument that entitles an Asset Owner to a share of the revenues generated in the annual or monthly TCR Auctions. ARRs are initially allocated to Asset Owners based on historical usage of the transmission network and future transmission service reservations. SPP will conduct studies annually and monthly to allocate ARRs based on nominations from transmission service reservations and grandfathered agreements. Thus, the Asset Owner can acquire an ARR from two sources:

- ❑ The Annual ARR Allocation
- ❑ Incremental ARR Allocation

2.2 What is a TCR?

A **Transmission Congestion Right (TCR)** is a financial instrument that entitles the holder to receive compensation for or requires the holder to pay certain congestion related transmission charges when the transmission system is congested and LMPs show price separations as a result of the re-dispatch of resources out of economic merit order to relieve that congestion. A TCR value is based on transmission **congestion charges** calculated in the **day-ahead market**. An Asset Owner can acquire a TCR from several sources:

- ❑ The Annual TCR Auction
- ❑ The Monthly TCR Auction
- ❑ The TCR Secondary Market

A TCR is structured to hedge an Asset Owner from congestion of the transmission system in the day-ahead market. TCRs do not apply to the real-time market.

SPP will annually and on a monthly basis conduct a TCR auction to provide Asset Owners with the opportunity to purchase TCRs or to sell previously acquired TCRs. SPP will also facilitate a Secondary Market to support trading of TCRs. To buy and sell TCRs in a SPP auction or on the SPP TCR Secondary Market, an Asset Owner must meet SPP creditworthiness criteria.

2.3 SPP TCR System

The SPP TCR system is used to conduct ARR allocations and TCR auctions and support TCR bilateral trading in the Secondary Market. An Asset Owner can use the TCR system to:

- ❑ Nominate MWs for each of their candidate ARRs on the TCR System Market User Interface (MUI).
- ❑ Obtain information about the three nomination rounds (Round 1, Round 2 and Round 3) including both the details and summaries for the most relevant indicators.
- ❑ Download and upload the candidate ARR list for a round and set the nomination MW.
- ❑ View full description of his/her candidate ARRs for a nomination process, including the maximum MW value associated with each ARR Entitlement.
- ❑ Review the results of ARR allocations.
- ❑ Submit TCR buy bids and sell offers into an annual or single/multi-round monthly TCR auction.
- ❑ Participate in the TCR Secondary Market.
- ❑ Review and download the applicable public and private data including allocation/auction results.
- ❑ Review messages issued by the SPP TCR market operator.

2.4 Interfacing with SPP TCR System

Asset Owners access the SPP TCR system through a web-based interface termed the SPP portal.

2.5 Who is this User's Manual for?

This User's Manual is intended for use by SPP ARR and TCR Asset Owners and Asset Owners to aid them in performing the following tasks:

- ❑ View and download the public existing TCRs.

- ❑ View and download the public auction and allocation information such as network data, the contingency list, monitored lines/transformers, source/sink definitions, and public allocation/auction results.
- ❑ View public messages.
- ❑ View and download the existing ARRs and TCRs specific to that Asset Owner.
- ❑ View and download private information such as Asset Owner specific reservations, ARR nominations and allocation results.
- ❑ View and download private information such as Asset Owner specific TCR buy bids, sell offers, and auction results.
- ❑ View private messages.
- ❑ Manage, download and upload nomination information about PTP and NITS Candidate ARRs.
- ❑ Manage their auction bids and TCR portfolios, including upload and download of the auction related files.
- ❑ Participate in the Secondary Market.

3. SPP TCR System Overview

3.1 Overview

The TCR System was designed to allow Asset Owners to participate in the SPP ARR allocations, TCR auctions and TCR Secondary Market. Asset Owners can use the web-based TCR system to nominate for ARRs, purchase, sell, or bilaterally trade TCRs. SPP conducts both an annual allocation/auction process (for four months and three seasons) and incremental ARR allocation/monthly TCR auctions. For each allocation/auction (annual or monthly) two separate runs are performed - one for the peak case and one for the off-peak case. Definitions of peak/off-peak classes and seasons can be found in the Integrated Marketplace protocols. ARRs acquired in an ARR allocation and TCRs acquired in a TCR Auction will be an Obligation.

ARRs acquired in an allocation or TCRs acquired in an auction will be PTP instruments available between any two settlement points, a node (bus) or combination of nodes (buses) designated by SPP (subject to a simultaneous feasibility test). The list of nodes and their aggregates include: Generation Nodes, Load Nodes, Hubs, Load Zones, Interfaces, Receipt Zones, Pseudo-generators, Pseudo-loads, and Loop Flow (Parallel Flow) Nodes.

All acquired TCRs can be reconfigured, meaning that a Market Participant can submit buy bids and sell offers in the same auction.

3.2 TCR System Components

The TCR system has the following key components:

- **TCR Interface.** The TCR interface is a state-the-art web-based market interface subsystem that will allow
 - Asset Owners to view public data, public allocation/auction results, and associated public announcements and messages
 - Asset Owners to view and download private data, private allocation/auction results and to view private messages
 - Asset Owners to manage and submit their Candidate ARR (CARR) nominations to an upcoming allocation
 - Asset Owners to manage and submit their TCR bids for an upcoming auction

- Asset Owners to manage and Self-convert ARR for an upcoming auction
- Asset Owners to participate in the Secondary Market to bilaterally trade their TCRs
- **Market Operator Interface (MOI).** The MOI subsystem is a web-based system through which SPP personnel will operate and manage the TCR System. This interface is not available to Asset Owners.
- **TCR Database.** The Database subsystem manages all access to both public and private data in the TCR System. All bid data submitted by Asset Owners are stored in this database.

3.3 ARR Allocation Time Line

SPP will initiate, direct and oversee the ARR allocations. An annual allocation (comprising four independent monthly and three independent seasonal allocation periods for the peak and off-peak times-of-use for a total of fourteen cases) will be performed at the beginning of each ARR/TCR calendar year and prior to the TCR auction process for the same time periods. In addition, incremental monthly allocations (peak and off-peak) may be performed prior to the beginning of each monthly auction.

For the multi-round annual and the single-round monthly allocation process, the timeline incorporates the following steps:

- PSS/E files and other auxiliary files are posted when the market operator initiates the allocation process.
- A defined time-period, where Asset Owners submit MW nominations for their Candidate ARRs for each round of the annual allocation process.
- The SPP market operator conducts the allocation (a round of the single or multi-round allocation).
- Results are posted at the conclusion of the allocation run.

3.4 TCR Auction Time Line

SPP will initiate, direct and oversee the TCR auctions. An annual auction (comprising four independent monthly and three independent seasonal auction periods for the peak and off-peak times-of-use for a total of fourteen cases) will be performed prior to the beginning of each ARR/TCR calendar year and following the ARR allocation. In addition, single/multi-round monthly auctions (peak and off-peak) will be performed prior

to the beginning of each month and if needed after incremental ARR monthly allocations.

For each seasonal or monthly auction, the timeline incorporates the following steps:

- ❑ PSS/E files and other auxiliary files are posted when the market operator initiates the auction process.
- ❑ A bidding period is opened during which Asset Owners submit bids for the auction.
- ❑ The SPP market operator conducts the auction (a round of the single or multi-round auction).

Auction results are posted at the conclusion of the auction round.

4. SPP Portal Web Site

Asset Owners interface with SPP TCR system via the SPP portal. The portal is accessed via the Internet, using the following web browsers:

- Microsoft Internet Explorer Version 8.0 or higher
- Mozilla Firefox
- Google Chrome

4.1 Portal Navigation

The SPP portal can be navigated by using drop-down menus available in the SPP portal system web pages, control tabs and buttons within these web pages, or through use of the Forward/Back controls of the web browser.

4.2 Accessing the SPP Portal

The SPP portal is the single point of entry for Asset Owners to access the SPP market systems.

For each Asset Owner an initial account is created by SPP for the Asset Owner's designated Local Security Administrator (LSA). The LSA is responsible for assigning additional user accounts for individuals of the Asset Owner's company. Each of these users is required to obtain an OATI digital security certificate to import to their web browser. Each of these users is assigned roles for each market system (e.g., Day-Ahead market system, TCR, Settlements). Users and their assigned roles are managed by SPP and are stored in the SPP Authorization Database.

Entering the following secured URL in the web browser, accesses the SPP portal:

<https://marketplace.spp.org/>

All Asset Owners that have OATI digital security certificates can access the SPP portal. There is no separate login page to access the SPP portal. If a user does not have a security certificate, that user cannot access the SPP portal, and will receive a message indicating that the page cannot be displayed.

4.3 TCR System Interface

4.3.1 TCR System Basics

The TCR system is a web-based system that allows Asset Owners to participate in ARR allocations/TCR auctions, in the TCR Secondary Market, as well as to view and download system data, allocation/auction results, and view associated messages.

4.3.2 Access to the TCR System

On the SPP portal there is a navigation tab to the TCR system. From here the users can access the various pages of the TCR system by clicking on different drop down menus.

For the TCR system, an Asset Owner can be set up by the LSA with one of the two types of TCR user accounts, both of which provide access to the user's TCR system private pages:

- The **submit role (READ_WRITE)** allows full privileges to the Asset Owners to submit TCR bids and participate in the Secondary Market. The **submit role (READ_WRITE)** can access all the public and private web pages for the given Asset Owner.
- The **view role (READ_ONLY)** that provides view-only access to the user's private and public pages. This account does not permit submission of portfolios into the TCR auctions or to trade TCRs on the secondary market.

A user (i.e. a human being) will be navigating through the TCR system as an Asset Owner. The digital certificate issued to the user permits the user to access the TCR system on behalf of one or more Asset Owners. When entering the TCR system, the user has to choose the Asset Owner that he/she wants to act on behalf of prior to navigation within the TCR system.

4.3.3 TCR System Interfaces

The SPP TCR system Interface has two functions:

- The public interface, which allows Asset Owners to download and view:
 - General data, which consists of the list of TCRs for all Asset Owners.
 - Network data, which consists of the contingency list, flowgate definitions, monitored lines/transformers, network model in pss/e format, parallel flows and scheduled outages. This data is available for each allocation/auction.

- Market data, which consists of source/sink definitions and base loading TCRs. This data is available for each allocation/auction.
- Market Results data:
 - Allocation data, which consists of the binding constraints.
 - Auction data, which includes the auction source/sink clearing prices, auction results and binding constraints.
- Historical data comprising CARR nominations and auction bid data.
- Public announcements/messages.
- The private interface, which allows each Asset Owner to access:
 - ARR Nomination Editor that permits Asset Owners to submit nominations to annual or incremental allocations.
 - View total Peak and Off-Peak MW amounts for the various types of entitlements.
 - Filter, download, upload or view PTP (if available) candidate ARR data for an allocation market and modify nominated MW values for those Candidate ARRs. Additionally, the participant can view summaries for this type of entitlement for any round of the annual or incremental process.
 - Filter, download, upload or view Network candidate ARR data (if available) for an allocation market and modify nominated MW Values for those candidate ARRs. Additionally, the participant can view summaries for this type of entitlement for any round of the annual or incremental process.
 - Filter or download the list of candidate ARRs along with allocated ARR's, after the allocation has been posted.
 - TCR Bid/Offers page that permits Asset Owners to submit portfolios of buy bids/sell offers and self-converted ARRs to the annual or monthly auctions.
 - Prepare and manage portfolios of buy bids/sell offers and self-converted ARRs.
 - View the portfolios that have been submitted to auctions.

- Upload and download bid portfolios.
- Secondary Market
 - View, post and accept bilateral TCR trades.
- Private downloads
 - General data, which consists of the list of TCRs and ARRAs owned by Asset Owners.
 - Market data, which consists of the list of Aggregated ARRAs and Transmission Service Reservations owned by Asset Owners.
 - Private Allocation data, which consists of the results of the multi-round seasonal or single round incremental allocation calculations, including the nominated MW value.
 - Private Auction data, which consists of the results of the single round annual or single/multi-round monthly TCR auction, including the bid curve associated with each of the TCR buy bids/sell offers in the portfolios submitted to an auction. In addition, separate downloads are available for self-converted ARRAs.
- Private messages sent via the Message Board.

4.4 TCR System Web Pages

Error! Reference source not found. provides an overview of TCR system web pages available from SPP portal public and private TCR interfaces.

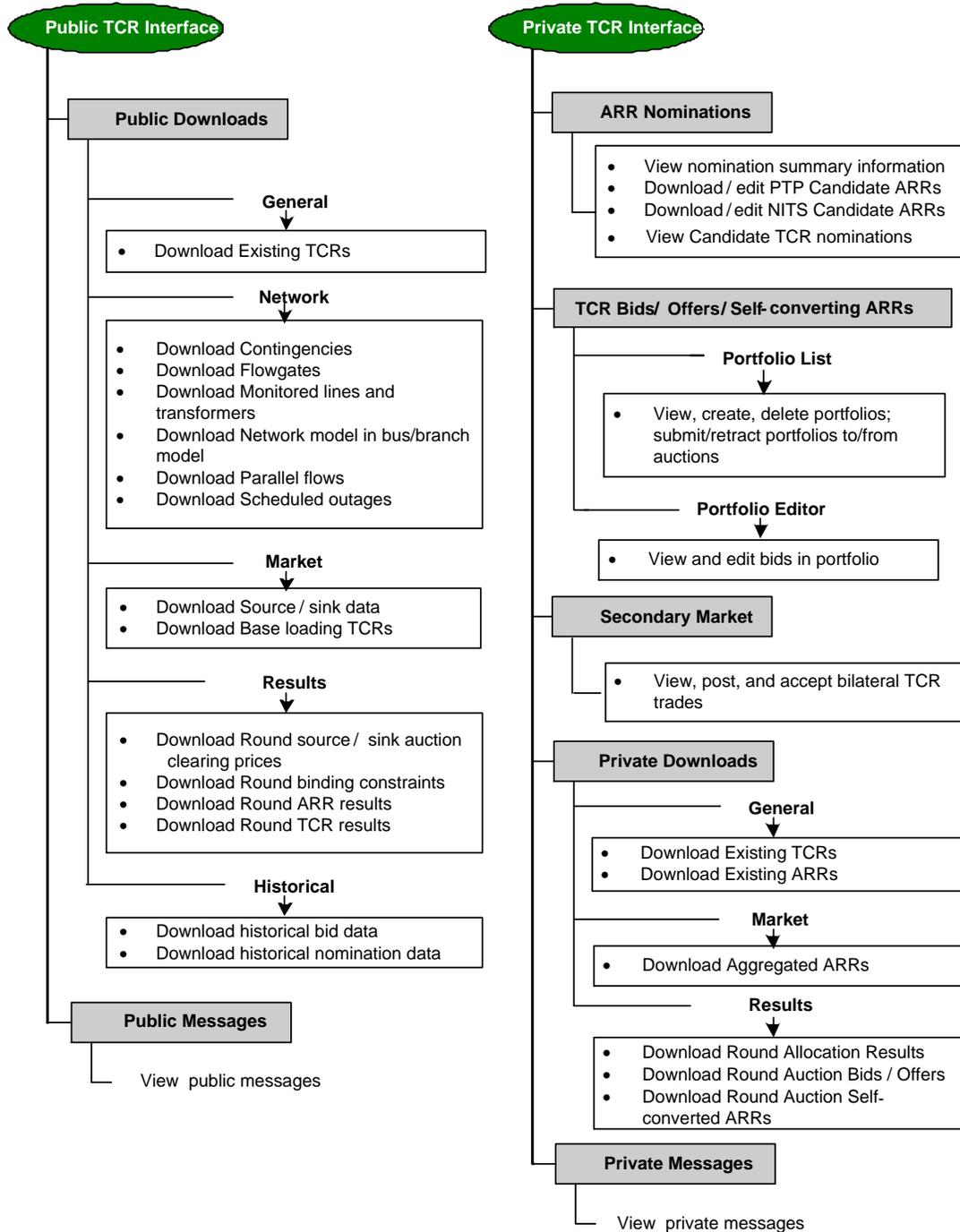


Figure 1 TCR System Web Pages for the Public and Private TCR Interfaces

4.5 Overview of the TCR Interface

There are two types of information available to the Asset Owners: Public information, which is general information available to any SPP Asset Owner, and Private Information which is confidential information pertinent to only that Asset Owner.

4.6 Functions of the TCR Interface

The TCR interface has many features all accessible through the five dropdown menus shown in Figure 2.

The five dropdown menu items are as follows:

- **ARR Nominations** – link to ARR Nomination Editor pages
- **TCR Bids/Offers** – link to TCR Bid Portfolio List page
- **Secondary Market** – link to TCR Secondary Market pages
- **Downloads**– link to Public and Private Download page
- **Messages** – link to Message Board



Figure 2 Functions of the TCR Interface

5. Nomination MUI Editor

5.1 Overview of the Nomination Editor

The TCR Nomination editor is accessible only by those Asset Owners and Market Participants who are authorized to participate in the ARR Allocation market. The focus of this chapter is how to view, download, and upload nomination information via the Nomination Market User Interface.

5.2 Available Nomination Information on the Nomination Editor

On validation, the Nomination Editor is available to SPP Asset Owners or the Market Participants that they represent. ***These interfaces are private to each Asset Owner and reflect data specific to that Asset Owner only.*** For each Allocation market and round, users can:

1. Filter, download, view or upload Candidate ARRs under the category PTP in CSV format.
2. Filter, download, view or upload Candidate ARRs under the category NITS in CSV format.
3. Modify the Nominated MW for Candidate ARRs under the category PTP.
4. Modify the Nominated MW for Candidate ARRs under the category NITS.

5.3 ARR Nomination Editor Functions

The **ARR Nomination Editor** page first contains 3 combination boxes to select the Market, Period, and Round. From there, the user chooses from the two tabs, PTP and NITS, to select the type of Candidate ARRs. The information displayed in the two tabs will pertain to the allocation market selected in the combination boxes. The following steps should be used to change the allocation market currently selected.

- ❑ Step 1: In the ARR Nomination Editor Interface, select an allocation market from the combination box underneath the heading “Market”. The combination box will contain a list of the most recent allocation markets created. See Figure 3.
- ❑ Step 2: Select the period associated with the allocation market from the combination box underneath the heading “Period”. The combination box will contain a list of applicable periods for the allocation market. See Figure 3.
- ❑ Step 3: The combination box underneath the heading “Round” will contain the rounds associated with the chosen allocation market and period. See Figure 3.

- Step 4: In order to see the information linked to the selected allocation market, period and round, click the **GO** control button next to the “Round” combination box. The User Interface will reflect the Candidate ARR data entitlement for the selected allocated market, period and round. See Figure 3.

The effective start and end dates of the chosen Allocation Market are listed to the right of the selection boxes. Further to the right is the nomination window with the open and close dates is listed.

The Summary Panel is a matrix of round specific MW quantities (columns of this matrix) for the various types of entitlements (rows of this matrix). The columns of this matrix are:

Round Cap: Nomination Cap for the set of entitlements for the Asset Owner for this Asset Owner for this ARR Allocation, per SPP Market Protocols.

Round Nomination: MW nominated by the Asset Owner in this round of the ARR Allocation market.

Round Allocation: The allocated MW corresponding to the Candidate ARR nominations for this round of the ARR Allocation market.

The rows of this matrix are:

NITS-OFF: Network Integration Transmission Service (NITS) type of entitlement for the off-peak time of use in this round of the ARR Allocation market.

PTP-OFF: Point to Point (PTP) type of entitlement for the off-peak time of use in this round of the ARR Allocation market.

NITS-ON: Network Integration Transmission Service (NITS) type of entitlement for the on-peak time of use in this round of the ARR Allocation market.

PTP-ON: Point to Point (PTP) type of entitlement for the on-peak time of use in this round of the ARR Allocation market.

Transmission Congestion Rights - Market User Interface
 TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1561 | Welcome [Kim AO] Role(s): [ROLE_MP, ROLE_MP_RW] Log Out

ARR Nominations TCR Bids/Offers Secondary Market Download Message

Home / Nomination

Market: Annual Allocation FAT Rr2 | Period: Jun_13 | Round: Round 1 | Go

Combination Boxes

Effective Dates		Nomination Window	
Start Date	End Date	Open Date	Close Date
06/01/2013	06/30/2013	07/18/2012 13:59:47 CPT	07/19/2012 13:59:51 CPT

Summary

	Round Cap	Round Nomination	Round Allocation
PTP-ON	567	567	398.4
PTP-OFF	567	567	398.4
NITS-OFF	204.8	178	129.4
NITS-ON	204.8	178	129.4

Round 1&2 Nomination Editor

Valid

Download Download Message

	Status	Entitlement MW	Candidate MW	Nominated MW	Allocated MW	Entitlement ID	Summary ID	Candidate ID	Asset Owner
⊞	VALID	100.0	100.0	50.0	24.6	161	208	702	Kim AO
⊞	VALID	70.0	70.0	35.0	0.0	560	201	327	Kim AO
⊞	VALID	60.0	60.0	30.0	0.0	384	216	371	Kim AO
⊞	VALID	100.0	100.0	50.0	0.0	162	208	317	Kim AO
⊞	VALID	50.0	50.0	25.0	0.0	633	288	486	Kim AO
⊞	VALID	150.0	150.0	75.0	0.0	153	232	400	Kim AO
⊞	VALID	60.0	60.0	30.0	0.0	380	226	30	Kim AO
⊞	VALID	150.0	150.0	75.0	0.0	491	233	565	Kim AO
⊞	VALID	60.0	60.0	30.0	0.0	130	225	185	Kim AO
⊞	VALID	24.0	24.0	12.0	0.0	305	298	468	Kim AO
⊞	VALID	60.0	60.0	30.0	0.0	379	226	526	Kim AO
⊞	VALID	60.0	60.0	30.0	0.0	113	222	378	Kim AO
⊞	VALID	70.0	70.0	35.0	0.0	559	201	331	Kim AO
⊞	VALID	100.0	100.0	50.0	0.0	698	209	93	Kim AO
⊞	VALID	150.0	150.0	75.0	0.0	492	233	351	Kim AO
⊞	VALID	70.0	70.0	35.0	0.0	468	194	145	Kim AO
⊞	VALID	60.0	60.0	30.0	0.0	622	239	566	Kim AO
⊞	VALID	60.0	60.0	30.0	0.0	383	216	215	Kim AO
⊞	VALID	60.0	60.0	30.0	0.0	114	222	641	Kim AO
⊞	VALID	60.0	60.0	30.0	0.0	158	215	80	Kim AO

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Figure 3 Nomination > General User Interface Step 1 – Step 4

The following tasks illustrate the functions and corresponding information available via the Nomination Interface.

5.3.1 View Data

By selecting either the PTP or NITS tab, the display window will show the corresponding data showing all of the details for valid ARR's of each type as shown in Figure 4.

The columns of the display for the two tabs (in Rounds 1 and 2) are:

- **Status** – Current status of the Candidate ARR. It bears the values of “Valid” or “Error”. The latter status indicates an invalid Candidate ARR which will not be submitted as a nomination to the ARR Allocation process.
- **Entitlement MW** – The MW associated with the Entitlement.
- **Candidate MW** – MWs eligible for nomination in this round of the ARR Allocation.
- **Nominated MW** – MWs nominated by the Asset Owner in this round of the ARR Allocation.
- **Allocated MW** – MWs allocated for this Candidate ARR after the simultaneous feasibility analysis was executed.
- **Entitlement ID** – ID of the entitlement belonging to the Asset Owner. Typically two entitlements (peak and off-peak) are created for each transmission service reservation (24 hours) as entered on OASIS.
- **Summary ID** – Summary ID of the transmission service reservation as entered on OASIS.
- **Candidate ID** – ID of the candidate ARR. This is automatically generated by the system.
- **Asset Owner** – Name of the Asset Owner associated with the Candidate ARR record.
- **Source** – Name of the source associated with the Candidate ARR record.
- **Sink** – Name of the sink associated with the Candidate ARR record.
- **Class** – Time of use associated with the Candidate ARR record.

The columns of the display for the two tabs (in Round 3) are:

- **Candidate ID** – ID of the candidate ARR. This is automatically generated by the system.
- **Status** – Current status of the Candidate ARR. It bears the values of “Valid” or “Error”. The latter status indicates an invalid Candidate ARR which will not be submitted as a nomination to the ARR Allocation process.
- **Nominated MW** – MWs nominated by the Asset Owner in this round of the ARR Allocation.
- **Allocated MW** – MWs allocated for this Candidate ARR after the simultaneous feasibility analysis was executed.
- **Source** – Name of the source associated with the Candidate ARR record.
- **Sink** – Name of the sink associated with the Candidate ARR record.
- **Class** – Time of use associated with the Candidate ARR record.
- **Asset Owner** – Name of the Asset Owner associated with the Candidate ARR record.
- **Description** – An optional description that can be entered by the Asset Owner with tags that are meaningful to the Asset Owner (e.g. ID in their own system, worksheet).



Transmission Congestion Rights - Market User Interface

TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1561 | Welcome [Kim AO] Role(s): [ROLE_MP, ROLE_MP_RW] [Log Out](#)

ARR Nominations
TCR Bids/Offers
Secondary Market
Download ▾
Message ▾

Home / Nomination

Market: ▼

Period: ▼

Round: ▼

Effective Dates		Nomination Window	
Start Date	End Date	Open Date	Close Date
06/01/2013	06/30/2013	07/18/2012 13:59:47 CPT	07/19/2012 13:59:51 CPT

Summary			
	Round Cap	Round Nomination	Round Allocation
PTP-ON	567	567	398.4
PTP-OFF	567	567	398.4
NITS-OFF	204.8	178	129.4
NITS-ON	204.8	178	129.4

Round 1&2 Nomination Editor

Valid

PTP

NITS

	Status ▾	Entitlement MW	Candidate MW	Nominated MW	Allocated MW	Entitlement ID	Summary ID	Candidate ID	Asset Owner
<input type="checkbox"/>	VALID	100.0	100.0	50.0	24.6	161	208	702	Kim AO
<input type="checkbox"/>	VALID	70.0	70.0	35.0	0.0	560	201	327	Kim AO
<input type="checkbox"/>	VALID	60.0	60.0	30.0	0.0	384	216	371	Kim AO
<input type="checkbox"/>	VALID	100.0	100.0	50.0	0.0	162	208	317	Kim AO
<input type="checkbox"/>	VALID	50.0	50.0	25.0	0.0	633	288	486	Kim AO
<input type="checkbox"/>	VALID	150.0	150.0	75.0	0.0	153	232	400	Kim AO
<input type="checkbox"/>	VALID	60.0	60.0	30.0	0.0	380	226	30	Kim AO
<input type="checkbox"/>	VALID	150.0	150.0	75.0	0.0	491	233	565	Kim AO
<input type="checkbox"/>	VALID	60.0	60.0	30.0	0.0	130	225	185	Kim AO
<input type="checkbox"/>	VALID	24.0	24.0	12.0	0.0	305	298	468	Kim AO
<input type="checkbox"/>	VALID	60.0	60.0	30.0	0.0	379	226	526	Kim AO
<input type="checkbox"/>	VALID	60.0	60.0	30.0	0.0	113	222	378	Kim AO
<input type="checkbox"/>	VALID	70.0	70.0	35.0	0.0	559	201	331	Kim AO
<input type="checkbox"/>	VALID	100.0	100.0	50.0	0.0	698	209	93	Kim AO
<input type="checkbox"/>	VALID	150.0	150.0	75.0	0.0	492	233	351	Kim AO
<input type="checkbox"/>	VALID	70.0	70.0	35.0	0.0	468	194	145	Kim AO
<input type="checkbox"/>	VALID	60.0	60.0	30.0	0.0	622	239	566	Kim AO
<input type="checkbox"/>	VALID	60.0	60.0	30.0	0.0	383	216	215	Kim AO
<input type="checkbox"/>	VALID	60.0	60.0	30.0	0.0	114	222	641	Kim AO
<input type="checkbox"/>	VALID	60.0	60.0	30.0	0.0	158	215	80	Kim AO

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Figure 4 PTP or NITS tab display

6. Nomination Editor Features

The displays in the ARR Nomination Editor are contained in scrollable windows. If all the data is not visible, the scroll bars of the browser must be used to view it. In total, there are two displays – PTP and NITS. These two displays can be accessed by clicking on the tab corresponding to that display. If the display is currently being shown, its tab will be highlighted in white as shown in Figure 5 where the PTP tab is highlighted.

Transmission Congestion Rights - Market User Interface

TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1527 | Welcome [Kim AO] Role(s): [READ_WRITE, Log Out ROLE_MP]

ARR Nominations
TCR Bids/Offers
Secondary Market
Download ▾
Message ▾

Home / Nomination

Market: Annual Allocation FAT Rr2 ▾ Period: Jul_13 ▾ Round: Round 1 ▾ Go

Effective Dates		Nomination Window	
Start Date	End Date	Open Date	Close Date
07/01/2013	07/31/2013	06/25/2012 09:41:12 CPT	06/25/2012 18:41:18 CPT

Summary			
	Round Cap	Round Nomination	Round Allocation
PTP-ON	399.5	331.5	266.3
PTP-OFF	399.5	399.5	343.5
NITS-OFF	184.7	96	89.9
NITS-ON	184.7	96	89.1

Round 18 - Nomination Editor

Valid

Download
 Download Message

PTP
NITS

	Status ▾	Entitlement MW	Candidate MW	Nominated MW	Allocated MW	Entitlement ID	Summary ID	Candidate ID	Asset Owner
<input checked="" type="checkbox"/>	VALID	60.0	60.0	30.0	18.2	37	240	302	Kim AO
<input checked="" type="checkbox"/>	VALID	100.0	100.0	50.0	0.0	152	270	303	Kim AO
<input checked="" type="checkbox"/>	VALID	60.0	60.0	30.0	0.0	681	227	251	Kim AO
<input checked="" type="checkbox"/>	VALID	104.0	104.0	52.0	0.0	280	299	651	Kim AO
<input checked="" type="checkbox"/>	VALID	55.0	55.0	27.5	0.0	450	195	615	Kim AO
<input checked="" type="checkbox"/>	VALID	55.0	55.0	27.5	0.0	449	195	515	Kim AO
<input checked="" type="checkbox"/>	VALID	100.0	100.0	50.0	0.0	313	210	126	Kim AO
<input checked="" type="checkbox"/>	VALID	100.0	100.0	50.0	0.0	314	210	268	Kim AO
<input checked="" type="checkbox"/>	VALID	60.0	60.0	30.0	0.0	649	217	401	Kim AO
<input checked="" type="checkbox"/>	VALID	104.0	104.0	52.0	0.0	279	299	29	Kim AO
<input checked="" type="checkbox"/>	VALID	50.0	50.0	25.0	0.0	552	289	694	Kim AO
<input checked="" type="checkbox"/>	VALID	60.0	60.0	30.0	0.0	650	217	50	Kim AO
<input checked="" type="checkbox"/>	VALID	150.0	150.0	75.0	0.0	630	234	609	Kim AO
<input checked="" type="checkbox"/>	VALID	60.0	60.0	30.0	0.0	264	223	708	Kim AO
<input checked="" type="checkbox"/>	VALID	60.0	60.0	30.0	0.0	682	227	245	Kim AO
<input checked="" type="checkbox"/>	VALID	60.0	60.0	30.0	0.0	38	240	135	Kim AO
<input checked="" type="checkbox"/>	VALID	50.0	50.0	25.0	0.0	551	289	484	Kim AO
<input checked="" type="checkbox"/>	VALID	60.0	60.0	30.0	0.0	263	223	295	Kim AO
<input checked="" type="checkbox"/>	VALID	150.0	150.0	7.0	0.0	629	234	109	Kim AO
<input checked="" type="checkbox"/>	VALID	100.0	100.0	50.0	0.0	151	270	314	Kim AO

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Figure 5 PTP tab highlighted

6.1 Paging Mechanism

The Nomination Editor has a feature of presenting the data in manageable sizes for the PTP or NITS Nomination tabs. When the user has a large amount of data, the system provides for a paging mechanism to present the data in blocks of 200 records. On each page, the Left Arrows (Previous) and Right Arrows (Next) allow the user to traverse the complete set of records. The **Right Arrow** causes the web page to refresh and bring up the succeeding block of records as shown in Figure 6. This arrow is disabled when the last block is reached. Similarly, the **Left Arrow** permits the user to navigate to the previous block of records as shown in Figure 7 and the arrow is disabled when the first block of records is reached.

Transmission Congestion Rights - Market User Interface

TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1527 | Welcome [Kim AO] Role(s): [READ_WRITE, Log Out ROLE_MP]

ARR Nominations
TCR Bids/Offers
Secondary Market
Download ▾
Message ▾

Home / Nomination

Market: Annual Allocation FAT Rr2 ▾ | Period: Jun_13 ▾ | Round: Round 1 ▾ Go

Effective Dates		Nomination Window	
Start Date	End Date	Open Date	Close Date
06/01/2013	06/30/2013	06/25/2012 09:41:12 CPT	06/25/2012 18:41:18 CPT

Summary			
	Round Cap	Round Nomination	Round Allocation
PTP-ON	567	567	398.4
PTP-OFF	567	567	398.4
NITS-OFF	204.8	178	129.4
NITS-ON	204.8	178	129.4

Valid

Download
 Download Message

PTP		NITS								
Status ▾	Entitlement MW	Candidate MW	Nominated MW	Allocated MW	Entitlement ID	Summary ID	Candidate ID	Asset Owner	Soi	
VALID	100.0	100.0	50.0	24.6	161	208	702	Kim AO		
VALID	70.0	70.0	35.0	0.0	560	201	327	Kim AO		
VALID	60.0	60.0	30.0	0.0	384	216	371	Kim AO		
VALID	100.0	100.0	50.0	0.0	162	208	317	Kim AO		
VALID	50.0	50.0	25.0	0.0	633	288	486	Kim AO		
VALID	150.0	150.0	75.0	0.0	153	232	400	Kim AO		
VALID	60.0	60.0	30.0	0.0	380	226	30	Kim AO		
VALID	150.0	150.0	75.0	0.0	491	233	565	Kim AO		
VALID	60.0	60.0	30.0	0.0	130	225	185	Kim AO		
VALID	24.0	24.0	12.0	0.0	305	298	468	Kim AO		
VALID	60.0	60.0	30.0	0.0	379	226	526	Kim AO		
VALID	60.0	60.0	30.0	0.0	113	222	378	Kim AO		
VALID	70.0	70.0	35.0	0.0	559	201	331	Kim AO		
VALID	100.0	100.0	50.0	0.0	698	209	93	Kim AO		
VALID	150.0	150.0	75.0	0.0	492	233	351	Kim AO		
VALID	70.0	70.0	35.0	0.0	468	194	145	Kim AO		
VALID	60.0	60.0	30.0	0.0	622	239	566	Kim AO		
VALID	60.0	60.0	30.0	0.0	383	216	215	Kim AO		
VALID	60.0	60.0	30.0	0.0	114	222	641	Kim AO		
VALID	60.0	60.0	30.0	0.0	158	215	80	Kim AO		

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Figure 6 Right arrow on the Nomination Editor displays

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Version 2.0

Transmission Congestion Rights - Market User Interface

TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1527 | Welcome [Kim AO] Role(s): [READ_WRITE, Log Out ROLE_MP]

ARR Nominations
TCR Bids/Offers
Secondary Market
Download ▾
Message ▾

Home / Nomination

Market: ▾

Period: ▾

Round: ▾

Effective Dates		Nomination Window	
Start Date	End Date	Open Date	Close Date
06/01/2013	06/30/2013	06/25/2012 09:41:12 CPT	06/25/2012 18:41:18 CPT

Summary			
	Round Cap	Round Nomination	Round Allocation
PTP-ON	567	567	398.4
PTP-OFF	567	567	398.4
NITS-OFF	204.8	178	129.4
NITS-ON	204.8	178	129.4

Round 1&2 Nomination Editor

Valid

Download

PTP		NITS								
Status ▾	Entitlement MW	Candidate MW	Nominated MW	Allocated MW	Entitlement ID	Summary ID	Candidate ID	Asset Owner	Soi	
VALID	24.0	24.0	12.0	12.0	306	298	677	Kim AO	HU	
VALID	150.0	150.0	75.0	0.0	154	232	562	Kim AO	Ge	
VALID	60.0	60.0	30.0	0.0	334	238	175	Kim AO	Ge	
VALID	60.0	60.0	30.0	0.0	621	239	412	Kim AO	Ge	
VALID	60.0	60.0	30.0	0.0	333	238	298	Kim AO	Ge	
VALID	100.0	100.0	50.0	0.0	697	209	420	Kim AO	Ge	
VALID	60.0	60.0	30.0	0.0	129	225	249	Kim AO	Ge	
VALID	50.0	50.0	25.0	0.0	634	288	168	Kim AO	Ge	
VALID	60.0	60.0	30.0	0.0	157	215	187	Kim AO	Ge	
VALID	70.0	70.0	35.0	0.0	467	194	79	Kim AO	Ge	

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Figure 7 Left arrow on the Nomination Editor displays

6.2 Editor Actions

The Nomination Editor allows the user to carry out four actions in Rounds 1 and 2 as shown in Figure 10:

- **Upload** – This button allows the user to upload a csv formatted file of bids to the portfolio editor. A sample file containing buy bids is shown below in Figure 8. Validation of the nominations is conducted during the upload and errors are reported to the user on the screen. The errors are also available as a download report by clicking the **“Download Message”** button.

	A	B	C	D	E	F	G	H	I	J	K	L	M
	Entitlement MW	Candidate MW	Nominated MW	Allocated MW	Entitlement ID	Summary ID	Candidate ID	Service Type	Asset Owner	Source	Sink	Class	Period Name
2	150	75	37.5	37.5	20577	1232	45351	PTP	Kim AO	GenJAN	LSE 8	ON	Jun_14
3	50	47.3	23	0	20669	1288	45056	PTP	Kim AO	GenRAL	LSE 5	ON	Jun_14
4	60	60	30	0	20411	1238	45335	PTP	Kim AO	GenMOR #1	LSE 4	ON	Jun_14
5	60	41.8	20.9	8.8	20304	1216	44886	PTP	Kim AO	GenJAN	LSE 3	OFF	Jun_14
6	60	41.8	20.9	8.8	20782	1222	45411	PTP	Kim AO	GenJAN	LSE 3	OFF	Jun_14
7	60	41.8	20.9	8.8	20457	1215	45497	PTP	Kim AO	GenJAN	LSE 3	ON	Jun_14
8	60	41.8	20.9	8.8	20781	1222	45188	PTP	Kim AO	GenJAN	LSE 3	ON	Jun_14
9	60	60	30	0	20412	1238	44860	PTP	Kim AO	GenMOR #1	LSE 4	OFF	Jun_14
10	60	41.8	20.9	8.8	20458	1215	45381	PTP	Kim AO	GenJAN	LSE 3	OFF	Jun_14
11	60	57.1	28	0	20552	1226	45194	PTP	Kim AO	GenJAN	LSE 6	OFF	Jun_14

Figure 8 Rounds 1 and 2 Nomination File

Typically, users download the nomination file from the nomination editor, update the Nominated MW values and upload the file to register the nominations in the system. During the upload process, the system uses the Candidate ID to determine the ARR being modified and updates the system database with the nominated MW in the file. See Figure 9.

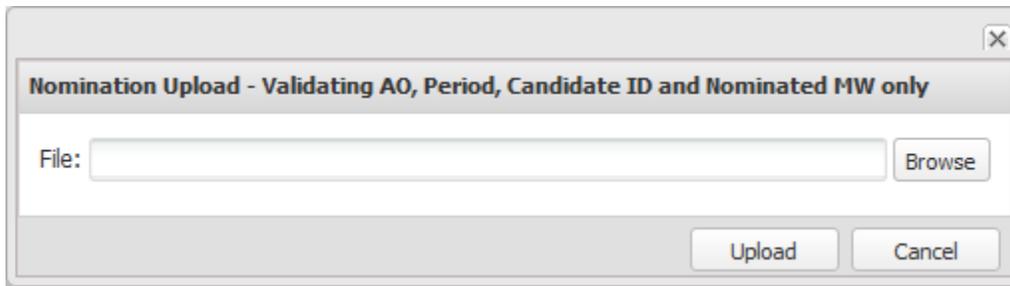


Figure 9 Pop-up window during upload of Round 1 and 2 Nomination File

- **Save** – This button instructs the system to save the nominations on the nomination editor. Validation of the nominations is conducted during the save operation and errors are immediately reported to the user on the screen.

- **Download** – This button permits the user to download the set of nominations from the nomination editor. The content of the download file is shown below in **Error! Reference source not found..**

- **Download Message** – This button downloads the error messages discovered during the save operation.

Transmission Congestion Rights - Market User Interface
 TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1527 | Welcome [Kim AO] Role(s): [READ_WRITE, Log Out ROLE_MP]

ARR Nominations TCR Bids/Offers Secondary Market Download Message

Home / Nomination

Market: Annual Allocation FAT Rr2 | Period: Jun_13 | Round: Round 1 | Go

Effective Dates: Start Date: 08/01/2013, End Date: 08/30/2013 | Nomination Window: Open Date: 08/25/2012, Close Date: 08/25/2012

Summary

	Round Cap	Round Nomination	Round Allocation
PTP-ON	567	567	398.4
PTP-OFF	567	567	398.4
NITS-OFF	204.8	178	129.4
NITS-ON	204.8	178	129.4

Round 1&2 Nomination Editor

Valid

Download Download Message

PTP NITS

Status	Entitlement MW	Candidate MW	Nominated MW	Allocated MW	Entitlement ID	Summary ID	Candidate ID	Asset Owner	So
VALID	Sort Ascending	4.0	12.0	12.0	306	298	677	Kim AO	HU
VALID	Sort Descending	50.0	75.0	0.0	154	232	562	Kim AO	Ge
VALID	Columns	0.0	30.0	0.0	334	238	175	Kim AO	Ge
VALID		0.0	30.0	0.0	621	239	412	Kim AO	Ge
VALID		0.0	30.0	0.0	333	238	298	Kim AO	Ge
VALID	100.0	100.0	50.0	0.0	697	209	420	Kim AO	Ge
VALID	60.0	60.0	30.0	0.0	129	225	249	Kim AO	Ge
VALID	50.0	50.0	25.0	0.0	634	288	168	Kim AO	Ge
VALID	60.0	60.0	30.0	0.0	157	215	187	Kim AO	Ge
VALID	70.0	70.0	35.0	0.0	467	194	79	Kim AO	Ge

Filter Options

Refresh

Page 2 of 2 | Refresh icon | Displaying records 21 - 30 of 30

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Figure 10 Action Icons on the Nomination Editor displays

6.3 Round 3 Nomination Editor

The Round 3 Nomination Editor differs significantly from the Round 1 & 2 nomination editor. In the Round 1& 2 editor, the user is presented with a list of Candidate ARR that are derived from the entitlements belonging to the Asset Owner. These Candidate ARRs inherit the characteristics (source, sink, time of use, period) of the entitlement and the user is only permitted to nominate from this entitlement subject to individual and global caps. In contrast, the Round 3 editor allows the user to create Candidate ARRs using sources and sinks (i.e. paths) of their own choice and nominating MW on them subject to global caps.

The Round 3 Nomination Editor is shown in Figure 11. The data is presented in tabular form with the following information:

- **Candidate ID** – A textbox that creates an ID for each of the nominations added and saved. This textbox cannot be edited.
- **Status** – A textbox that displays the current status of the nomination. The statuses can take on two values – Valid and Error. In case of invalid bids, the nomination row can be expanded by clicking the “plus” icon in the extreme left column. The expanded row will now display additional information about the status of the nomination.
- **Nominated MW** – MWs nominated by the Asset Owner in this round of the ARR Allocation.
- **Allocated MW** – MWs allocated for this Candidate ARR after the simultaneous feasibility analysis was executed.
- **Source** – A text box to denote the name of the source for a Candidate ARR. The data can be entered by selecting the record, then selecting the desired source name under the folder **Sources & Sinks** in the right central panel and clicking the “Set Source” button.
- **Sink** – A text box to denote the name of the sink for a Candidate ARR. The data can be entered by selecting the record, then selecting the desired sink name under the folder **Sources & Sinks** in the right central panel and clicking the “Set Sink” button.
- **Class** – A list box to select either peak (ON) or off-peak (OFF).
- **Asset Owner** – A text box to denote the name of the owner for a particular TCR. This data is automatically populated with the name of the **Asset Owner** for whom the nominations are being created.

- **Description (optional)**– An optional short description that a market participant may wish to associate with the nomination. It can be used to store tags or IDs that market participants use within their own systems.

Home / Nomination

Market: Annual Allocation 2014 | Period: Jun_14 | Round: Round 3 | Go

Effective Dates: Start Date: 06/01/2014, End Date: 06/30/2014 | Nomination Window: Open Date: 08/08/2012 17:44:52 CPT, Close Date: 10/31/2012 13:47:55 CPT

	Round Cap	Round Nomination	Round Allocation
NITS-OFF	312.1	0.0	0.0
PTP-OFF	731.3	0.0	0.0
PTP-ON	731.3	31	0.0
NITS-ON	312.1	0.0	0.0

Round 3 Nomination Editor

Valid

Add Remove Clear All Upload Save Download Download Message

PTP	NITS	Candidate ID	Status	Nominated MW	Allocated MW	Source	Sink	Class
		83001	VALID	20.0	0.0	LSE 3	LSE 6	ON
		75003	VALID	0.1	0.0	GenANA	GenBEL	ON
		75002	VALID	0.1	0.0	GenANA	GenBEL	ON
		75004	VALID	0.6	0.0	GenMOR #1	GenMOR #2	ON
		127001	VALID	0.1	0.0	GenEJB	LSE 1	ON
		118001	VALID	10.0	0.0	LSE 3	LSE 6	ON
		126001	VALID	0.1	0.0	GenONE	LSE 2	ON

Data

Set Source Set Sink

Sources & Sinks

- GenANA
- GenBEL
- GenDOS
- GenEJB
- GenJAN
- GenMOR #1
- GenMOR #2
- GenNUG
- GenONE
- GenRAL
- HUB 3 LOAD
- HUB 3 SOURCE
- LSE 1
- LSE 10
- LSE 11
- LSE 11 SOURCE
- LSE 2
- LSE 3
- LSE 4
- LSE 5
- LSE 6
- LSE 7
- LSE 8

Page 1 of 1 | Displaying records 1 - 7 of 7

Figure 11 Round 3 Nomination Editor

Immediately below the Upper Panel in the Nomination Editor, the user is presented with several functions on a widget bar as shown in Figure 12.

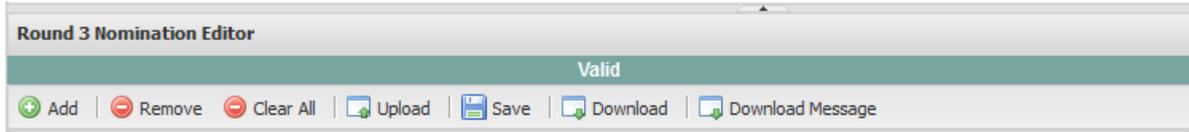


Figure 12 Round 3 Nomination Editor Functions

The following functions are available on this widget bar:

- **Add** – This button adds a single new nomination record to the nomination editor.
- **Remove** – This button deletes the selected set of nomination records from the nomination editor. Note that multiple rows can be selected by holding down the “Shift” key.
- **Clear All** - This button deletes all records from the nomination editor.
- **Upload** - This button allows the user to upload a csv formatted file of nominations to the nomination editor. A sample file containing nominations is shown below in Figure 13. Validation of the nominations is conducted during the upload process and a summary of errors is reported to the user on the screen. The errors are also available as a download report by clicking the “**Download Message**” button.

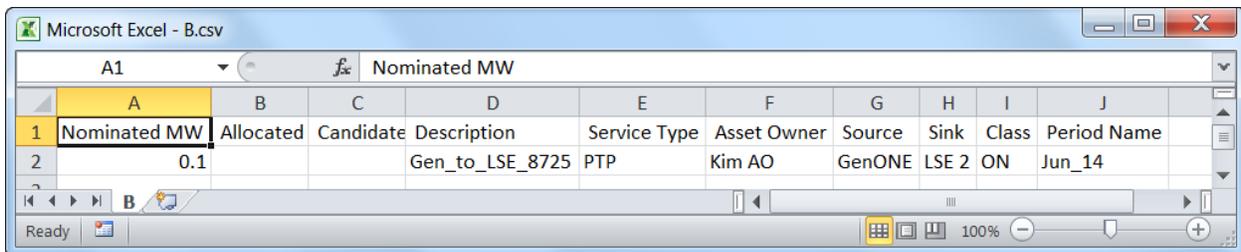


Figure 13 Round 3 Nomination File for Upload

- **Save** - This button instructs the system to save the nomination records on the nomination editor. Validation of the nomination set is conducted during the save operation and a summary of errors is immediately reported to the user on the screen.
- **Download** - This button permits the user to download a valid set of nominations from the nomination editor. The content of the download file is shown below in Figure 14.

	A	B	C	D	E	F	G	H	I	J
1	Nominated MW	Allocated MW	Candidate ID	Description	Service Type	Asset Owner	Source	Sink	Class	Period Name
2	0.1		126001	1.23457E+48	PTP	Kim AO	GenONE	LSE 2	ON	Jun_14
3	10		118001	LSE	PTP	Kim AO	LSE 3	LSE 6	ON	Jun_14
4	0.1		127001	GenEJB	PTP	Kim AO	GenEJB	LSE 1	ON	Jun_14
5	0.6		75004	GenMOR	PTP	Kim AO	GenMOR	GenMOR	ON	Jun_14
6	0.1		75002	75002	PTP	Kim AO	GenANA	GenBEL	ON	Jun_14
7	0.1		75003	75003	PTP	Kim AO	GenANA	GenBEL	ON	Jun_14
8	20		83001	83001	PTP	Kim AO	LSE 3	LSE 6	ON	Jun_14

Figure 14 Downloaded Round 3 Nomination File

- **Download Message** - This button downloads the error messages discovered during the save operation.

7. Managing TCR Portfolios

7.1 Overview of a TCR Portfolio

One of the important functions of the TCR interface is to manage TCR portfolios. A TCR portfolio is an efficient and effective package to manage TCR bids and Self-converted ARR. Each valid TCR portfolio consists of a set of valid PTP TCR buy bids/sell offers and Self-converted ARRs. All the Sources and Sinks specified in PTP TCRs are defined by SPP.

7.2 Valid TCR Portfolio

A valid TCR portfolio should have a name and should have the following data fields:

- **Bid ID:** ID of the TCR Bid
- **TCR ID:** ID of the TCR being sold (Monthly only)
- **Asset Owner:** The name of the Asset Owner who wants to buy or sell the PTP TCR
- **Source:** The name of the Source for a PTP TCR buy bid/sell offer
- **Sink:** The name of the Sink for a PTP TCR buy bid/sell offer
- **OPT/OBL:** HEDGE Type of the TCR – Obligation (OBL) or Option (OPT)
- **Class:** Peak market (ON) or off-peak (OFF) time of use indicator
- **Type:** Buy bid (BUY) or sell offer (SELL)
- **Period:** Name of the period for which the portfolio is being submitted
- **Bid Curve (MW, \$/MW):** Made up of a range (2-10) of bid segments. The curves are assumed to be piecewise linear. In addition, buy bid curves must be *monotonically non-increasing* with respect to **MW**. Sell offer bid curves must be *monotonically non-decreasing* with respect to **MW**. A sample buy bid curve is shown in **Figure 15**. A sample sell offer curve is shown in **Figure 16**. The user should note that the first **MW** segment always begins at 0 MW and that the last **MW** segment specified implies the maximum MW amount requested to buy or offered for sale.

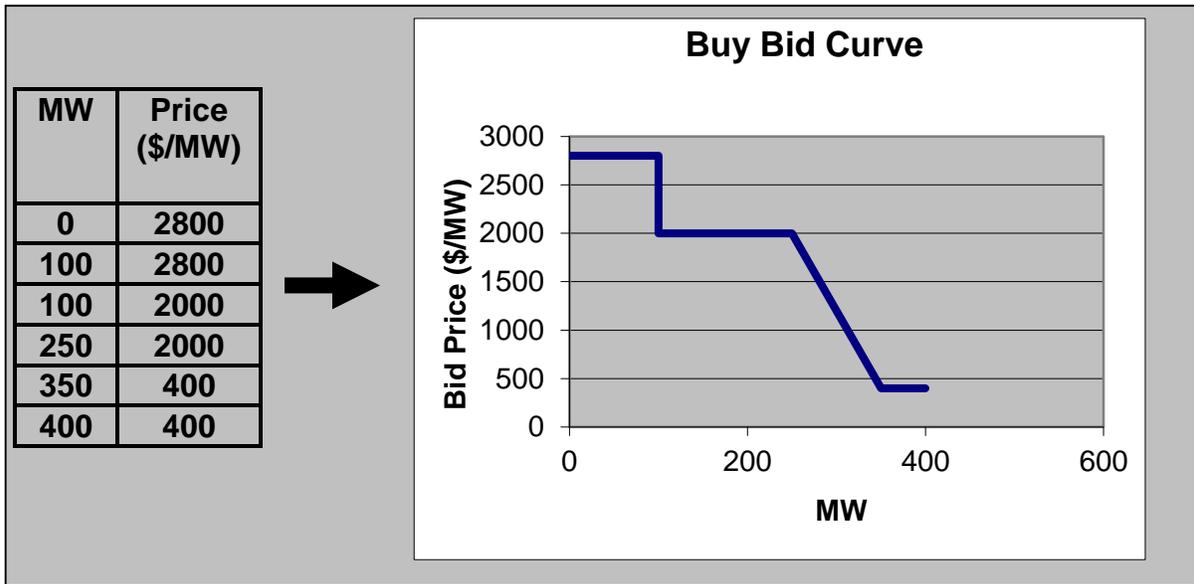


Figure 15 Sample Buy Bid Curve

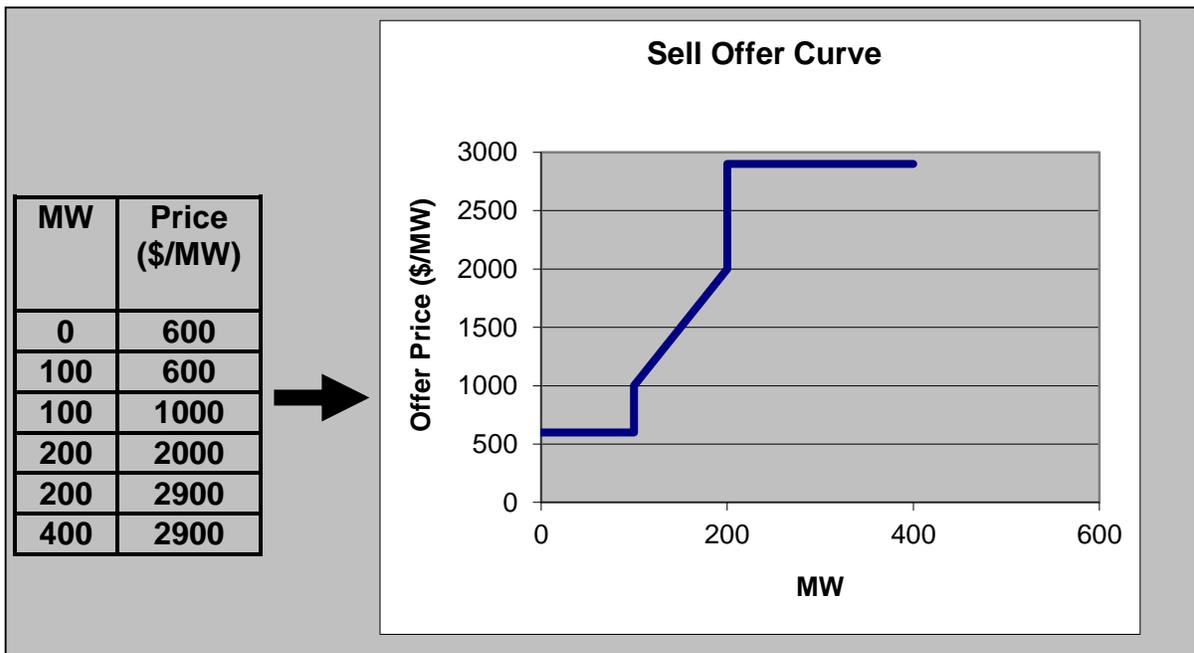


Figure 16 Sample Sell Offer Curve

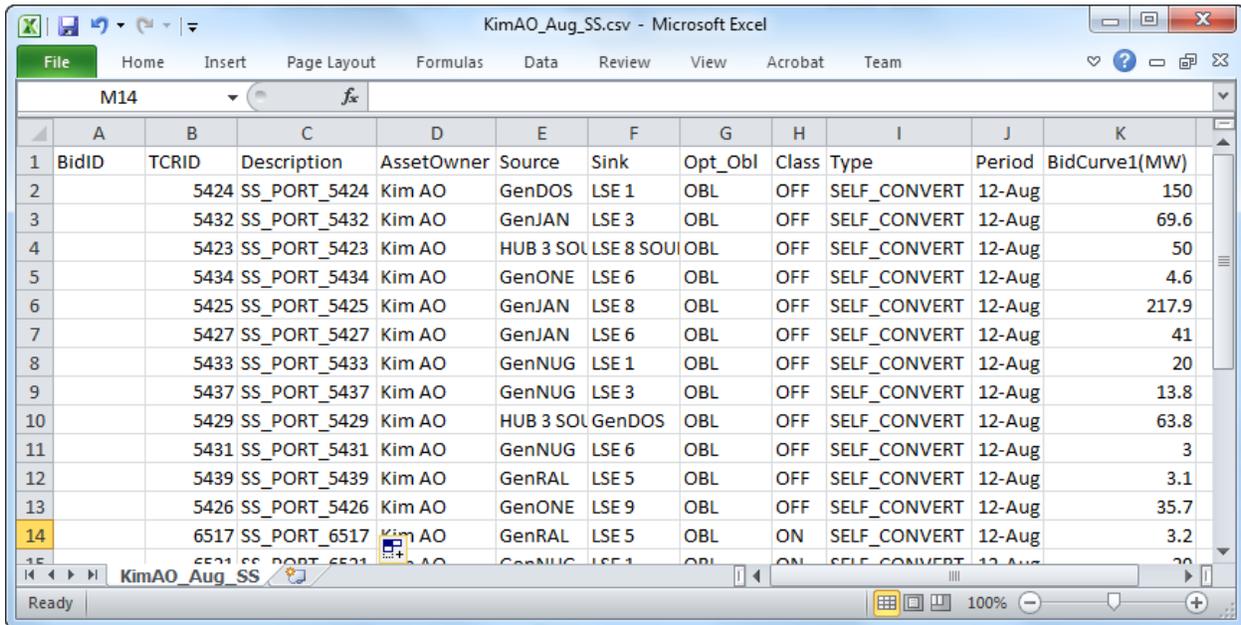
A sample buy bid portfolio file is shown in Figure 17. A sample sell offer portfolio file is shown in Figure 18. A sample self-convert portfolio file is shown in Figure 19.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
	Bid ID	TCR ID	Description	Asset Owner	Source	Sink	OPT/OBL	Class	Type	Period	Bid Curve	Bid Curve[i](\$/MW)		
1	66019			Kim AO	GenONE	LSE 5	OBL	ON	BUY	Jul_13	0	0	2	0
2	66020			Kim AO	GenDOS	LSE 11	OBL	ON	BUY	Jul_13	0	0	2	0
3	66026			Kim AO	GenMOR #1	LSE 10	OBL	ON	BUY	Jul_13	0	0	1	0
4	66028			Kim AO	GenMOR #1	LSE 10	OBL	ON	BUY	Jul_13	0	0	2	0
5	66027			Kim AO	GenMOR #1	LSE 10	OBL	ON	BUY	Jul_13	0	0	1	0
6	66029			Kim AO	GenMOR #1	LSE 10	OBL	ON	BUY	Jul_13	0	0	2	0
7	66017			Kim AO	GenDOS	LSE 11	OBL	ON	BUY	Jul_13	0	0	3	0
8	66018			Kim AO	GenDOS	LSE 11	OBL	ON	BUY	Jul_13	0	0	3	0
9	134001			Kim AO	GenBEL	GenEJB	OBL	ON	BUY	Jul_13	0	3	6	3

Figure 17 Buy Bid Portfolio in CSV Format

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
	BidID	TCRID	Description	AssetOw	Source	Sink	Opt_Obl	Class	Type	Period	BidCurve	BidCurve[MW		
1	28036	SELL_28036		Kim AO	GenJAN	LSE 8	OBL	ON	SELL	12-Jul	0	-1000	150	-999.99
2	28037	SELL_28037		Kim AO	GenJAN	LSE 6	OBL	ON	SELL	12-Jul	0	-1000	5.1	-999.99
3	28038	SELL_28038		Kim AO	GenJAN	LSE 3	OBL	ON	SELL	12-Jul	0	-1000	8.1	-999.99
4	28039	SELL_28039		Kim AO	GenNUG	LSE 3	OBL	ON	SELL	12-Jul	0	-1000	5	-999.99
5	28041	SELL_28041		Kim AO	GenDOS	LSE 9	OBL	ON	SELL	12-Jul	0	-1000	6	-999.99
6	28043	SELL_28043		Kim AO	GenDOS	LSE 9	OBL	ON	SELL	12-Jul	0	-1000	5	-999.99
7	28044	SELL_28044		Kim AO	GenDOS	LSE 5	OBL	ON	SELL	12-Jul	0	-1000	9.3	-999.99
8	28045	SELL_28045		Kim AO	GenNUG	LSE 6	OBL	ON	SELL	12-Jul	0	-1000	6	-999.99
9	28046	SELL_28046		Kim AO	GenDOS	LSE 5	OBL	ON	SELL	12-Jul	0	-1000	5	-999.99
10	28047	SELL_28047		Kim AO	GenDOS	LSE 3	OBL	ON	SELL	12-Jul	0	-1000	5.4	-999.99
11	28048	SELL_28048		Kim AO	GenDOS	LSE 1	OBL	ON	SELL	12-Jul	0	-1000	5	-999.99
12	28050	SELL_28050		Kim AO	GenRAL	LSE 5	OBL	ON	SELL	12-Jul	0	-1000	8.1	-999.99
13	28051	SELL_28051		Kim AO	GenONE	LSE 6	OBL	ON	SELL	12-Jul	0	-1000	5	-999.99
14	28121	SELL_28121		Kim AO	GenANA	LSE 5	OBL	OFF	SELL	12-Jul	0	-1000	37.7	-999.99
15	28122	SELL_28122		Kim AO	GenJAN	LSE 3	OBL	OFF	SELL	12-Jul	0	-1000	8.1	-999.99

Figure 18 Sell Offer Portfolio in CSV Format



	A	B	C	D	E	F	G	H	I	J	K
	BidID	TCRID	Description	AssetOwner	Source	Sink	Opt_Obl	Class	Type	Period	BidCurve1(MW)
2		5424	SS_PORT_5424	Kim AO	GenDOS	LSE 1	OBL	OFF	SELF_CONVERT	12-Aug	150
3		5432	SS_PORT_5432	Kim AO	GenJAN	LSE 3	OBL	OFF	SELF_CONVERT	12-Aug	69.6
4		5423	SS_PORT_5423	Kim AO	HUB 3 SOL	LSE 8 SOU	OBL	OFF	SELF_CONVERT	12-Aug	50
5		5434	SS_PORT_5434	Kim AO	GenONE	LSE 6	OBL	OFF	SELF_CONVERT	12-Aug	4.6
6		5425	SS_PORT_5425	Kim AO	GenJAN	LSE 8	OBL	OFF	SELF_CONVERT	12-Aug	217.9
7		5427	SS_PORT_5427	Kim AO	GenJAN	LSE 6	OBL	OFF	SELF_CONVERT	12-Aug	41
8		5433	SS_PORT_5433	Kim AO	GenNUG	LSE 1	OBL	OFF	SELF_CONVERT	12-Aug	20
9		5437	SS_PORT_5437	Kim AO	GenNUG	LSE 3	OBL	OFF	SELF_CONVERT	12-Aug	13.8
10		5429	SS_PORT_5429	Kim AO	HUB 3 SOL	GenDOS	OBL	OFF	SELF_CONVERT	12-Aug	63.8
11		5431	SS_PORT_5431	Kim AO	GenNUG	LSE 6	OBL	OFF	SELF_CONVERT	12-Aug	3
12		5439	SS_PORT_5439	Kim AO	GenRAL	LSE 5	OBL	OFF	SELF_CONVERT	12-Aug	3.1
13		5426	SS_PORT_5426	Kim AO	GenONE	LSE 9	OBL	OFF	SELF_CONVERT	12-Aug	35.7
14		6517	SS_PORT_6517	Kim AO	GenRAL	LSE 5	OBL	ON	SELF_CONVERT	12-Aug	3.2
15		6521	SS_PORT_6521	Kim AO	GenNUG	LSE 1	OBL	ON	SELF_CONVERT	12-Aug	20

Figure 19 Self-Convert Portfolio in CSV Format

7.3 Managing Auction Portfolios on the Private TCR Interface

The Portfolio List web pages for “submit” and “view” roles of users are shown in Figure 20 and Figure 21, respectively.



Transmission Congestion Rights - Market User Interface

TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1276 | Welcome [AO Joann3] Role(s): [READ_WRITE, ROLE_MP] [Log Out](#)

ARR Nominations
TCR Bids/Offers
Secondary Market
Download ▾
Message ▾

[Home](#) / Auction Portfolio List

Market:

Period:

Round:

Effective Dates		Bidding Window	
Start Date	End Date	Open Date	Close Date
06/01/2013	06/30/2013	06/13/2012 21:00:12 CPT	06/14/2012 10:53:40 CPT

Portfolio Name	Date Modified	Download	Status	Submit	Retract	Delete	Msg
Testcase	06/11/2012 14:24:54 CPT	CSV	New			<input type="button" value="Delete"/>	msg
first	06/05/2012 10:56:00 CPT	CSV	Approved				msg

Showing 1 to 2 of 2 entries

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Figure 20 Portfolio List – Submit Role (READ_WRITE)

Transmission Congestion Rights - Market User Interface

TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1276 | Welcome [AO Joann3] Role(s): [READ_ONLY, ROLE_MP] [Log Out](#)

ARR Nominations
TCR Bids/Offers
Secondary Market
Download ▾
Message ▾

[Home](#) / Auction Portfolio List

Market: ▾

Period: ▾

Round: ▾

Effective Dates		Bidding Window	
Start Date	End Date	Open Date	Close Date
06/01/2013	06/30/2013	06/13/2012 21:00:12 CPT	06/14/2012 10:53:40 CPT

Portfolio Name	Date Modified	Download	Status	Submit	Retract	Delete	Msg
Testcase	06/11/2012 14:24:54 CPT	CSV	New				msg
first	06/05/2012 10:56:00 CPT	CSV	Approved				msg

Showing 1 to 2 of 2 entries

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Figure 21 Portfolio List – View Role (READ_ONLY)

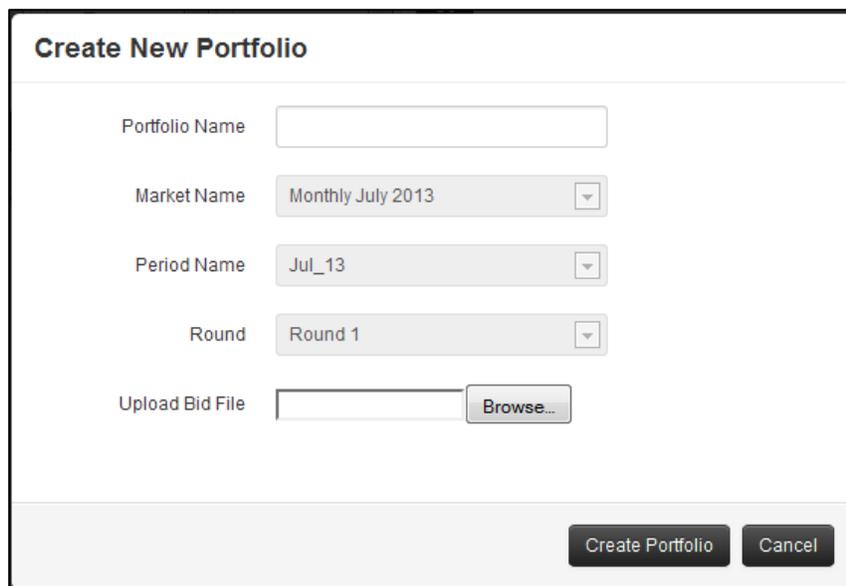
The following subsections describe the functions of managing portfolios on the TCR interface. If the functions are unique to the “submitter (READ_WRITE)” type of user, they will be pointed out explicitly.

7.3.1 View Existing Portfolios

- Select the **TCR Bids/Offers** tab.
- Select the desired Market, Period and Round using the drop down menus and then click Go.
- Click the portfolio’s name, which is in the column “**Portfolio Name**” shown in Figure 20 and Figure 21. Then the web page **Portfolio Editor** will pop up to display the detailed TCR bid information. The **Portfolio Editor** will be covered in detail later in next chapter.

7.3.2 Create Auction Portfolios by File Upload

- Click the command button “**Add New**” to create an empty portfolio or to upload a CSV format portfolio file from the local computer. The user is presented with a pop-up window as shown in Figure 22.



The screenshot shows a 'Create New Portfolio' dialog box with the following fields and controls:

- Portfolio Name:** A text input field.
- Market Name:** A dropdown menu with 'Monthly July 2013' selected.
- Period Name:** A dropdown menu with 'Jul_13' selected.
- Round:** A dropdown menu with 'Round 1' selected.
- Upload Bid File:** A text input field followed by a 'Browse...' button.
- Buttons:** 'Create Portfolio' and 'Cancel' buttons at the bottom right.

Figure 22 Create New Portfolio

- To create an empty portfolio, enter a valid Portfolio Name and click “Create Portfolio”.
- To upload a portfolio, enter a valid Portfolio Name, browse for the file and then click “Create Portfolio”. A sample CSV file is shown in Figure 17.

- A Portfolio Name is a required field when uploading a Portfolio. Without a name, the portfolio will be rejected when uploaded. The Portfolio Description is optional.
- Finally this newly created portfolio appears as a new row in the tabular form in the page **Portfolio List**.

7.3.3 Download Portfolios

- Select the CSV link in the “**Download**” Column in the page **Portfolio List**.
- The new file is saved in the CSV format with the same name as the portfolio.

7.3.4 Delete Portfolios

- Click the command button “**Delete**” to delete the portfolio that is no longer required.
- The portfolio designated for deletion will be removed from the **Portfolio List**.
- Deletion of a portfolio that has been submitted to an auction in the past, does not remove the portfolio from the auction that it was submitted to.

7.3.5 Submit Portfolios to Auction

This function is only available to the user with a “submit” (READ_WRITE) role. One or more portfolios can be submitted to an upcoming TCR auction only during SPP’s TCR auction open bidding window as shown in Figure 23. After the bidding window closes, portfolios cannot be submitted. Asset Owners may submit more than one portfolio to an auction. ***Note: A given portfolio may contain only bids and/or offers associated with that Asset Owner and cannot contain bids/offers of multiple Asset Owners associated with a Market Participant.*** Presently, SPP limits the number of an Asset Owner’s bids/offers to 2000, total, for each auction, period and time-of-use. The number of Self-converting ARRs does not count toward the bid limit.

Transmission Congestion Rights - Market User Interface

TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1290 | Welcome [Kim AO] Role(s): [READ_WRITE, Log Out ROLE_MP]

ARR Nominations
TCR Bids/Offers
Secondary Market
Download ▾
Message ▾

[Home](#) / [Auction Portfolio List](#)

Market:

Period:

Round:

Effective Dates		Bidding Window	
Start Date	End Date	Open Date	Close Date
06/01/2013	06/30/2013	06/18/2012 01:00:00 CPT	06/20/2012 02:00:00 CPT

Portfolio Name	Date Modified	Download	Status	Submit	Retract	Delete	Msg
the fail file	06/18/2012 17:34:54 CPT	CSV	Valid	<input type="button" value="Submit"/>		<input type="button" value="Delete"/>	msg
Buy Bids	06/18/2012 17:32:14 CPT	CSV	Valid	<input type="button" value="Submit"/>		<input type="button" value="Delete"/>	msg
Jun13	06/18/2012 17:29:22 CPT	CSV	Valid	<input type="button" value="Submit"/>		<input type="button" value="Delete"/>	msg

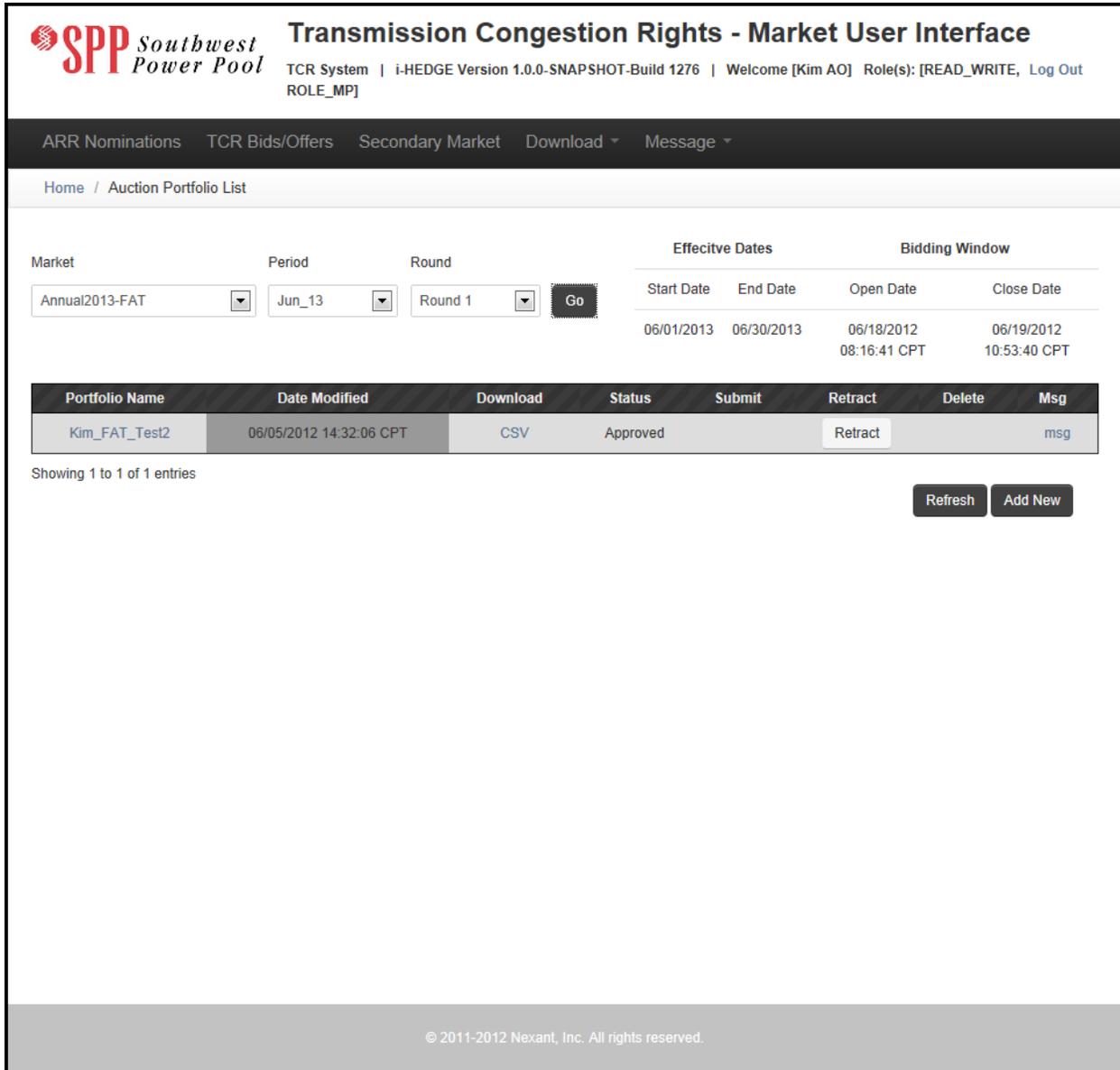
Showing 1 to 3 of 3 entries

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Figure 23 Portfolio List – Submit to Auction Button

- To edit the portfolio – Please note that the **Portfolio Editor** will be covered in detail later in next chapter.
- To submit a portfolio, click the “**Submit**” button as shown in Figure 23. The selected portfolio will be submitted to SPP TCR auction as shown in Figure 24, and the corresponding “**Retract**” link will become active.
- To delete a portfolio, click the “**Delete**” button as shown in Figure 23. While the auction bidding window is open, a submitted portfolio cannot be deleted, as

evidenced by the absence of the “Delete” button in Figure 24. Such a portfolio can be deleted only after it has been retracted from an auction.



Transmission Congestion Rights - Market User Interface
 TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1276 | Welcome [Kim AO] Role(s): [READ_WRITE, Log Out ROLE_MPJ]

ARR Nominations TCR Bids/Offers Secondary Market Download Message

Home / Auction Portfolio List

Market: Annual2013-FAT | Period: Jun_13 | Round: Round 1 | Go

Effective Dates		Bidding Window	
Start Date	End Date	Open Date	Close Date
06/01/2013	06/30/2013	06/18/2012 08:16:41 CPT	06/19/2012 10:53:40 CPT

Portfolio Name	Date Modified	Download	Status	Submit	Retract	Delete	Msg
Kim_FAT_Test2	06/05/2012 14:32:06 CPT	CSV	Approved		Retract		msg

Showing 1 to 1 of 1 entries

Refresh Add New

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Figure 24 Portfolio List – Retract Button

7.3.6 Retract Portfolios from Auction

This function is also only available to a user with “submit” role. The portfolios can be retracted from an upcoming TCR auction only during SPP TCR open bidding window. After this bidding window closes, portfolios cannot be removed. A portfolio must have been submitted first, to be eligible to be removed.

- For the selected portfolio click the “**Retract**” button in the table column “**Retract**” shown in Figure 24.
- The retracted portfolio will be removed from the list of submitted TCR portfolios and the “**Submit**” and “**Delete**” link will become active again as shown in Figure 25. Please note that this action does not remove the portfolio from the **Portfolio List**. Furthermore, the portfolio will stay targeted to that particular auction.



Transmission Congestion Rights - Market User Interface

TCR System | I-HEDGE Version 1.0.0-SNAPSHOT-Build 1290 | Welcome [Kim AO] Role(s): [READ_WRITE, Log Out ROLE_MP]

ARR Nominations
TCR Bids/Offers
Secondary Market
Download ▾
Message ▾

Home / Auction Portfolio List

Market	Period	Round	Effective Dates		Bidding Window		
Annual Auction FAT r2 ▾	Jun_13 ▾	Round 1 ▾	Go	Start Date	End Date	Open Date	Close Date
				06/01/2013	06/30/2013	06/18/2012 01:00:00 CPT	06/20/2012 02:00:00 CPT

Portfolio Name	Date Modified	Download	Status	Submit	Retract	Delete	Msg
the fail file	06/18/2012 17:34:54 CPT	CSV	Valid	Submit		Delete	msg
Buy Bids	06/18/2012 17:32:14 CPT	CSV	Valid	Submit		Delete	msg
Jun13	06/18/2012 17:29:22 CPT	CSV	Valid	Submit		Delete	msg

Showing 1 to 3 of 3 entries

Refresh
Add New

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Figure 25 Portfolio List – After Retraction from an Auction

7.3.7 Auction Portfolio Statuses

The auction portfolio list page lists the portfolios along with their statuses. The following statuses are supported by the portfolio list page:

- **New** An empty portfolio without any bids/offers in it.
- **Valid** A portfolio with a valid set of bids/offers. The portfolio is not in a “Submitted” state with respect to the auction.
- **Invalid** A portfolio with at least one invalid bid/offer in it.
- **Approved** A portfolio with a valid set of bids/offers that has passed the credit check. The portfolio is in a “Submitted” state with respect to the auction.
- **Disapproved** A portfolio with a valid set of bids/offers that has not passed the credit check. The portfolio is not in a “Submitted” state with respect to the auction.

The general flow of tasks in managing portfolios is shown in Figure 26.

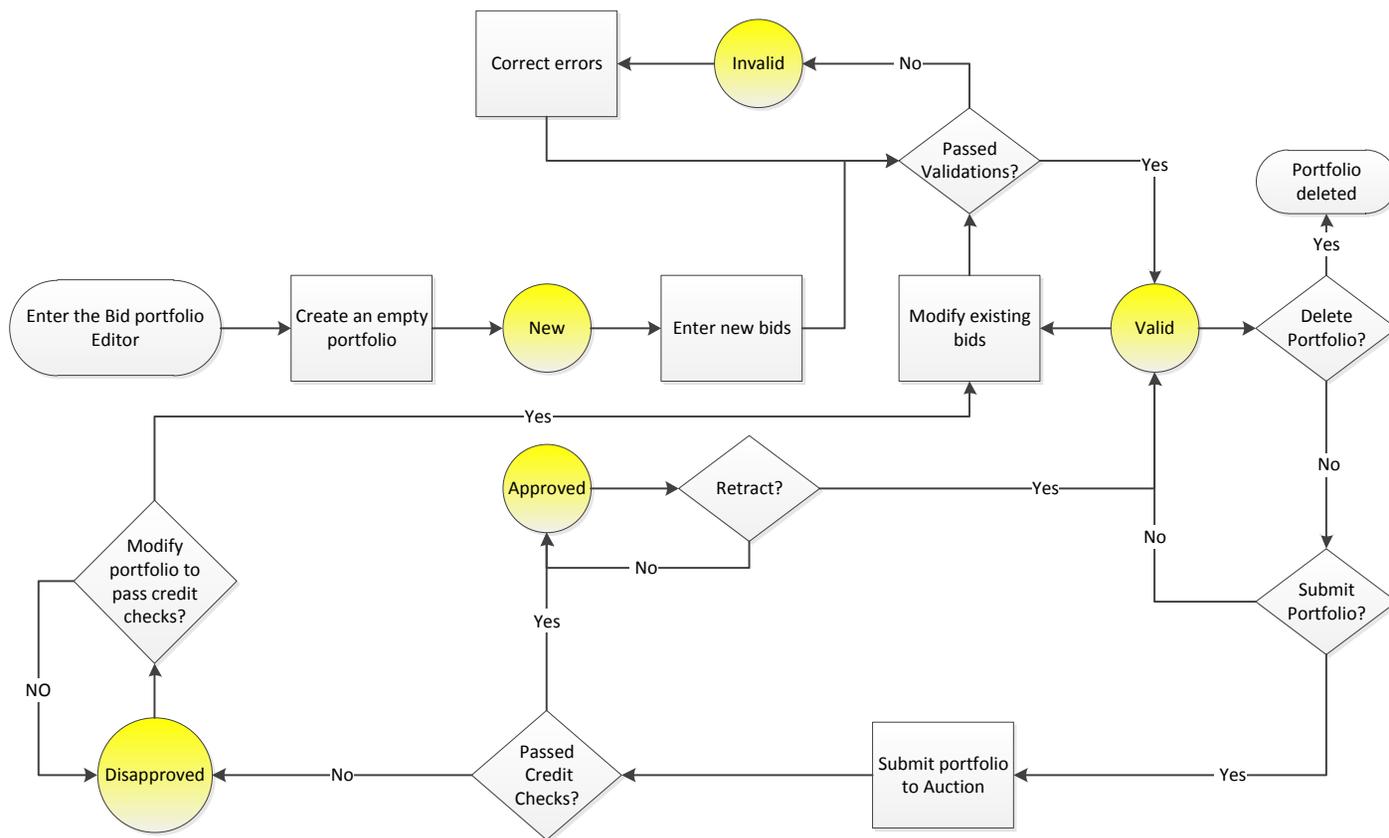


Figure 26 Managing Portfolios

8. Managing TCR Bids

8.1 Overview of TCR Bids

The TCR auction supports the following type of TCR bid/offers:

- **Point-to-Point TCR (PTP TCR)** – submitted by Asset Owners who wish to purchase or sell a PTP TCR in the auction from a valid source to a valid sink.

A user can submit as many buy bids, as he or she desires, subject to SPP limitations. Similarly a user can submit as many sell offers as he or she desires, provided the user owns that TCR before selling, again, subject to SPP limitations

8.2 Valid TCR Bids

A valid TCR bid consists of the following information:

- **ID** – A field containing the ID for each of the Bids added and saved. This textbox cannot be edited.
- **ARR ID** – ID number of the ARR for self-converting ARRs (Applicable to Self-Converting tab only).
- **TCR ID** – ID number of the TCR for sell offers (Applicable to Sell Offer tab only).
- **Asset Owner** – The name of the Asset Owner who wishes to sell or buy the TCR or self-convert the ARR.
- **Source** – The name of the source for a TCR.
- **Sink** – The name of the sink for a TCR.
- **Bid Curve** – The bid curve of the TCR which allows up to 10 segments.
- **Class** – Peak (ON) or off-peak (OFF) case.

8.3 Portfolio Editor

The Auction **Portfolio Editor** is the location where Asset Owners manage their auction portfolios, as shown in Figure 27.

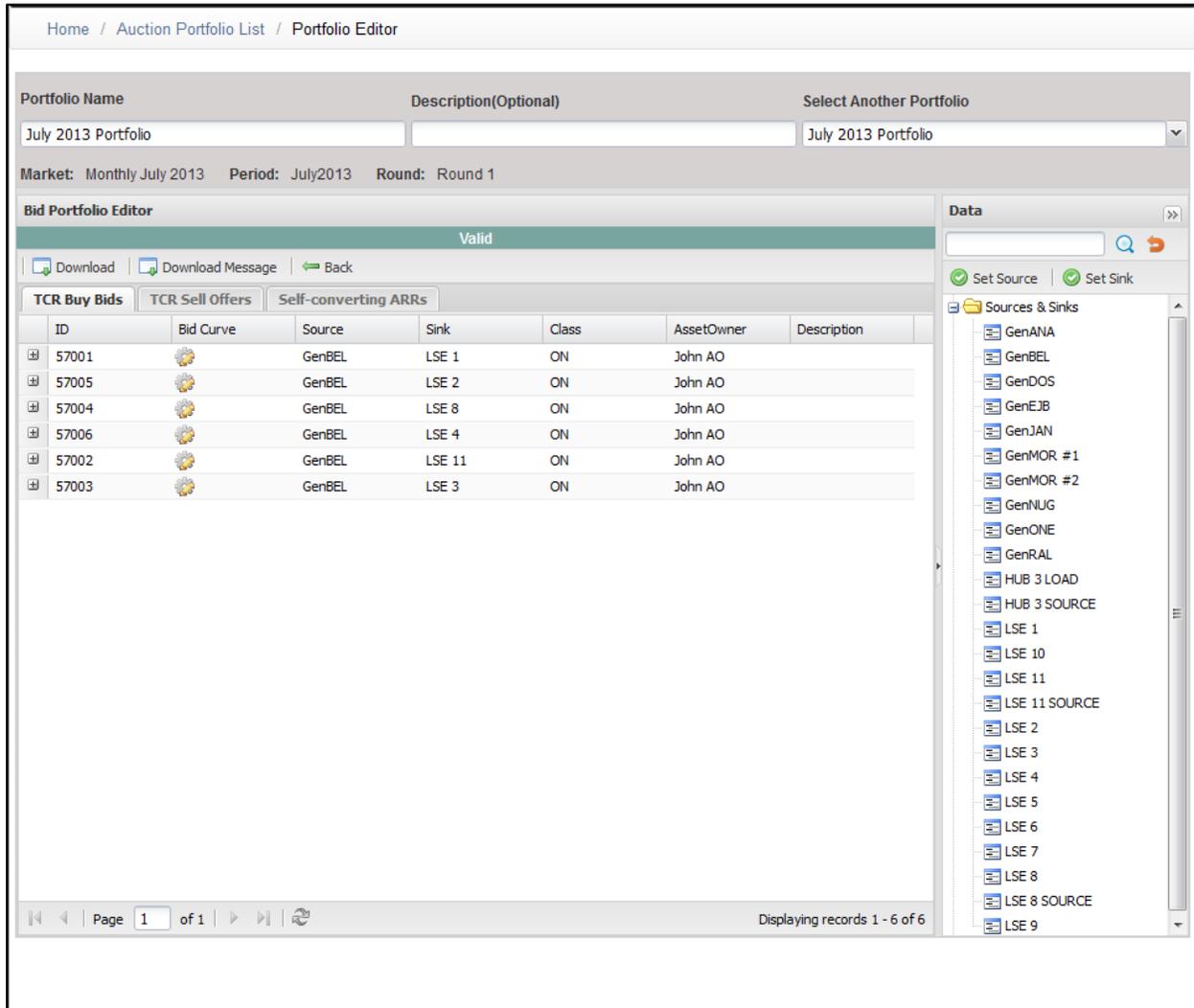


Figure 27 Portfolio Editor

From the **Portfolio Editor** page, the MP can navigate to the **TCR Buy Bids**, **TCR Sell Offers** or the **Self Converting ARRs** tabs. The **Portfolio Editor** page contains four display panels: the upper panel, the left central panel, the right central panel, and the bottom panel. In each of the four panels contains tool box(es) provided for editing purpose. All of the panels and their associated tool box(es) are described as below.

- **Upper Panel** – describes the global properties of the portfolio and contains the following tool boxes:
 - **Portfolio Name** – A text box to view or input the name of the portfolio currently being managed.

- **Description (optional)** – A text box to view or input the description for the current portfolio.
- **Select Another Portfolio** – A list box with all existing portfolios listed for selection.
- **Left Central Panel** – where the Asset Owner navigates to the **TCR Buy Bids**, **TCR Sell Offers** or the **Self-Converting ARR** Editor, a tabular form to edit required data fields for the bids and contains the following tool boxes:
 - **ID** – A textbox that creates an ID for each of the Bids added and saved. This textbox cannot be edited.
 - **Bid Curve** – A pop up form to input the segments of the piecewise linear bid curve for the current TCR. Clicking on the icon in this column pops up a bid curve form shown in Figure 28.

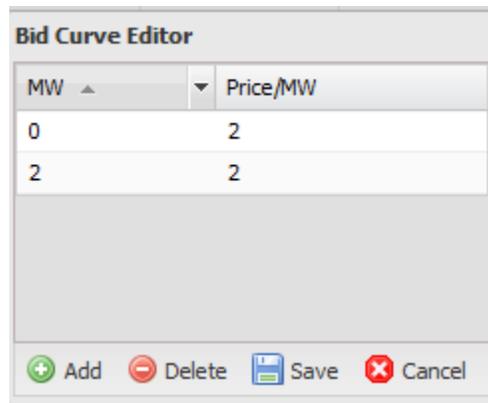


Figure 28 Bid Curve Pop-up Window

The left column and the right column of the bid curve table are the MW amount and the price in \$/MW of the segment respectively. Note that the first segment for a buy bid as well as a sell offer is always at 0 MW. Under the bid curve table there are four command buttons:

ADD: Add another segment in the bid curve table.

DELETE: Delete the selected segments from the bid curve table.

SAVE: Save all inputted bid curve segments.

CANCEL: Cancel all actions since the last saving operation.

- **Source** – A text box to denote the name of the source for a TCR. The data can be entered by selecting the record, then selecting the desired source name under the folder **Sources & Sinks** in the right central panel and clicking the “Set Source” button.
- **Sink** – A text box to denote the name of the sink for a TCR. The data can be entered by selecting the record, then selecting the desired sink name under the folder **Sources & Sinks** in the right central panel and clicking the “Set Sink” button.
- **Class** – A list box to select either peak (ON) or off-peak (OFF).
- **Asset Owner** – A text box to denote the name of the owner for a particular TCR. This data is automatically populated with the name of the **Asset Owner** for whom the bid portfolio is being created.
- **Description** – An optional short description that a market participant may wish to associate with the bid. It can be used to store tags or IDs that market participants use within their own systems.

Immediately below the Upper Panel in the Bid Portfolio Editor, the user is presented with several functions on the following widget bar. The following functions are available on this widget bar:

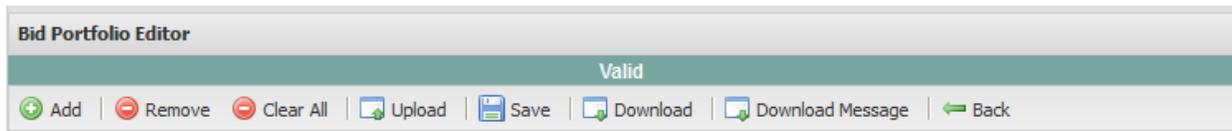


Figure 29 Bid Portfolio Editor Functions

- **Add** – This button adds a single new bid record to the portfolio editor.
- **Remove -** – This button deletes the selected set of bid record from the portfolio editor. Note that multiple rows can be selected by holding down the “Shift” key.
- **Clear All** - This button deletes all bid records from the portfolio editor.
- **Upload** - This button allows the user to upload a csv formatted file of bids to the portfolio editor. A sample file containing buy bids is shown below in Figure 30. Validation of the bid set is conducted during the upload and errors are reported to the user on the screen. The errors are also available as a download report by clicking the “**Download Message**” button.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Bid ID	TCR ID	Description	Asset Owner	Source	Sink	OPT/OBL	Class	Type	Period	Bid Curve[i](MW)	Bid Curve[i](\$/MW)		
2				John AO	GenANA	GenBEL	OBL	ON	BUY	Jul_13	0	1	1	1
3				John AO	GenDOS	GenJAN	OBL	ON	BUY	Jul_13	0	2	2	2

Figure 30 Bid Portfolio File for Upload

- **Save** - This button instructs the system to save the bid records on the portfolio editor. Validation of the bid set is conducted during the save operation and errors are immediately reported to the user on the screen.
- **Download** - This button permits the user to download a valid set of bids from the portfolio editor. The content of the download file is shown below in Figure 31.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Bid ID	TCR ID	Description	Asset Owner	Source	Sink	OPT/OBL	Class	Type	Period	Bid Curve[i](MW)	Bid Curve[i](\$/MW)		
2	140006			John AO	GenANA	GenBEL	OBL	ON	BUY	Jul_13	0		1	1
3	140005			John AO	GenDOS	GenJAN	OBL	ON	BUY	Jul_13	0		2	2

Figure 31 Downloaded Bid Portfolio File

- **Download Message** - This button downloads the error messages discovered during the save operation.
- **Back** – This button allows the user to navigate back to the bid portfolio list page.
- **Right Central Panel** – a display tree that contains the following TCR information:
 - **Static Data**
 - **Sources/Sinks** – The folder contains all valid names of PTP TCR sources and sinks.

8.4 Managing TCR Bids with the Portfolio Editor

Clicking on the **TCR Buy Bids** tab on the **Portfolio Editor** page brings up the **TCR Editor** panel. This panel is used to manage TCR auction bids. The following subsections give the description of those functions performed by TCR users in **Portfolio Editor**.

8.4.1 View Existing Portfolios

- From **Portfolio Editor** select one of the existing portfolios from “**Select Another Portfolio**” list box. Then all the bids in this selected portfolio will be loaded in the bid editor table.

8.4.2 Add TCR Buy Bids

- Click “**ADD**” button in **Portfolio Editor**.
- A new row will appear in the bid table and ready to be edited.
- Fill all the necessary data fields according to different TCR types.

As mentioned in the previous section some fields (i.e. **Asset Owner, Source, Sink**) are inputted by setting the appropriate item under the appropriate folder (i.e. **Asset Owner, Source/Sinks**) from the right central panel.

8.4.3 Add TCR Sell Offers

- Click “**ADD**” button in **Portfolio Editor**.
- A new row will appear in the bid table and ready to be edited. Select this row for assignment of the TCR to be sold.
- From the right panel, select the TCR from the list of TCRs in **Existing TCRs** folders and click the “Set TCR” button to associate the TCR with the new row in the left panel.
- Modify the bid curve (MW, \$/MW pairs). Note that the last MW breakpoint specified implies the maximum MW amount offered for sale.
- Please note that the user can get more information on an existing TCR by double-clicking on the individual TCR under the Existing TCR folders. The pop-up screen shows several attributes of the TCR as shown in Figure 32.



Figure 32 Existing TCR

8.4.4 Modify TCR Bids

- Find the TCR bids to be modified on the screen.
- Modify the desired data fields using the same procedures described previously.
- Repeat the above two steps to modify the bids as many as you wish.
- Click **“SAVE”** button in the bottom panel if necessary to save the updated bids of the portfolio in the database.

8.4.5 Delete TCR Bids

- Find the bids you wish to delete and highlight them.
- Click the **“DELETE”** button in the bottom panel to delete those highlighted bids from the portfolio.

8.4.6 Save TCR Bids in the Portfolio

- Click the **“SAVE”** button in the bottom panel.
- All the bids in the current portfolio are saved in the database.

8.5 Managing ARR Bids

The **Self-Converting ARRs** panel is used to Self-convert ARRs into the TCR Auction. Clicking on the **Self-Converting ARRs** tab on the **Portfolio Editor** page brings up the **Self-Converting ARRs** panel. This is the only panel used to manage ARR auction submissions.

8.5.1 View Existing ARR Portfolios

Figure 33 shows the ARR Editor. It comprises two panels:

- **Left Central Panel** – a tabular form to edit only the MW data field for the ARR Self-converts and contains the following tool boxes:
 - **Bid ID** – A textbox that creates an ID for each of the Bids added and saved. This textbox cannot be edited.
 - **ARR ID** – a textbox that holds the ARR ID for each of the ARRs being Self-converted. This textbox cannot be edited and is automatically entered when selecting the desired ARR from the “Existing ARRs” folder in the right central panel and then clicking the “Set ARR” button.
 - **MW** – A text box to input the MW to include in the Self-convert. This field is automatically entered to the maximum MW of the ARR when selecting and setting an ARR from the “Existing ARRs” folder in the right central panel. The user can modify this value.
 - **Source** – A text box to input the name of the source for a TCR. The data can be entered by selecting and setting the correct source name under the folder **Sources/Sinks** in the right central panel.
 - **Sink** – A text box to input the name of the sink for a TCR. The data can be entered by selecting and setting the correct sink name under the folder **Sources/Sinks** in the right central panel.
 - **Class** – A list box to select either peak (PEAK) or off-peak (OFF-PEAK) and is automatically entered when selecting and setting the ARR from the “Existing ARRs” folder in the right central panel.
 - **Hedge Type** – A list box to select obligation (OBL) for a PTP TCR and is automatically entered when selecting and setting the ARR from the “Existing ARRs” folder in the right central panel.

- **Asset Owner** – A text box to input the name of the owner for a particular TCR. The data can be entered by selecting and setting the correct item under the folder **Asset Owner** in the right central panel.
- ***Right Central Panel*** – a display tree that contains the following TCR information:
 - **Existing ARRs** – This is a list of all the TCRs held by the Asset Owner.

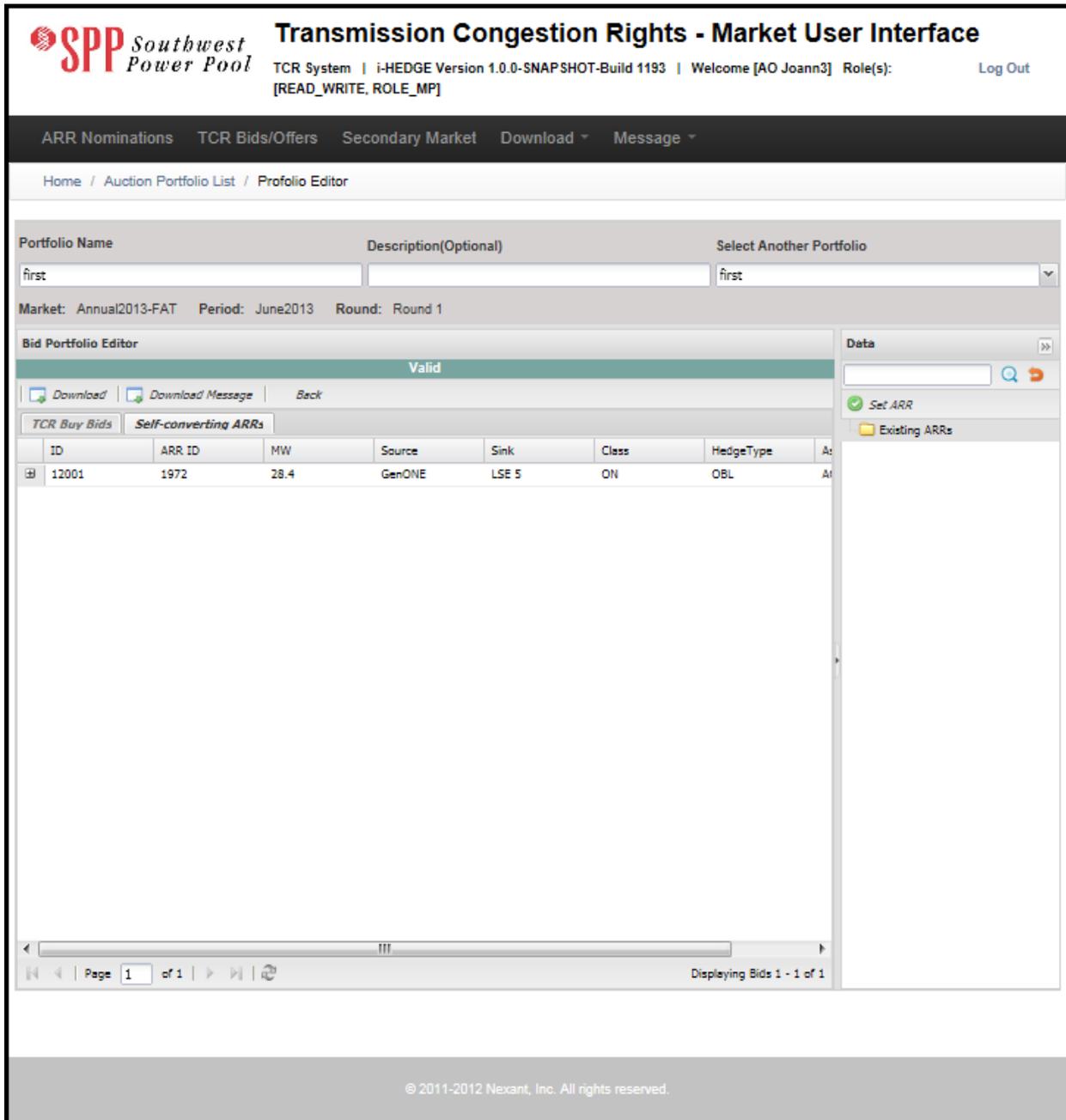


Figure 33 Editing ARR Portfolios

- From **Portfolio Editor** select one of the existing portfolios from “**Select Another Portfolio**” list box. Then all the bids in this selected portfolio will be loaded in the bid editor table.

9. Trading in Secondary Market

9.1 Overview of Secondary Market

The SPP TCR secondary trading market is a bilateral trading system that facilitates the trading of existing TCRs between Asset Owners using a bulletin board system, which is resident in the SPP TCR system. For TCR trades made through the bulletin board, SPP automatically transfers ownership and adjusts each Asset Owner's settlement statements accordingly.

The Secondary Market allows trading of existing TCRs only. ARRs cannot be traded on the secondary market. A TCR as originally defined or a portion of the TCR can be traded, as long as the total MW amount of the TCR as well as the original TCR time spans are maintained. With these restrictions, trading in the secondary market has no impact on the simultaneous feasibility of the existing outstanding TCRs and no impact on the market-clearing prices in the TCR auctions. In particular, there is no need for SPP to perform simultaneous feasibility tests for trades in the Secondary Market.

When a TCR is traded, the associated firm transmission capability is not reassigned, just the financial entitlements.

The following steps are required to trade a TCR in the Secondary Market:

- An Asset Owner posts a buy bid or sell offer.
- An Asset Owner accepts this posting and confirms the trade.
- The system executes a credit check to ensure that the trade can be completed. If the credit requirements are satisfied, the trade is accepted and comes into effect, while if the credit requirements are not satisfied, the trade is denied.

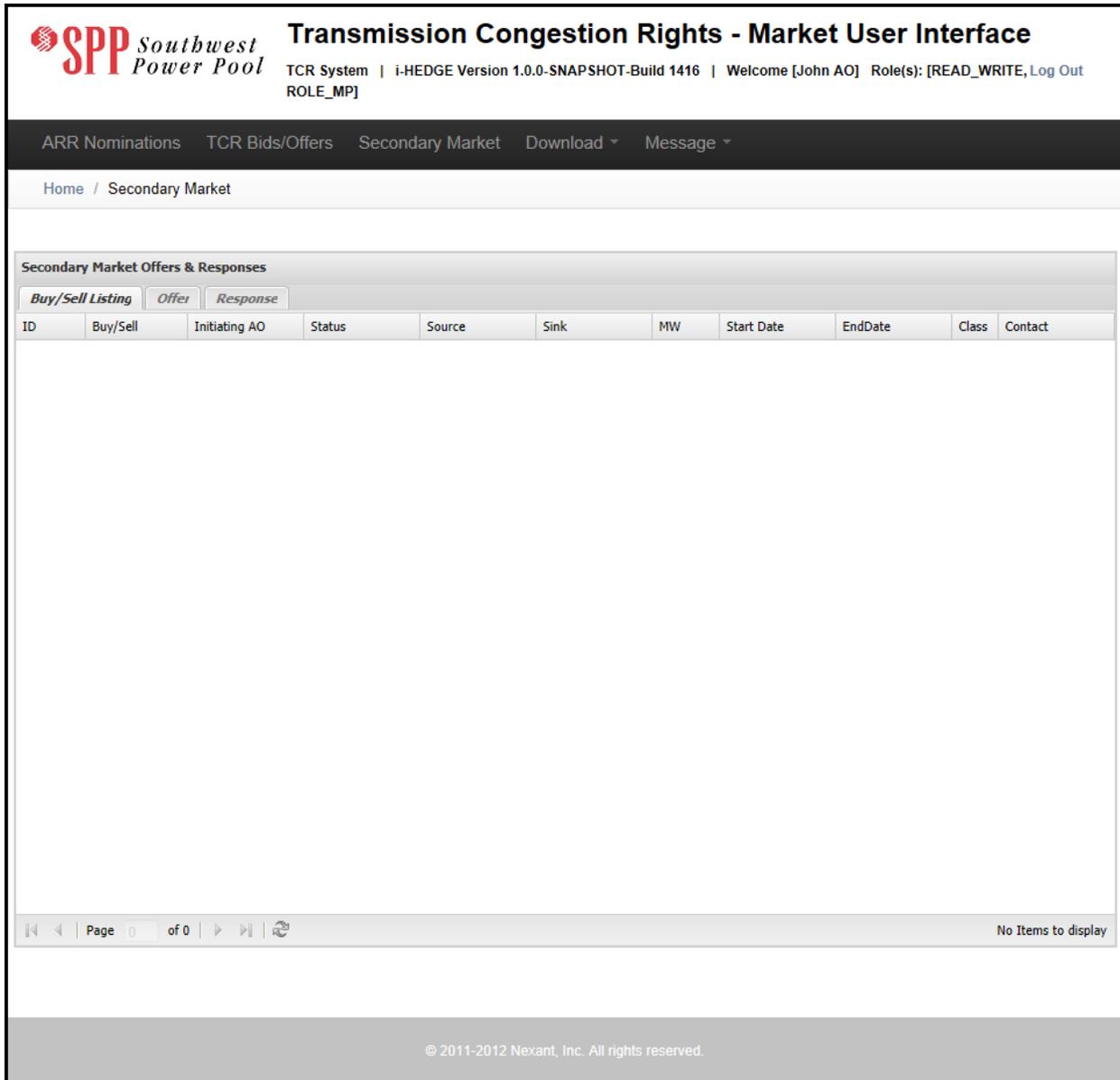
9.2 Accessing the Secondary Market

Depending on information contained in the digital security certificate, a user is designated to either as a "viewer (READ_ONLY)" or a "submitter (WRITE_ONLY)". Functionally the viewer and submitter roles are equivalent, except that a viewer is not afforded the opportunity to post a bid or sell offer or accept a trade.

The Secondary Market is a market system designed to facilitate the trading of TCRs by Asset Owners. It operates on a "classified advertisement" principle, where TCR buy bids and sell offers are posted for other asset owners to peruse. Upon viewing a posting that interests an Asset Owner, the Asset Owner communicates with the entity

that posted the item and negotiates the terms of the TCR sale. The money is exchanged outside the purview of the TCR System and the transfer of ownership of the TCR is conducted through the TCR System.

The Secondary Market can be accessed through the TCR interface. Figure 34 shows that one of the main menu tabs is labeled “**Secondary Market**”. By clicking this link, the user will be taken to the **Secondary Market** web page shown in Figure 34.



The screenshot displays the 'Transmission Congestion Rights - Market User Interface'. At the top left is the SPP Southwest Power Pool logo. To the right, it says 'TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1416 | Welcome [John AO] Role(s): [READ_WRITE, Log Out ROLE_MP]'. Below this is a navigation bar with tabs: 'ARR Nominations', 'TCR Bids/Offers', 'Secondary Market', 'Download', and 'Message'. The 'Secondary Market' tab is active. Below the navigation bar is a breadcrumb trail: 'Home / Secondary Market'. The main content area is titled 'Secondary Market Offers & Responses' and contains three sub-tabs: 'Buy/Sell Listing', 'Offer', and 'Response'. The 'Buy/Sell Listing' tab is selected, showing a table with the following columns: ID, Buy/Sell, Initiating AO, Status, Source, Sink, MW, Start Date, EndDate, Class, and Contact. The table is currently empty. At the bottom of the table area, there is a pagination control showing 'Page 0 of 0' and a 'No Items to display' message. The footer of the page contains the copyright notice: '© 2011-2012 Nexant, Inc. All rights reserved.'

Figure 34 The Secondary Market

9.3 Secondary Market Public posting display

The public posting display for the secondary market shown in Figure 34 contains three tabs: Buy/Sell Listing, Offer, and Response.

- **Buy/Sell listing tab** – lists the TCRs currently listed for sale, with the following information:
 - **ID** – The unique ID of the transaction for the sale of the TCR.
 - **Buy/Sell** – The flag indicating if the offer is a buy bid or sell offer.
 - **Initiating AO** – The name of the initiating Asset Owner – buying AO for a buy bid listing and selling AO for a sell offer listing.
 - **Status** – Status of the TCR for sale:
 - **Posted** – The buy bid or sell offer of the TCR has been posted.
 - **Pending AO Response** – Asset Owners are working on closing the transaction for the TCR.
 - **Approved** – TCR exchange was approved.
 - **Disapproved** – TCR exchange was not approved as credit checks failed.
 - **Source** – The name of the source for a desired TCR buy bid or the posted PTP TCR sell offer.
 - **Sink** – The name of the sink for a desired TCR buy bid or the posted PTP TCR sell offer.
 - **MW** – The MW amount of the TCR.
 - **Start Date** – The effective starting date of the TCR.
 - **End Date** – The effective expiration date of the TCR.
 - **Class** – Peak (ON) or off-peak (OFF) for the TCR.
 - **Contact** – The name, address, phone number, email address of the designated person regarding this transaction for the purchase or sale of the PTP TCR. It is assumed that this person is authorized to conduct this transaction on behalf of the Asset Owner.

- **Description** – An optional short description that a market participant may wish to associate with the secondary market transaction. It can be used to store tags or IDs that market participants use within their own systems.
- **Offers tab** – editor for Asset Owners to initiate the purchase or sale of TCRs in the secondary market. This tab has two mini-tabs – **My Buy Offer** and **My Sell Offer** – each displaying a table containing the following information:
 - **ID** – The unique ID of the transaction for purchase or sale of the TCR.
 - **Type** – States whether or not the offer is public or private.
 - **Responding AO** – The name of the counter party Asset Owner.
 - **Status** – Status of the TCR for sale:
 - **Posted** – The buy bid or sell offer of the TCR has been posted.
 - **Pending AO Response** – Asset Owners are working on closing the transaction for the TCR.
 - **Approved** – TCR exchange was approved.
 - **Disapproved** – TCR exchange was not approved as credit checks failed.
 - **TCR ID** – The specific ID of the TCR for sale - applicable only to the **My Sell Offer** mini-tab.
 - **Source** - The name of the source of the TCR.
 - **Sink** – The name of the sink of the TCR.
 - **MW** – The MW amount of the TCR.
 - **Start Date** – The effective starting date of the TCR.
 - **End Date** – The effective expiration date of the TCR.
 - **Class** – Peak (ON) or off-peak (OFF) for the TCR.
 - **Contact Information** – The name, address, phone number, email address of the designated person regarding this transaction for the

purchase of the PTP TCR. It is assumed that this person is authorized to conduct this transaction on behalf of the Asset Owner.

- **Description** – An optional short description that a market participant may wish to associate with the secondary market transaction. It can be used to store tags or IDs that market participants use within their own systems.
- **Response tab** - editor for Asset Owners to respond to buy or sell offers in the secondary market. This tab has two mini-tabs – **Respond to Buy Offer** and **Respond to Sell Offer** – each displaying a table containing the following information:
 - **Response ID** – The specific ID of the Response.
 - **Request ID** – The Specific ID of the Request.
 - **Type** – States whether or not the offer is public or private.
 - **Initiating AO** – The name of the Initiating Asset Owner.
 - **TCRID** – The specific ID of the TCR being used to satisfy a buy request. This is applicable only in the “Respond to Buy Offer”.
 - **Status** – Status of the TCR being traded:
 - **Posted** – The buy bid or sell offer of the TCR has been posted.
 - **Pending AO Response** – Asset Owners are working on closing the transaction for the TCR.
 - **Approved** – TCR exchange was approved.
 - **Disapproved** – TCR exchange was not approved as credit checks failed.
 - **Source** – The name of the source of the TCR being traded.
 - **Sink** – The name of the sink of the TCR being traded.
 - **MW** – The MW amount of the TCR being traded.
 - **Start Date** – The effective starting date of the TCR being traded.
 - **End Date** – The effective expiration date of the TCR being traded.

- **Class** – Peak (ON) or off-peak (OFF) of the TCR being traded.
- **Contact** – The name, address, phone number, email address of the designated person regarding this transaction for the PTP TCR. It is assumed that this person is authorized to conduct this transaction on behalf of the Asset Owner.
- **Description** – An optional short description that a market participant may wish to associate with the secondary market transaction. It can be used to store tags or IDs that market participants use within their own systems.

9.3.1 Posting a Secondary Market Trade

Asset Owners (Submitters) can post a buy bid or sell offer to the secondary market by the following steps:

9.3.1.1 **Go to Offers**

Click on **Offer tab** on the left hand side of the screen in between the Buy/Sell Listing, and the Response tabs shown in Figure 34. A Private Posting editor appears as shown in Figure 35. This display is divided into two tabs, a tab entitled “My Buy Offers” and another tab entitled “My Sell Offers”.

Transmission Congestion Rights - Market User Interface
 TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1416 | Welcome [John AO] Role(s): [READ_WRITE, Log Out ROLE_MP]

ARR Nominations TCR Bids/Offers Secondary Market Download Message

Home / Secondary Market

Secondary Market Offers & Responses

Buy/Sell Listing Offer Response

My Buy Offer My Sell Offer

Add Retract Upload Save Download Posted Offers Download All Offers

ID	Type	Responding AO	Status	Source	Sink	MW	Start Date
26006	PRIVATE	AEPM	Pending AO Res...	6ROMEVL 1	6SLTGRAS 1	3	07/02/2012
1003	PUBLIC	Kim AO	Pending AO Res...	ANA G1	BER 138	1	06/22/2012

Set AO Set Source Set Sink

Asset Owners

- AECC
- AECI
- AEPM
- AMSE
- AO James
- AO Joann2
- AO Joann3
- APM
- AUGK
- AVCC
- CALP
- CHET
- CHSM
- CMLP
- CWEP
- EDE
- EGP2
- ETEC
- EXGN
- GRDX
- GSECGS
- HCPD
- HMU
- INDP
- KBPU

Page 1 of 1 | Displaying items 1 - 2 of 2

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Figure 35 Posting Editor

9.3.1.2 Submit a Buy Offer

To post a new Buy offer, the user must click the ADD command button found at the top of the “My Buy Offers” panel on the Posting display. Doing so will create a blank row (or record) in the “My Buy Offer” panel as shown in Figure 36.

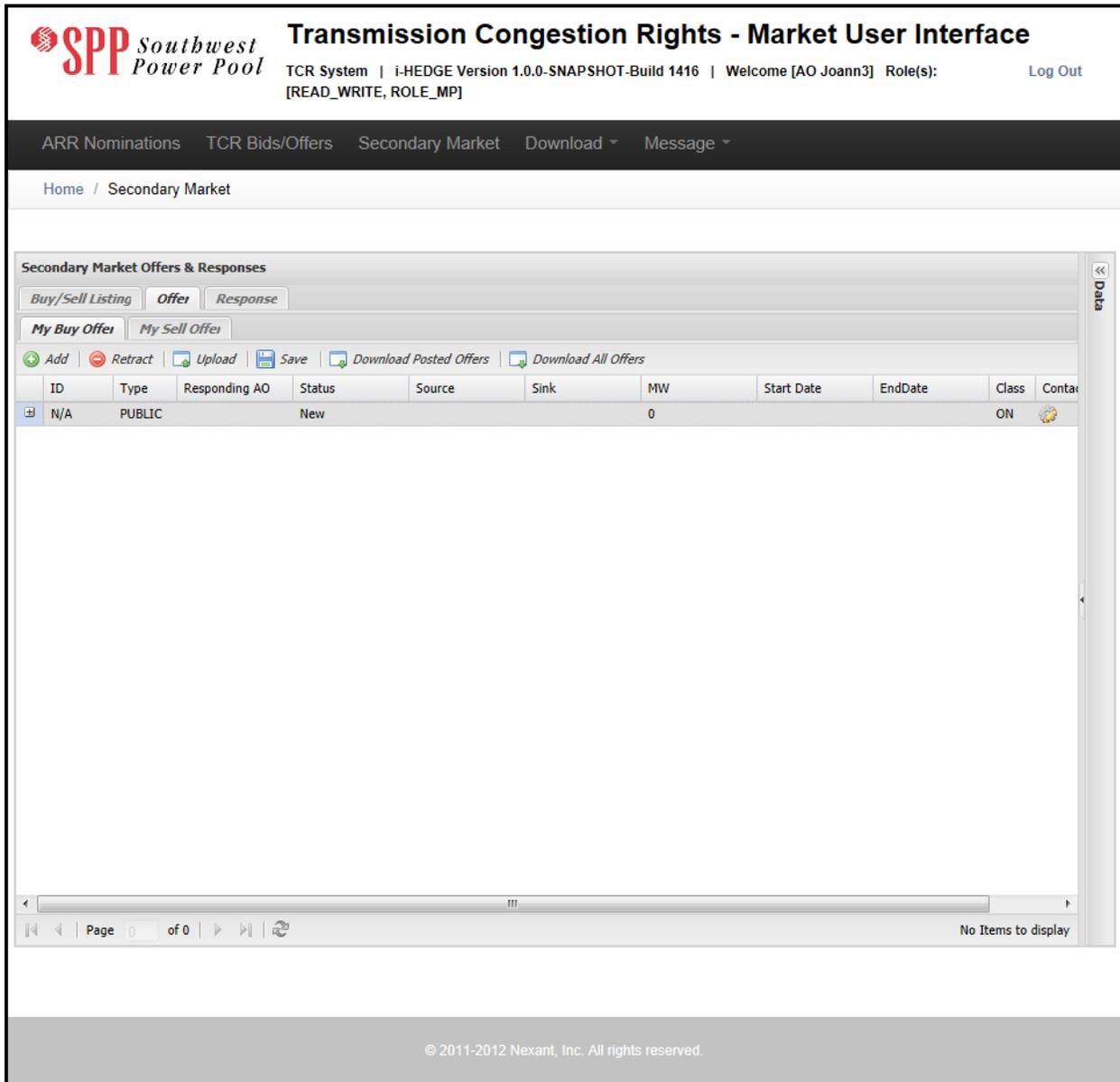


Figure 36 Posting Editor with “My Buy Offer” panel

Data fields of **My Offer Panel** include:

- **ID** – The unique ID of the buy offer. This number is automatically generated by the system when the user posts the offer.
- **Type** – Public or private type for the posted TCR. If the Private option is chosen, the offer will not be shown in the Public Posting page to Asset Owners other than the initiating and target Asset Owners.

- **Responding AO**– The name of the responding asset owner for the TCR buy bid. This field is populated by selecting the desired Asset Owner (from the list of Asset Owners) in the right panel and clicking the “Set AO” button.

If a Public posting is being contemplated, this field will be filled after the other party has signaled its willingness to participate in this transaction. If a private posting is being contemplated, this field will be filled when the bid is being constructed (as the identity of the other Asset Owner is known).

- **Status** – The status of the TCR buy bid.
- **Source** – The name of the source for the PTP TCR buy bid to be posted
- **Sink** – The name of the sink for the PTP TCR buy bid to be posted
- **MW** – The MW amount of the TCR buy bid to be posted.
- **Start Date** – The effective starting date of the buy bid to be posted
- **End Date** – The effective expiration date of the buy bid to be posted
- **Class** – Peak (PEAK) or off-peak (OFF-PEAK) type of the buy bid to be posted
- **Contact** – The contact information of the buyer.
- **Description** – An optional short description that a market participant may wish to associate with the secondary market transaction. It can be used to store tags or IDs that market participants use within their own systems.

The Asset Owners can then fill in the necessary information by setting **Asset Owner**, **Sources/Sinks** data from the right hand panel data structures in the appropriate fields of the editor (using the “Set AO”, “Set Source” and “Set Sink” buttons), typing in desired **MW**; selecting **Start Date** and **End Date** from pop-up menus; and selecting **Class** from drop-down menus. In order to fill in Contact Information, the user must click on the symbol in the Contact column, which displays a popup shown in Figure 37. The user must enter the relevant contact information (name, address, phone number & email address) and click **SAVE** to save the information, or **CANCEL** to close without saving. The optional description field can also be filled.

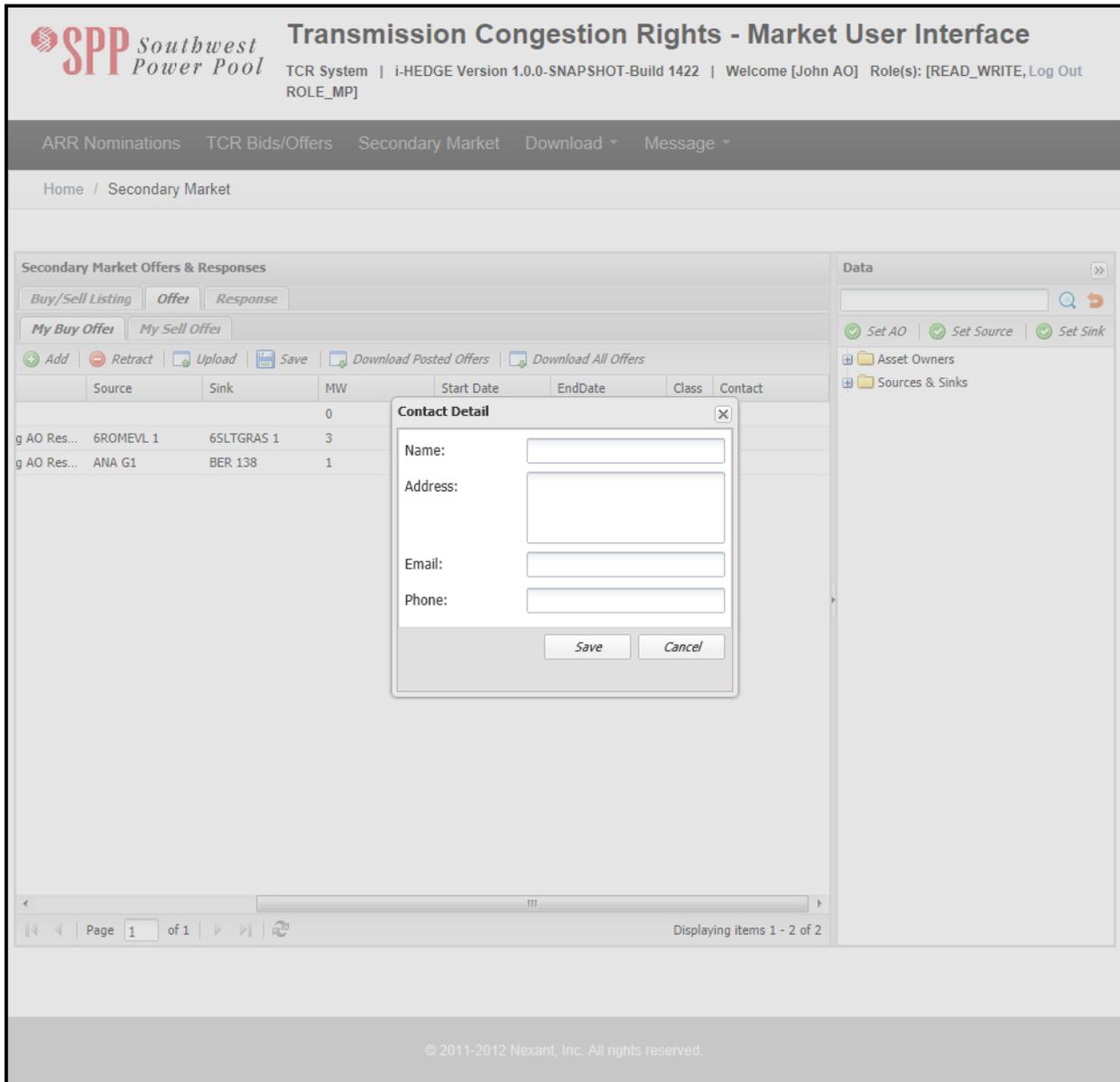


Figure 37 Private Posting Editor with Contact Information popup

Once the information has been entered, click on the **“SAVE”** button to post the buy bid in the market postings as shown in Figure 38. The status field of this new buy offer will now change to “Posted” in the “My Offers” panel as shown in Figure 39, after the buy bid has been posted. To see the update to the Public Posting display, the user must click the Buy/Sell Listing on the left side of the display. Figure 40 shows the postings after the buy bid has been entered into the system.



Transmission Congestion Rights - Market User Interface

TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1426 | Welcome [John AO] Role(s): [READ_WRITE, Log Out ROLE_MP]

ARR Nominations
TCR Bids/Offers
Secondary Market
Download ▾
Message ▾

Home / Secondary Market

Secondary Market Offers & Responses

Buy/Sell Listing Offer Response

My Buy Offer My Sell Offer

ID	Type	Responding AO	Status	Source	Sink	MW	Start Date
26006	PRIVATE	AEPM	Pending AO Res...	6ROMEVL 1	6SLTGRAS 1	3	07/02/2012
1003	PUBLIC	Kim AO	Pending AO Res...	ANA G1	BER 138	1	06/22/2012

Data

- Asset Owners
- Sources & Sinks

Page 1 of 1

Displaying items 1 - 2 of 2

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Figure 38 Private Posting Editor before Post (Buy Bid)

Transmission Congestion Rights - Market User Interface

TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1527 | Welcome [Kim AO] Role(s): [READ_WRITE, Log Out ROLE_MP]

ARR Nominations
TCR Bids/Offers
Secondary Market
Download ▾
Message ▾

[Home](#) / [Secondary Market](#)

Secondary Market Offers & Responses

Buy/Sell Listing
Offer
Response

My Buy Offer
My Sell Offer

Add
 Retract
 Upload
 Save
 Download Posted Offers
 Download All Offers

ID	Type	Responding AO	Status	Source	Sink	MW	Start Date
20001	PRIVATE	AO Joann2	Posted	YAK 345	YAK 138	25	10/01/2012

Data

✔ Set AO |
 ✔ Set Source |
 ✔ Set Sink

📁 Asset Owners

📁 Sources & Sinks

Page 1 of 1
Displaying items 1 - 1 of 1

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Figure 39 Private Posting Editor after Buy Bid has been posted



Transmission Congestion Rights - Market User Interface

TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1527 | Welcome [John AO] Role(s): [READ_WRITE, Log Out ROLE_MP]

ARR Nominations TCR Bids/Offers Secondary Market Download ▾ Message ▾

Home / Secondary Market

Secondary Market Offers & Responses

Buy/Sell Listing Offer Response

My Buy Offer My Sell Offer

➕ Add ⊖ Retract ⬆️ Upload 💾 Save ⬇️ Download Posted Offers ⬇️ Download All Offers

ID	Type	Responding AO	Status	Source	Sink	MW	Start Date
26006	PRIVATE	AEPM	Pending AO Res...	6ROMEVL 1	6SLTGRAS 1	3	07/02/2012
1003	PUBLIC	Kim AO	Open	ANA G1	BER 138	1	06/22/2012

Data

✔️ Set AO ✔️ Set Source ✔️ Set Sink

📁 Asset Owners
📁 Sources & Sinks

Page 1 of 1 | Displaying items 1 - 2 of 2

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Figure 40 Public Postings with newly created buy bid

Transmission Congestion Rights - Market User Interface

TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1527 | Welcome [John AO] Role(s): [READ_WRITE, Log Out ROLE_MP]

ARR Nominations
TCR Bids/Offers
Secondary Market
Download ▾
Message ▾

Home / Secondary Market

Secondary Market Offers & Responses

Buy/Sell Listing
Offer
Response

My Buy Offer
My Sell Offer

+ Add
- Retract
⬇ Upload
💾 Save
⬇ Download Posted Offers
⬇ Download All Offers

ID	Type	Responding AO	Status	Source	Sink	MW	Start Date
26006	PRIVATE	AEPM	Pending AO Res...	6ROMEVL 1	6SLTGRAS 1	3	07/02/2012
1003	PUBLIC	Kim AO	Open	ANA G1	BER 138	1	06/22/2012

Data

🔍
↻

✔ Set AO
✔ Set Source
✔ Set Sink

📁 Asset Owners

📁 Sources & Sinks

⏪
⏩
Page 1 of 1
⏴
⏵

Displaying items 1 - 2 of 2

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Figure 41 Public Postings with newly created buy bid

9.3.1.3 Submit a Sell Offer

To post a new Sell offer, the user must click the ADD command button found on the left of the “My Sell Offers” panel under the Offers Tab. Doing so will create a blank record in the “My Sell Offer” panel as shown in Figure 36.

The Asset Owners can then set a TCR from the existing TCRs under the **Existing TCRs** data structure into the “My Offer Details” pane and fill in the remaining necessary information:

- MW – The MW amount of the TCR, which may be less than or equal to the original TCR.
- Start Date – The effective starting date of the TCR offer to be posted, which may be after the original start date and prior to the original end date.
- End Date – The effective expiration date of the TCR offer to be posted, which may be prior to the original end date, but not after the original end date or prior to the original start date.

To complete the sell offer, the user must enter contact information. In order to fill in Contact Information, the user must click on the “Click to Add” link, which displays a popup shown in Figure 37. The user must enter the relevant contact information (name, address, phone number & email address) and click **SAVE** to save the information, **CANCEL** to close without saving.

Once the information has been entered, click on the “**Save**” button to post the sell offer in the market postings as shown in Figure 42. The status field of this new sell offer will now change to “Posted” in the “Buy/Sell Listings” tab as shown in Figure 43, after the sell offer has been posted. To see the update to the Public Posting display, the user must click the Public Posting tab at the top right corner of the display. Figure 44 shows the postings after the sell offer has been entered into the system.



Transmission Congestion Rights - Market User Interface

TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1426 | Welcome [Kim AO] Role(s): [READ_WRITE, Log Out ROLE_MP]

ARR Nominations
TCR Bids/Offers
Secondary Market
Download ▾
Message ▾

[Home](#) / [Secondary Market](#)

Secondary Market Offers & Responses

Buy/Sell Listing
Offer
Response

My Buy Offer
My Sell Offer

Add
 Retract
 Upload
 Save
 Download Posted Offers
 Download All Offers

ID	Type	Responding AO	Status	TCRID ▲	Source	Sink	MW
2002	PUBLIC	John AO	Pending Credit...	70454	LSE 7	LSE 11 SOURCE	1

Data

Set AO
 Set TCR

- Asset Owners
- Existing TCRs

Page 1 of 1

Displaying items 1 - 1 of 1

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Figure 42 Private Posting Editor before Post (Sell Offer)



Transmission Congestion Rights - Market User Interface

TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1527 | Welcome [Kim AO] Role(s): [READ_WRITE, Log Out ROLE_MP]

ARR Nominations TCR Bids/Offers Secondary Market Download ▾ Message ▾

Home / Secondary Market

Secondary Market Offers & Responses

Buy/Sell Listing Offer Response

My Buy Offer My Sell Offer

➕ Add ⏪ Retract ⬆️ Upload 💾 Save ⬇️ Download Posted Offers ⬇️ Download All Offers

ID	Type	Responding AO	Status	TCRID	Source	Sink	MW
2002	PRIVATE	John AO	Posted	70454	LSE 7	LSE 11 SOURCE	1

Data

Set AO Set TCR

Asset Owners

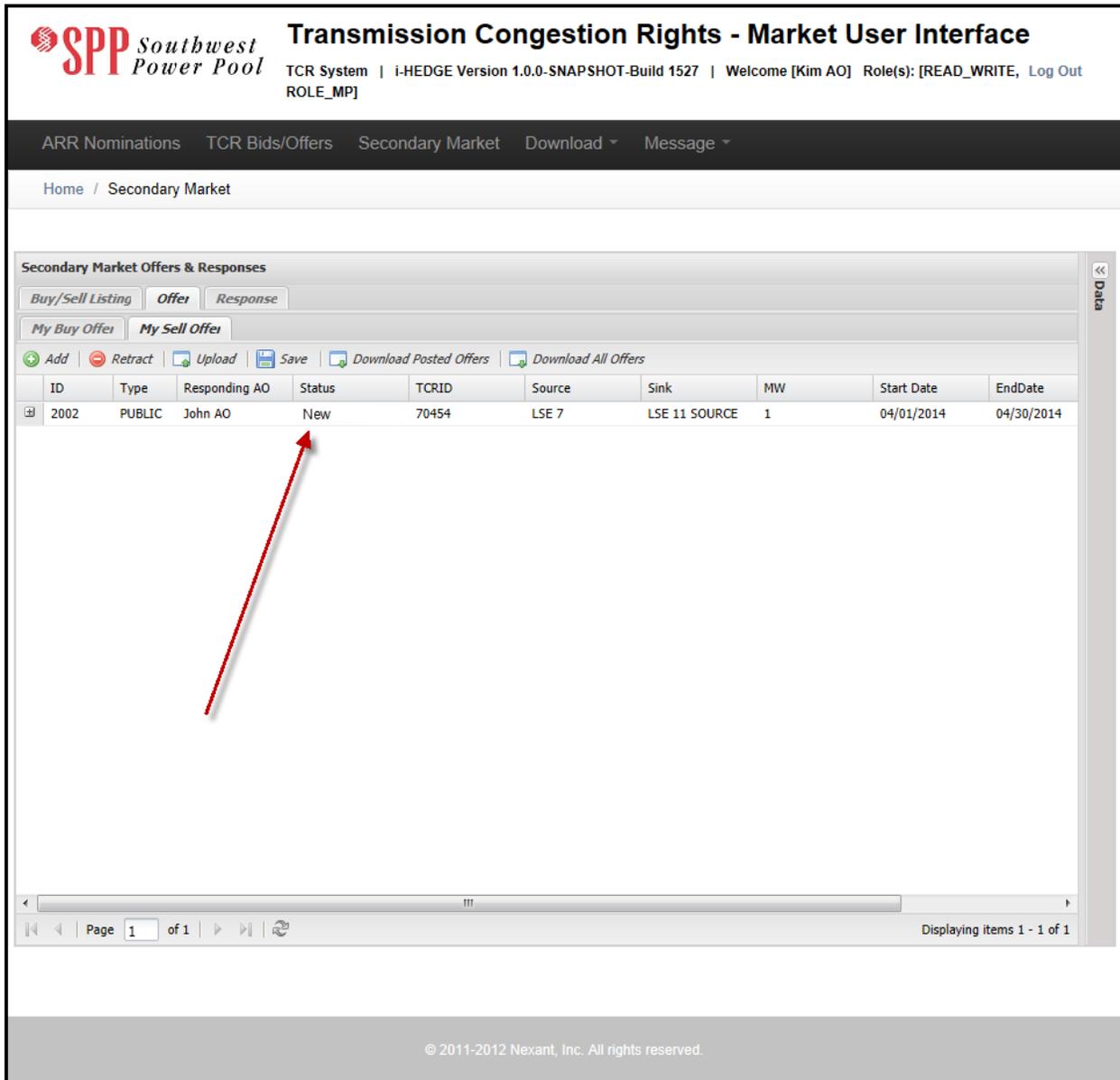
Existing TCRs

Page 1 of 1

Displaying items 1 - 1 of 1

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Figure 43 Private Posting Editor after sell offer has been posted



Transmission Congestion Rights - Market User Interface
 TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1527 | Welcome [Kim AO] Role(s): [READ_WRITE, Log Out ROLE_MP]

ARR Nominations TCR Bids/Offers Secondary Market Download Message

Home / Secondary Market

Secondary Market Offers & Responses

Buy/Sell Listing Offer Response

My Buy Offer My Sell Offer

Add Retract Upload Save Download Posted Offers Download All Offers

ID	Type	Responding AO	Status	TCRID	Source	Sink	MW	Start Date	EndDate
2002	PUBLIC	John AO	New	70454	LSE 7	LSE 11 SOURCE	1	04/01/2014	04/30/2014

Page 1 of 1 | Displaying items 1 - 1 of 1

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Figure 44 Public Postings with newly created sell offer

9.3.2 Accepting a Secondary Market Trade

An Asset Owner can either accept a PUBLIC bid to buy A TCR or to sell A TCR on the Secondary Market. If an Asset Owner accepts a bid to buy posting, that Asset Owner must match that bid with its TCR holdings. The matching holding must be of the same kind, i.e. TCR, must have the required MW amount, must have compatible start and end dates, and must be of the same class. Multiple TCR holdings are allowed to satisfy the MW requirements of the posted bid to buy.

9.3.2.1 Responding to a “Buy Bid” posting

- Step 1: Selling Asset Owner clicks on a TCR they are willing to fulfill and clicks on the contact information.

- Step 2: Selling Asset Owner contacts the buying Asset Owner and negotiates the terms of the sale. If buyer agrees to the sale, the user has to assign the seller to the TCR bid. To accomplish this, the buyer must go to the Private Posting site and select the offer from the “My Offer Listings” panel. Upon selection, the offer will appear in the “My Offer Details” panel. The buyer must assign the selling Asset Owner to the offer by setting the Asset Owner’s name into the “Responding AO” field. See Figure 45.

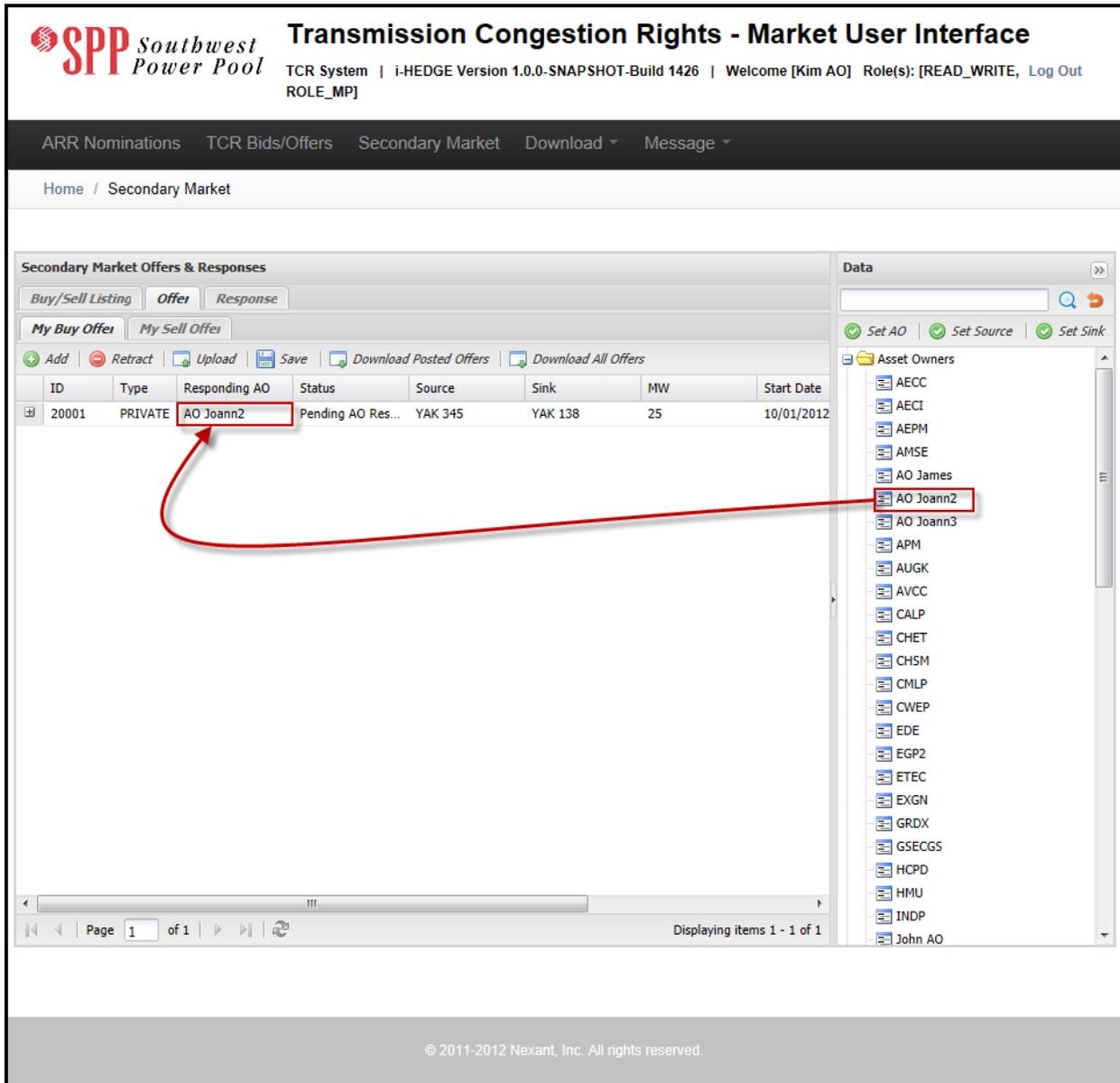


Figure 45 Assigning Selling MP to the Buy Bid – Step 2

- Step 3: Once the Selling MP has been assigned to the offer, the user (Buying Asset Owner) must click the Save button at the top of “My Buy Offer” panel. In the “My Offer Listings” panel, the offer status changes from “Posted” to “Pending AO response”. See Figure 46.

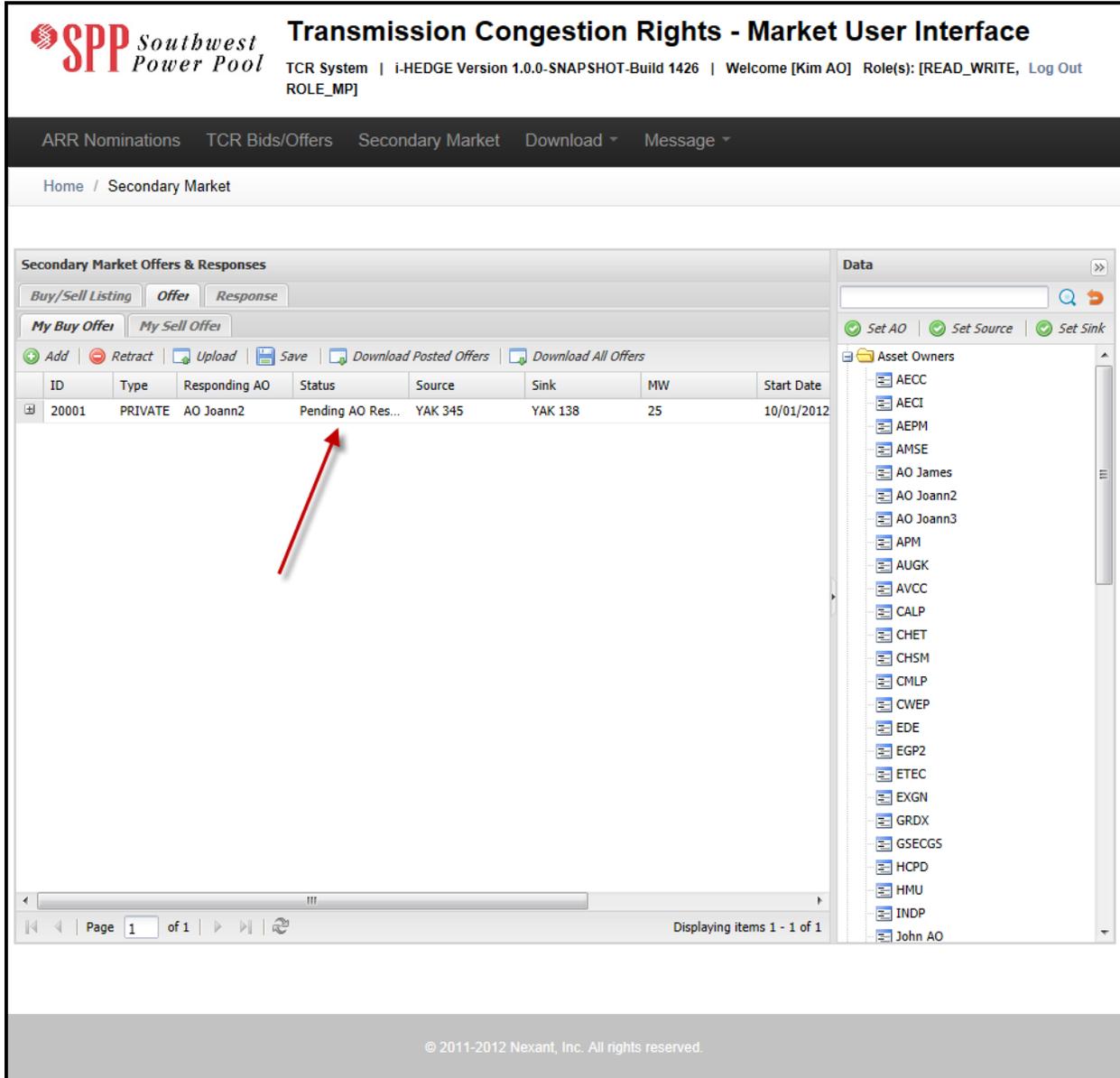


Figure 46 Buy Offer has been assigned to a Seller – Step 3

- ❑ Step 4: Selling Asset Owner must now confirm TCR purchase. To do this, the selling participant must sign into the system and go to the Private Postings display. The user must select the TCR posting from the “Responses” tab they wish to fulfill. See Figure 47.
- ❑ Step 5: The Asset Owner must select the TCR(s) required to fulfill the buy bid, ensuring that the total MW is equal to the amount necessary to fulfill the bid. The TCR may be selected from the folder “Existing TCRs”. See Figure 48.

- ❑ Step 6: The selling Asset Owner must then click the **RESPOND** command button at the top of the “Respond to Sell Offer” panel. The bid buy status should change to “Accepted” or “Declined” depending on the results of the credit calculations. See Figure 49.

SPP Southwest Power Pool **Transmission Congestion Rights - Market User Interface**
 TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1527 | Welcome [Kim AO] Role(s): [READ_WRITE, Log Out ROLE_MP]

ARR Nominations TCR Bids/Offers Secondary Market Download Message

Home / Secondary Market

Secondary Market Offers & Responses

Buy/Sell Listing Offer **Response**

Respond to Buy Offer Respond to Sell Offer

Respond Reset Error Status Upload Download Pending AO Responses Download All Responses

Response ID	Request ID	Type	Initiating AO	Status	Source	Sink	MW	Start Date	EndDate	Class
4001	2010	PRIVATE	John AO	Pending Credit...	GenRAL	LSE 8 SOURCE	19.1	07/01/2013	07/31/2013	ON
3001	2011	PRIVATE	John AO	Pending Credit...	GenEJB	GenJAN	13.6	12/01/2013	03/31/2014	ON
2013	2012	PRIVATE	John AO	Pending Credit...	GenNUG	LSE 1	13.6	04/01/2014	05/31/2014	ON
2009	2006	PRIVATE	John AO	Pending Credit...	LSE 2	GenEJB	0.1	06/01/2013	06/30/2013	ON
2008	2007	PRIVATE	John AO	Pending Credit...	LSE 8	GenANA	0.9	04/01/2014	05/31/2014	ON
2005	2004	PRIVATE	John AO	Pending Credit...	GenDOS	LSE 5	0.8	04/01/2014	05/31/2014	ON
2001	3	PRIVATE	John AO	Pending Credit...	LSE 6	LSE 7	35	04/01/2014	04/30/2014	ON
1005	2	PRIVATE	John AO	Pending Credit...	LSE 4	GenJAN	1	04/01/2014	04/30/2014	ON
1001	1	PRIVATE	John AO	Pending Credit...	LSE 7	LSE 4	30	03/01/2014	03/31/2014	ON

Page 1 of 1 | Displaying items 1 - 9 of 9

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Figure 47 Seller has selected the offer they wish to fulfill – Step 4

SPP Southwest Power Pool **Transmission Congestion Rights - Market User Interface**
 TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1527 | Welcome [Kim AO] Role(s): [READ_WRITE, ROLE_MP] [Log Out](#)

ARR Nominations TCR Bids/Offers Secondary Market Download Message

Home / Secondary Market

Secondary Market Offers & Responses

Buy/Sell Listing Offer **Response**

Respond to Buy Offer Respond to Sell Offer

Respond Reset Error Status Upload Download Pending AO Responses Download All Responses

Response ID	Request ID	Type	Initiating AO	TCRID	Status	Source	Sink
N/A	1003	PUBLIC	John AO	0	Pending AO Res...	ANA G1	BER 138

Data

- Set TCR
- Existing TCRs
 - LSE 7 | LSE 11 SOURCE | 70454
 - Start Date: 04/01/2014 | End Date:
 - GenMOR #1 | LSE 4 | 70429

Page 1 of 1 | Displaying items 1 - 1 of 1

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Figure 48 Seller selects TCRs to fulfill bid – Step 5

SPP Southwest Power Pool **Transmission Congestion Rights - Market User Interface**
 TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1527 | Welcome [John AO] Role(s): [READ_WRITE, Log Out ROLE_MP]

ARR Nominations TCR Bids/Offers Secondary Market Download Message

Home / Secondary Market

Secondary Market Offers & Responses

Buy/Sell Listing Offer Response

Respond to Buy Offer Respond to Sell Offer

Respond Reset Error Status Upload Download Pending AO Responses Download All Responses

Response ID	Request ID	Type	Initiating AO	Status	Source	Sink	MW	Start Date	EndDate	Class
2003	2002	PUBLIC	Kim AO	Approved	LSE 7	LSE 11 SOURCE	1	04/01/2014	04/30/2014	ON

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Figure 49 Seller has fulfilled buy bid – Step 6

Checking the TCR assets of the Asset Owner who responded to the buy bid (i.e. sold one of its TCRs) indicates that three TCRs cover the remaining portion of the original TCR belonging to the Market.

If the buying Asset Owner does not have the requisite credit to purchase the TCR, the offer will be “Declined” and an error message will be displayed describing the required credit to fulfill the purchase and the buyer’s available credit. The seller will also be able

to see that the offer was “Declined” but a more generic message, without the buyer’s available credit information will be displayed when the seller clicks on the **Declined** link.

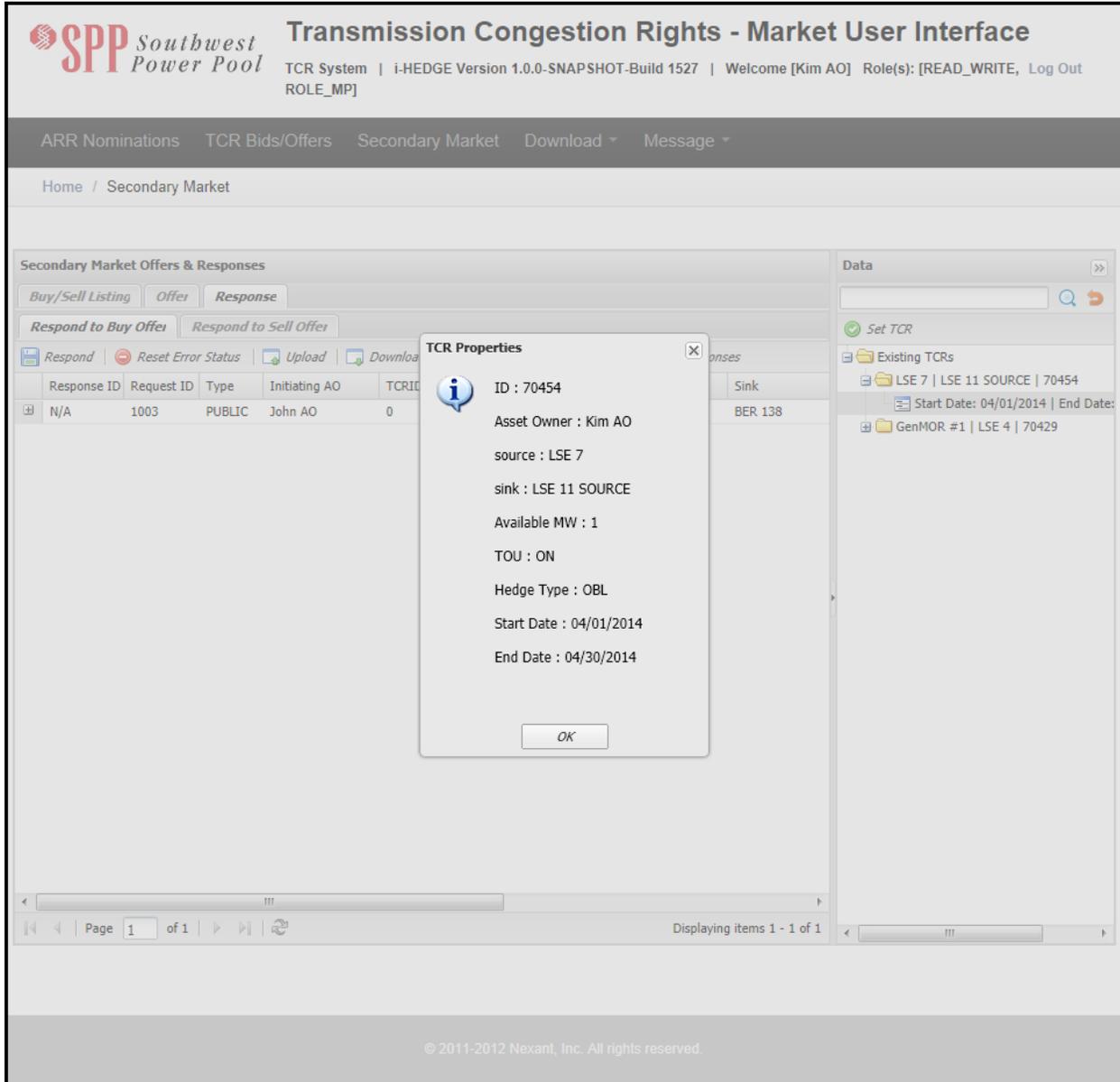


Figure 50 First Segment of the TCR for the time period 03/01/2008 to 03/29/2008

9.3.2.2 Responding to a “Offer to Sell” posting

- Step 1: Buying Asset Owner clicks on A TCR they are willing to purchase and clicks on the contact information.
- Step 2: Buying Asset Owner gets in touch with the selling Asset Owner and negotiates the terms of the sale. If seller agrees to the sale, the user has to assign the buyer to the TCR bid. To accomplish this, the seller must go to the Private Posting site and select his/her offer from the “My Offers” Tab. Upon selection, the offer will appear in the “My Offer Details” panel. The seller must assign the buying Asset Owner to the offer by (i) selecting the row in the left panel (ii) selecting the AO’s name (from the list of AOs in the right panel) and (iii) clicking the “Set AO” button. See Figure 51.

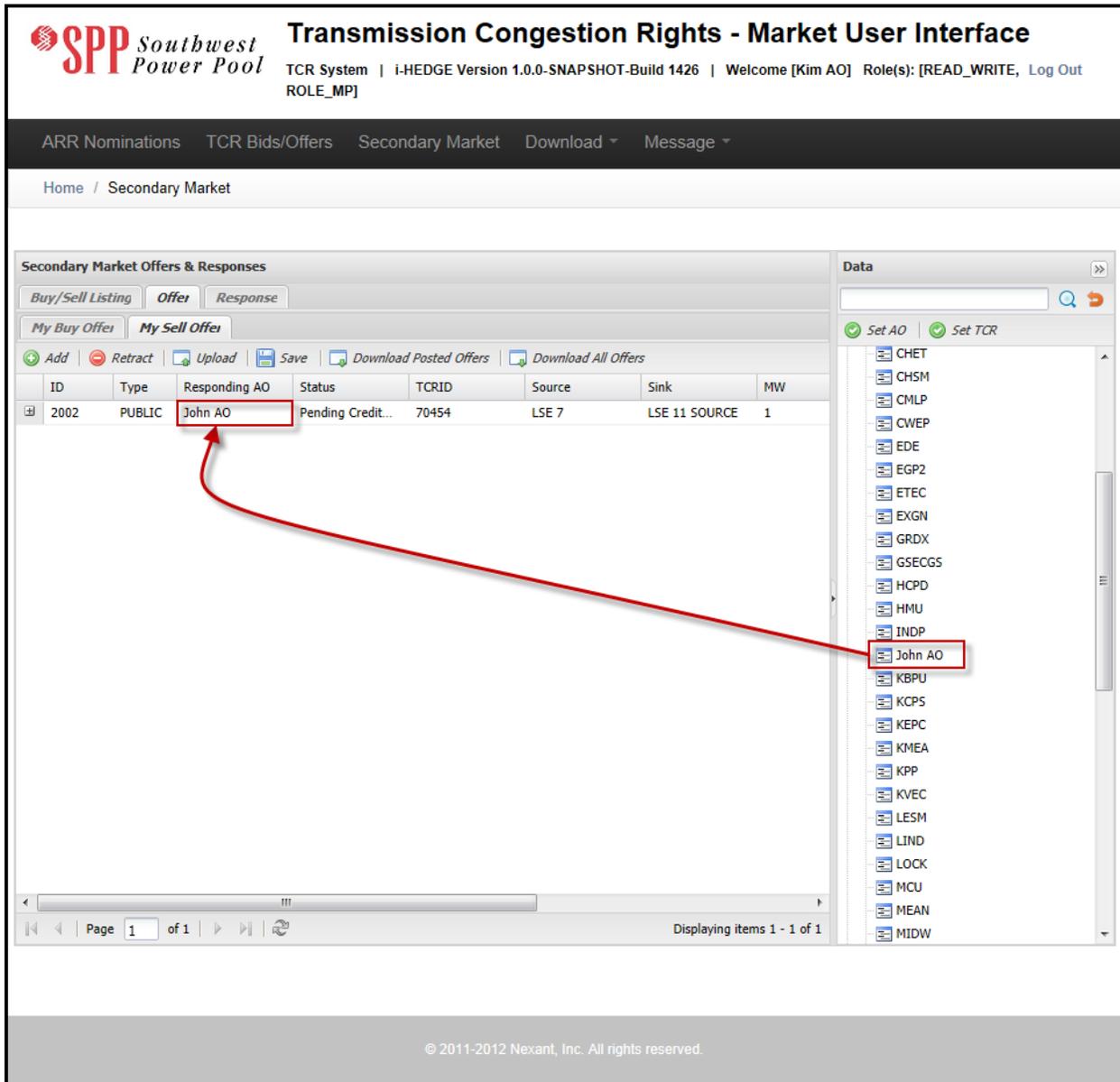


Figure 51 Assigning Buying MP to the Sell Offer – Step 2

- ❑ Step 3: Once the Buying MP has been assigned to the offer, the user (Selling Asset Owner) must click the ACCEPT command button at the bottom right of the “My Offer Details” panel. In the “My Offer Listings” panel, the offer status will go from “Posted” to “Waiting for Counterparty”. See
- ❑ Figure 52.

Transmission Congestion Rights - Market User Interface
 TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1426 | Welcome [John AO] Role(s): [READ_WRITE, Log Out ROLE_MP]

ARR Nominations TCR Bids/Offers Secondary Market Download Message

Home / Secondary Market

Secondary Market Offers & Responses

Buy/Sell Listing Offer Response

Respond to Buy Offer Respond to Sell Offer

Respond Reset Error Status Upload Download Pending AO Responses Download All Responses

Response ID	Request ID	Type	Initiating AO	Status	Source	Sink	MW	Start Date	EndDate	Class
2003	2002	PUBLIC	Kim AO	Pending Credit...	LSE 7	LSE 11 SOURCE	1	04/01/2014	04/30/2014	ON

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Figure 52 Offer changes status – Step 3

- Step 4: Buying Asset Owner must now confirm TCR purchase. To do this, the buying participant must sign into the system and go to the Private Postings display. The user must select the TCR posting from “My Offer Listings” they wish to purchase. See Figure 53.

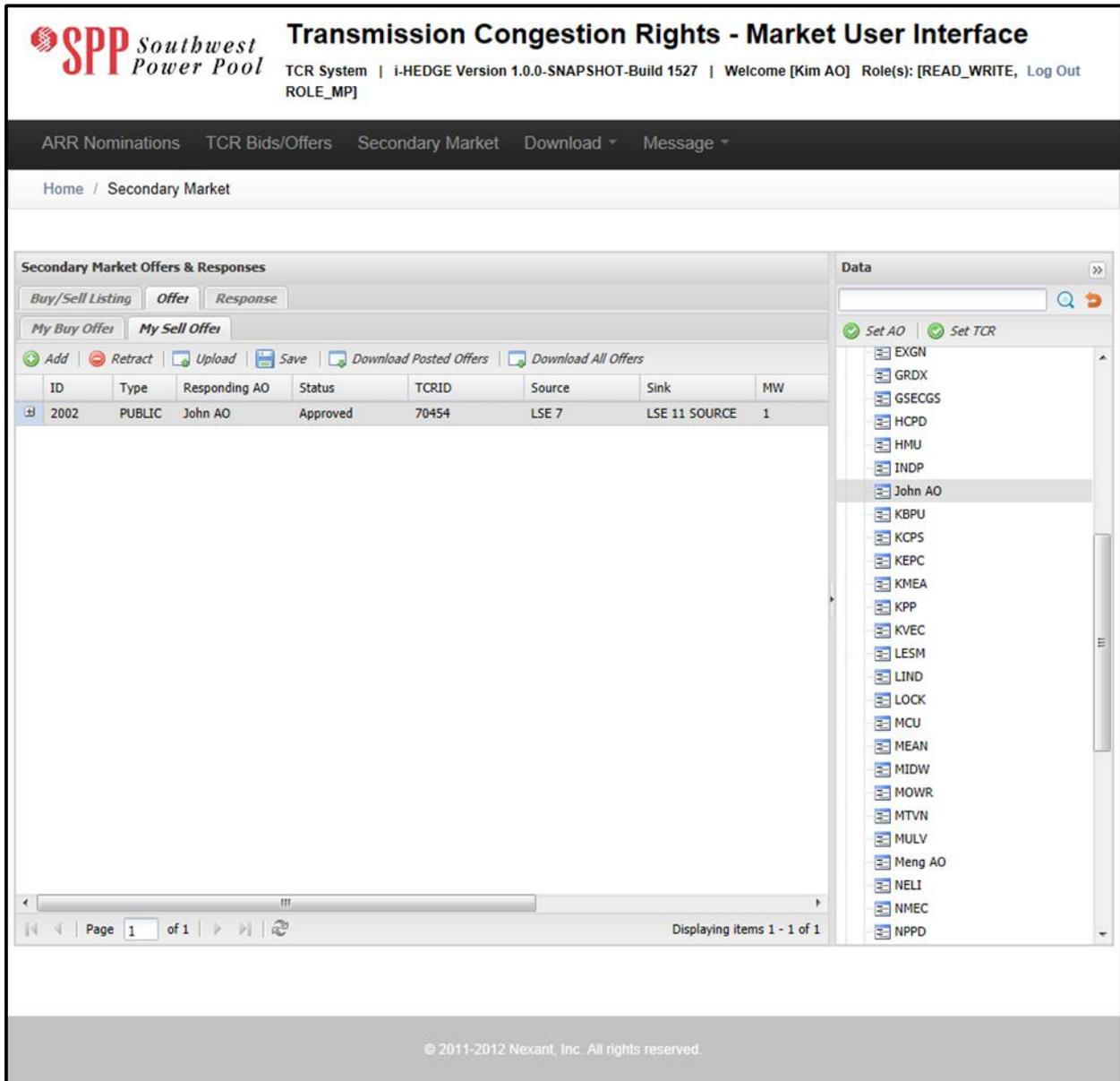


Figure 53 Buying MP selects selling offer to fulfill – Step 4

- Step 5: The buying Asset Owner must select the Asset Owner from the Asset Owner folder in the folder tree. To finalize the transaction the buying Asset Owner must click the ACCEPT command button to finalize the transaction. See Figure 54.

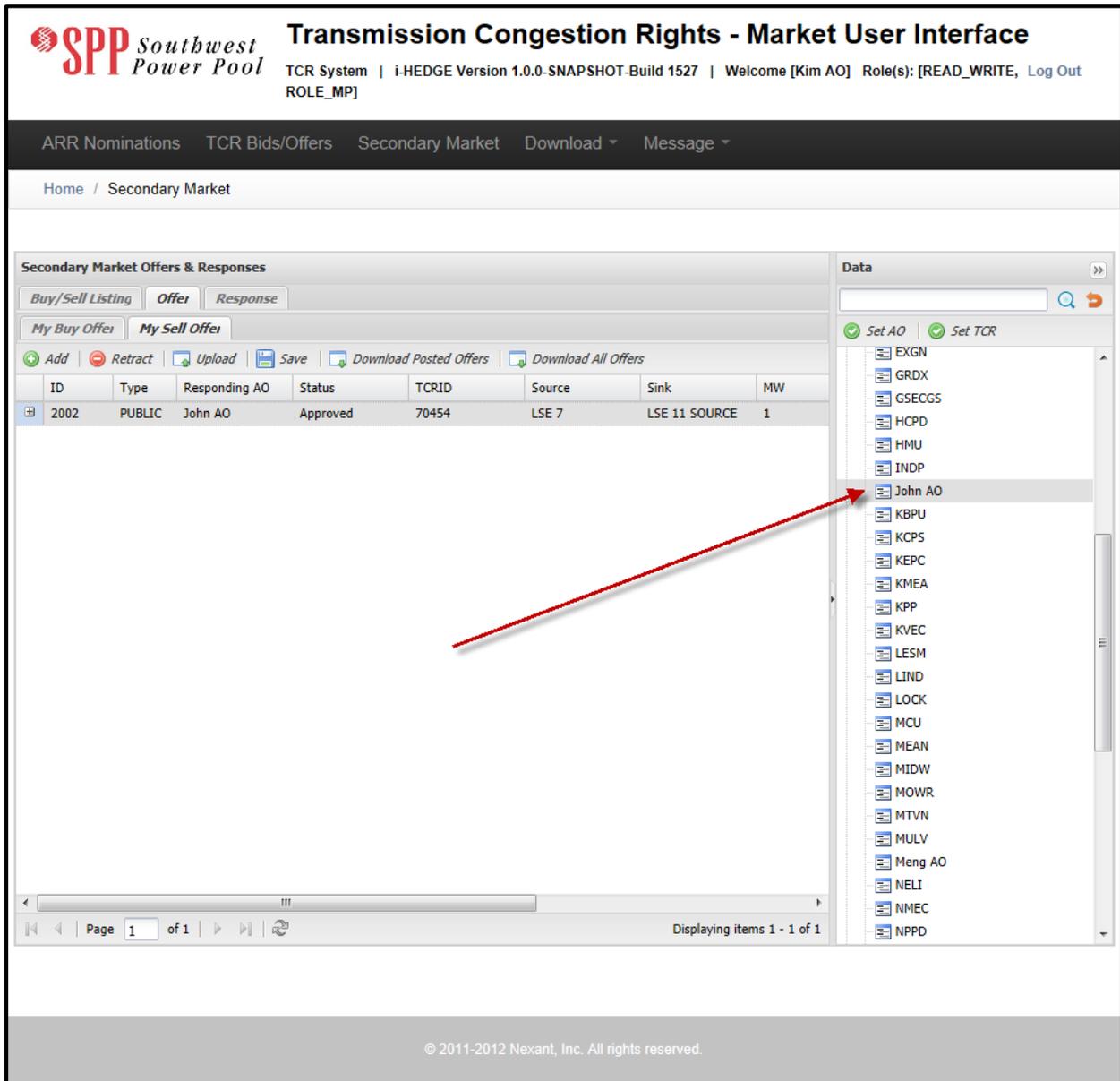


Figure 54 Buying MP adds Asset Owner and Accepts – Step 5

- Step 6: Once the buyer has clicked ACCEPT the status of the sell offer will change to either “Accepted” or “Declined”. See Figure 55. If the buying Asset Owner does not have the requisite credit to purchase the TCR, the offer will be “Declined” and an error message will be displayed describing the required credit to fulfill the purchase and the buyer’s available credit. The seller will also be able to see that the offer was “Declined” but a more generic message, without the buyer’s available credit information will be displayed when the seller clicks on the **Declined** link.

The screenshot displays the 'Transmission Congestion Rights - Market User Interface' for the Southwest Power Pool. The page title is 'Transmission Congestion Rights - Market User Interface'. Below the title, it shows 'TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1527 | Welcome [Kim AO] Role(s): [READ_WRITE, Log Out ROLE_MP]'. The navigation menu includes 'ARR Nominations', 'TCR Bids/Offers', 'Secondary Market', 'Download', and 'Message'. The breadcrumb trail is 'Home / Secondary Market'. The main content area is titled 'Secondary Market Offers & Responses' and contains tabs for 'Buy/Sell Listing', 'Offer', and 'Response'. Under the 'Offer' tab, there are sub-tabs for 'My Buy Offer' and 'My Sell Offer'. Action buttons include 'Add', 'Retract', 'Upload', 'Save', 'Download Posted Offers', and 'Download All Offers'. A table lists offers with columns: ID, Type, Responding AO, Status, TCRID, Source, Sink, MW, Start Date, and EndDate. One offer is listed with ID 2002, Type PUBLIC, Responding AO John AO, Status Approved, TCRID 70454, Source LSE 7, Sink LSE 11 SOURCE, MW 1, Start Date 04/01/2014, and EndDate 04/30/2014. A red arrow points to the 'Approved' status. The page footer shows 'Page 1 of 1' and 'Displaying items 1 - 1 of 1'. Copyright information at the bottom reads '© 2011-2012 Nexant, Inc. All rights reserved.'

ID	Type	Responding AO	Status	TCRID	Source	Sink	MW	Start Date	EndDate
2002	PUBLIC	John AO	Approved	70454	LSE 7	LSE 11 SOURCE	1	04/01/2014	04/30/2014

Figure 55 Offer status changes once Transaction is complete – Step 6

Checking the TCR assets of the Asset Owner who posted and sold the sell offer indicates that three TCRs cover the remaining portion of the original TCR belonging to the Asset Owner.

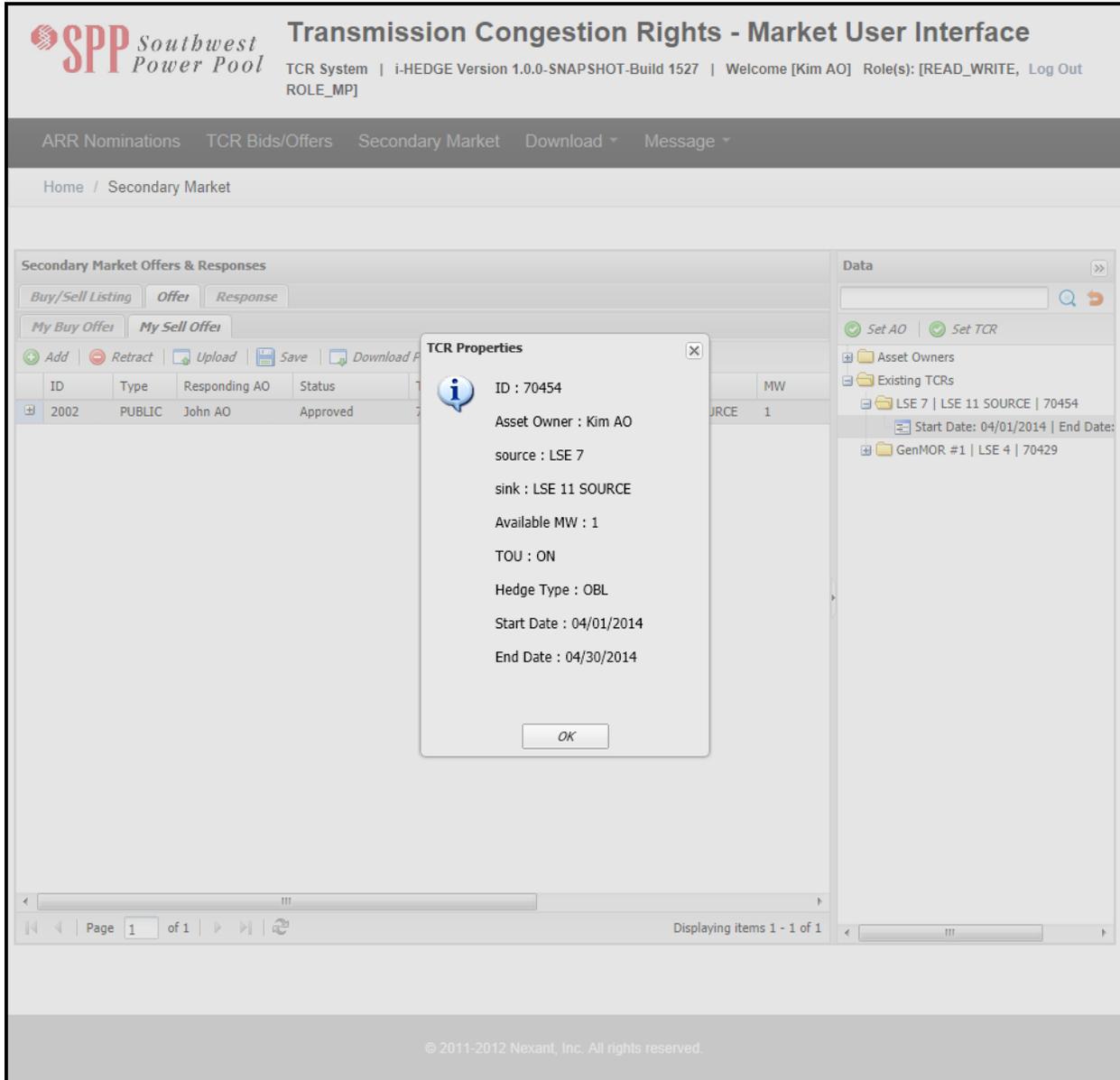


Figure 56 The Remaining TCR for time period 04/01/2014 to 04/30/2014

9.3.3 Secondary Market Trade Activity Flows

The buy bid activity flow that covers a comprehensive TCR buy transaction, i.e., posting a TCR buy offer and responding to it, are shown in Figure 57 and Figure 58. The sell bid activity flow that covers a comprehensive TCR sell transaction, i.e., posting a TCR sell offer and responding to it, is shown in Figure 59 and Figure 60.

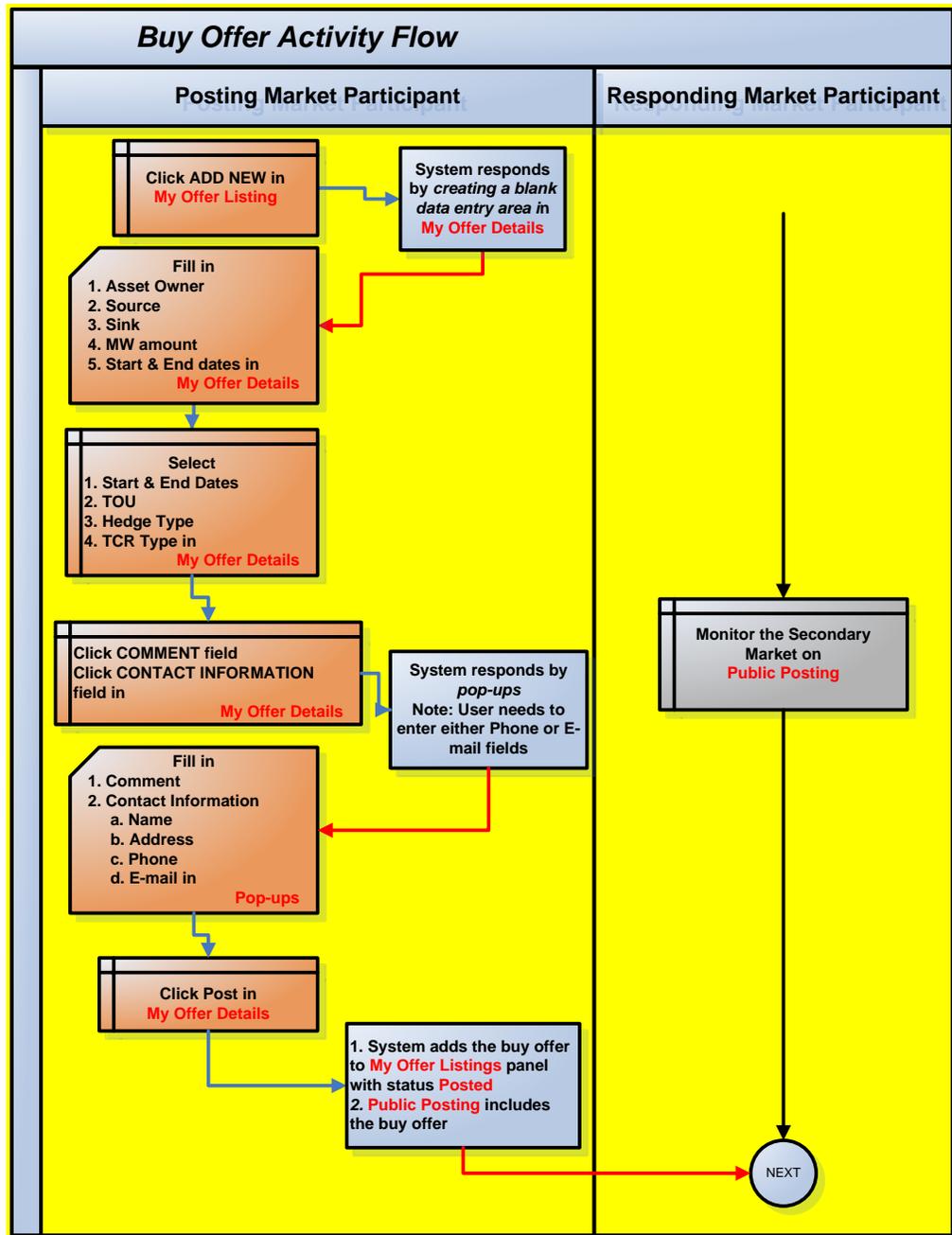


Figure 57 Buy Bid Activity Flow

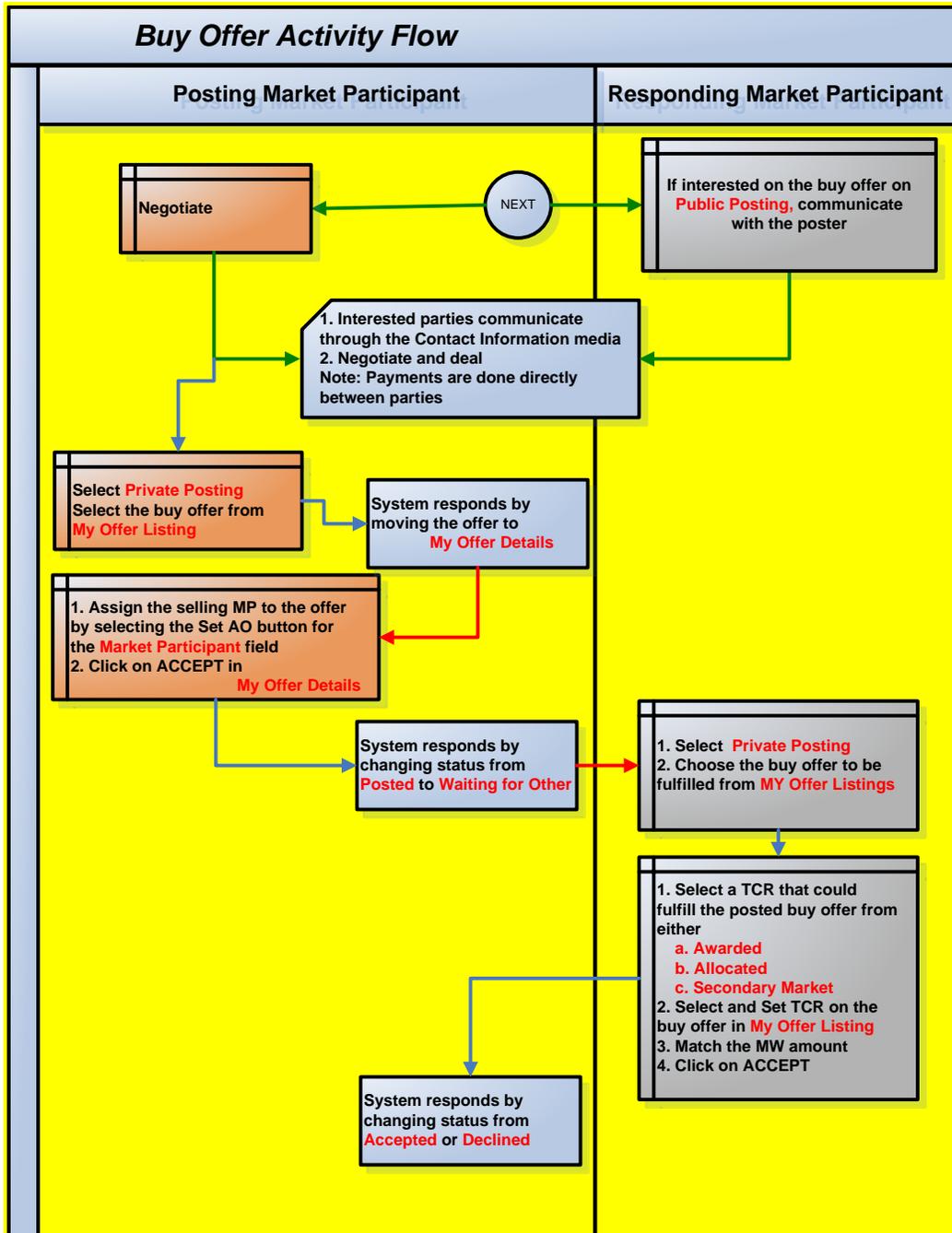


Figure 58 Buy Bid Activity Flow

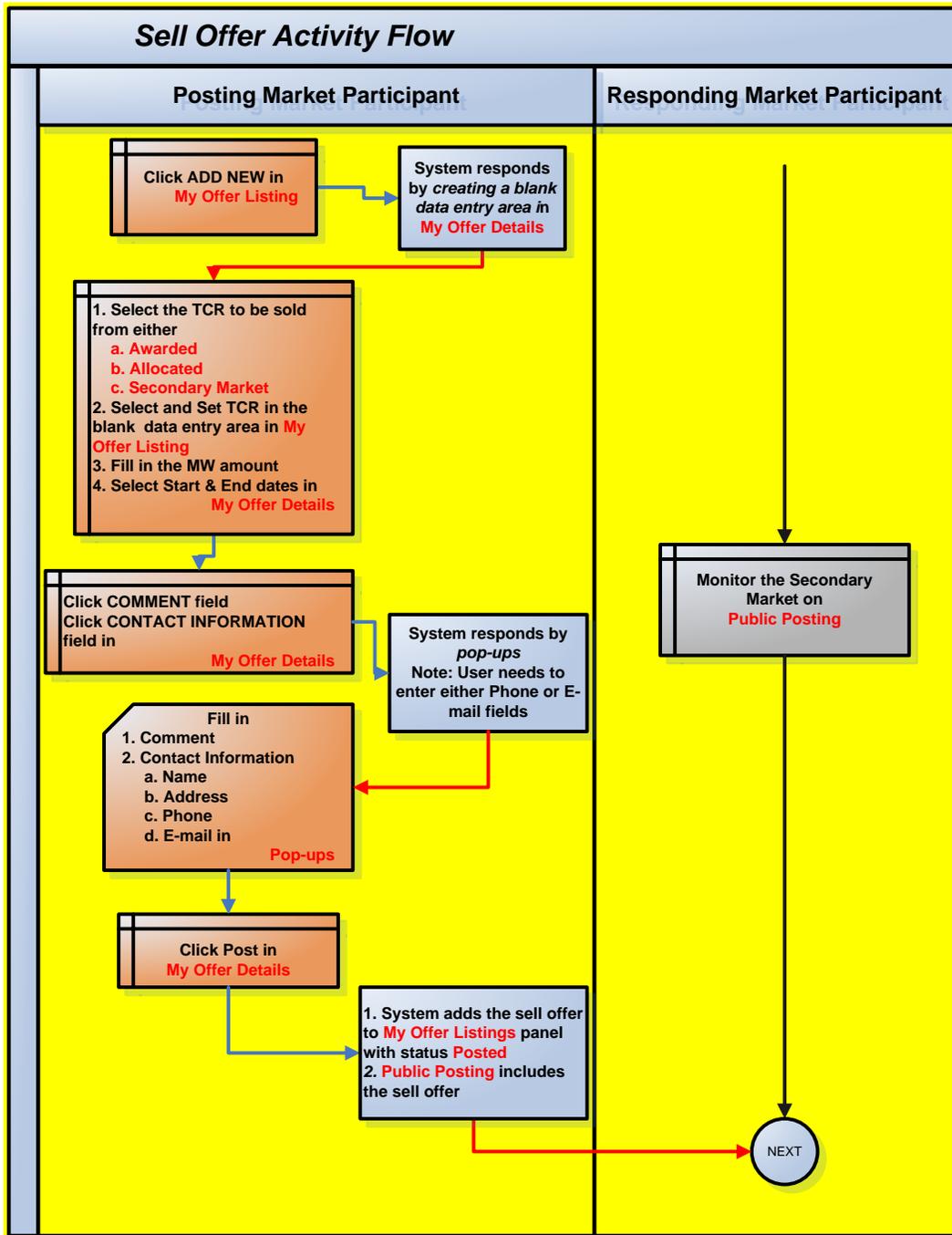


Figure 59 Sell Offer Activity Flow

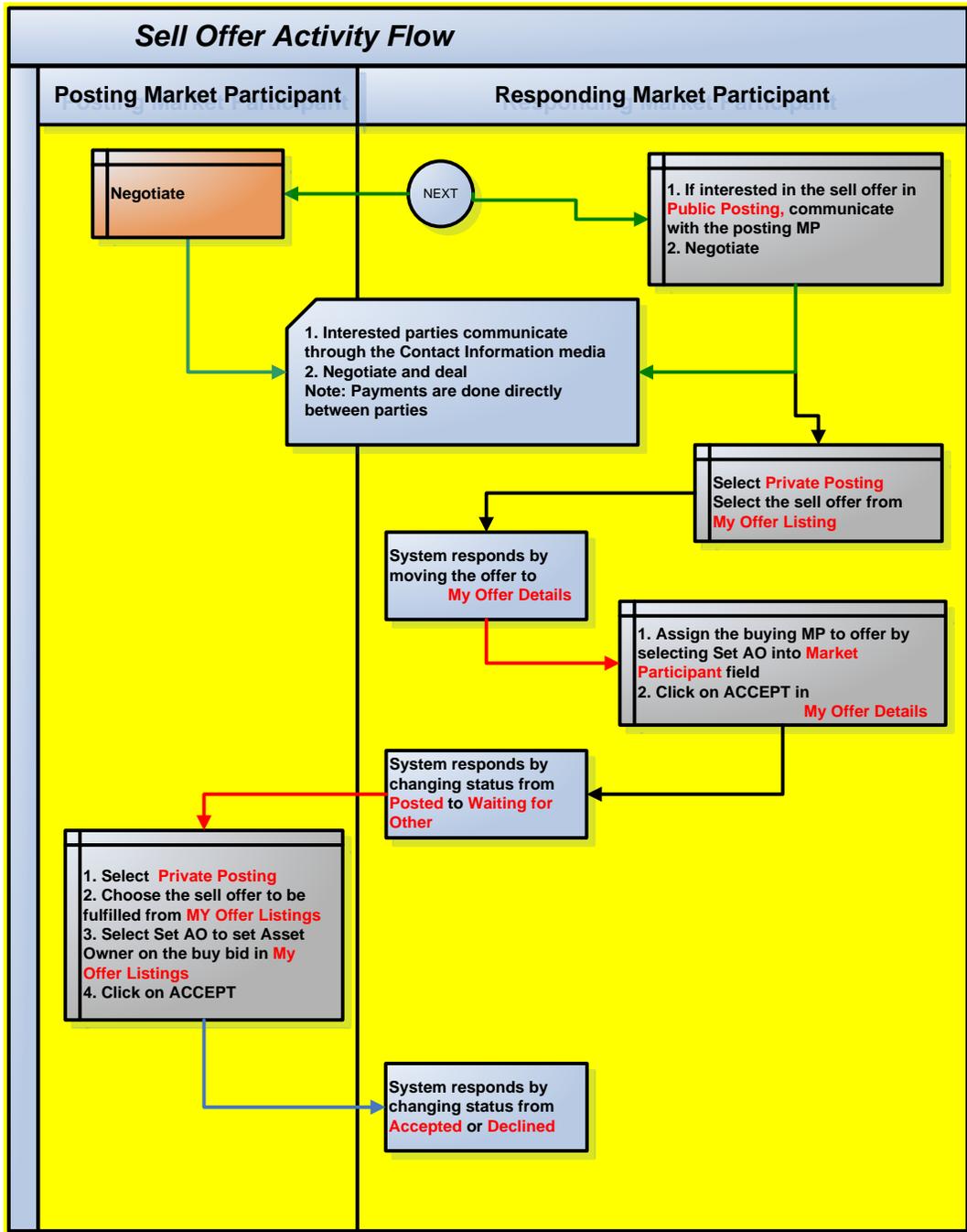


Figure 60 Sell Offer Activity Flow

10. Public and Private Downloads

10.1 Available Public Information on the TCR Download Interface

The TCR Public download interface is available to all SPP Asset Owners and the same information is presented to all of them.

At any time, users can:

1. Download and view general information such as Existing TCRs in CSV and XML formats.

For each period of an allocation or auction, users can:

1. Download and view the Contingency list in CSV and XML formats.
2. Download and view Flowgate definitions in CSV and XML formats.
3. Download and view Monitored Lines and Transformers list in CSV and XML formats.
4. Download and view network(s) in PSS/E RAWD format release 31.0.
5. Download and view Parallel Flows in CSV and XML formats.
6. Download and view the Scheduled Outages in CSV and XML formats.

Prior to an allocation or auction, users can:

1. Download and view Source and Sink definitions in CSV and XML formats.
2. Download and view Baseloading TCRs in CSV and XML formats.

After each round of the seasonal allocation has been run, users can:

1. Download and view Binding Constraints in CSV and XML formats

After an auction round is completed, users can:

1. Download and view Auction Clearing Prices for Sources/Sinks in CSV and XML formats.
2. Download and view Auction results (TCRs) in CSV and XML formats.
3. Download and view Binding Constraints in CSV and XML formats.

10.1.1 Download and View General Data

By clicking the **General** tab on Public TCR interface the users will enter the General Data download page shown in Figure 61. Data is generally available in CSV formatted

files, which are easily read by software packages such as Microsoft EXCEL™, or in XML formatted files. Details of the CSV formatted data files are described below and are viewed using Microsoft EXCEL™. Details of the corresponding XML formatted files can be found in the document entitled: **SPP Transmission Congestion Rights System – Market User Interface – XML Reference.**

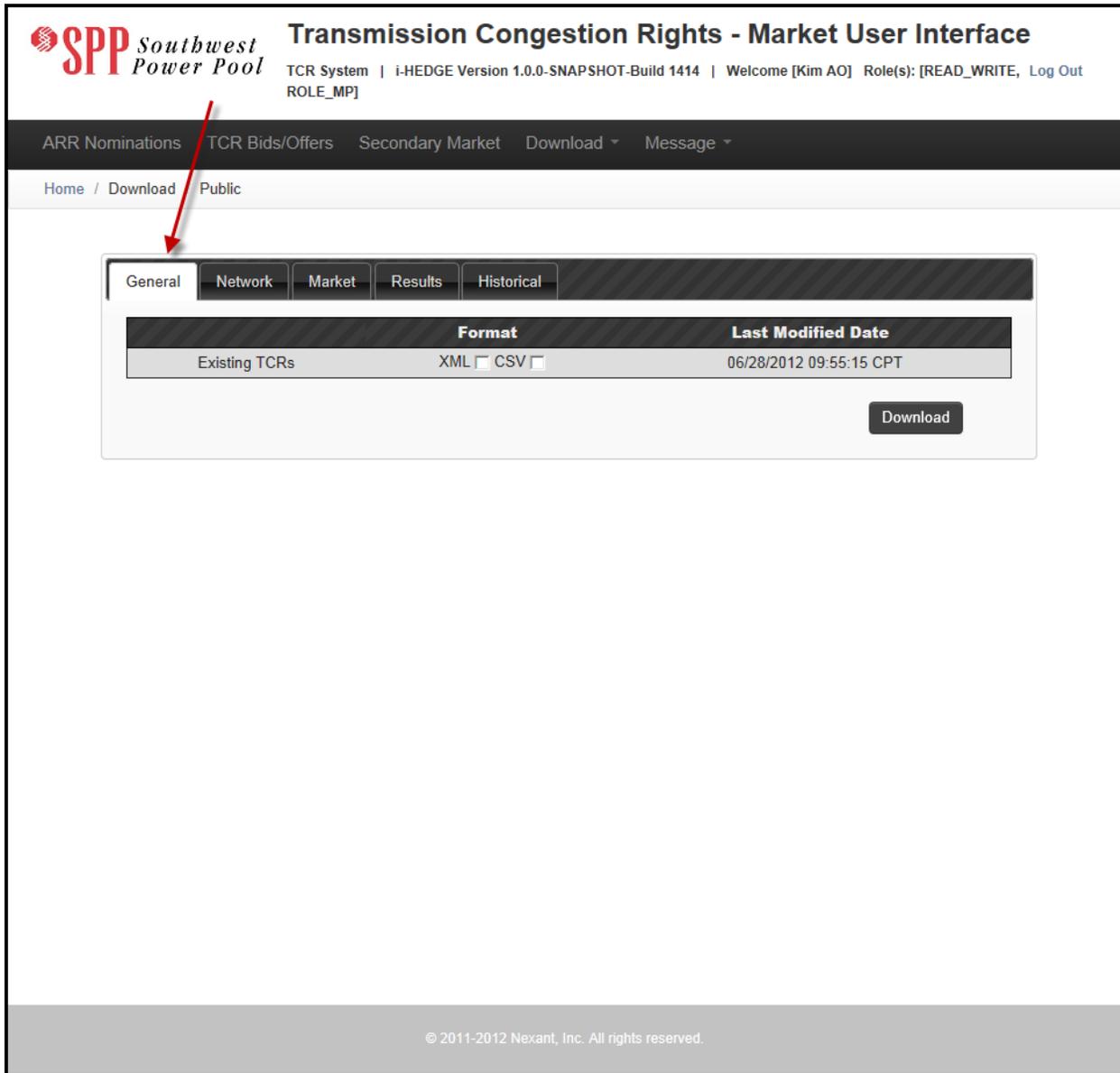
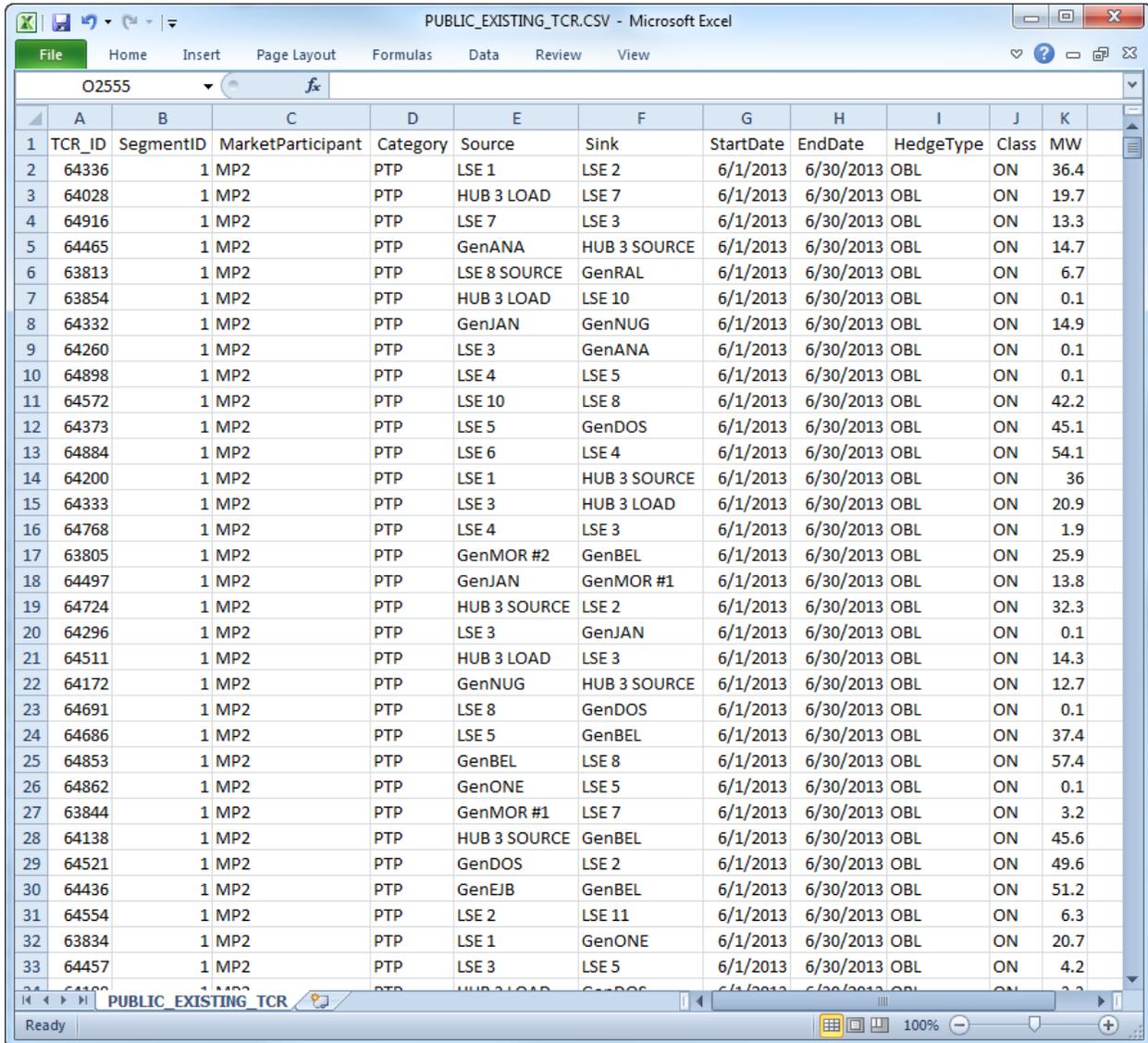


Figure 61 General Data Available from the Public TCR Interface

10.1.1.1 Download and view the Existing TCRs in XML or CSV formats

Check the box for XML and/or CSV formats and click the **Download** button to download the existing TCRs list in text file(s) of the chosen formats. The download will be in a zipped format, which can be viewed using an unzipping tool. A sample existing TCRs list in CSV format is shown in **Figure 62**.



TCR_ID	SegmentID	MarketParticipant	Category	Source	Sink	StartDate	EndDate	HedgeType	Class	MW
64336	1	MP2	PTP	LSE 1	LSE 2	6/1/2013	6/30/2013	OBL	ON	36.4
64028	1	MP2	PTP	HUB 3 LOAD	LSE 7	6/1/2013	6/30/2013	OBL	ON	19.7
64916	1	MP2	PTP	LSE 7	LSE 3	6/1/2013	6/30/2013	OBL	ON	13.3
64465	1	MP2	PTP	GenANA	HUB 3 SOURCE	6/1/2013	6/30/2013	OBL	ON	14.7
63813	1	MP2	PTP	LSE 8 SOURCE	GenRAL	6/1/2013	6/30/2013	OBL	ON	6.7
63854	1	MP2	PTP	HUB 3 LOAD	LSE 10	6/1/2013	6/30/2013	OBL	ON	0.1
64332	1	MP2	PTP	GenJAN	GenNUG	6/1/2013	6/30/2013	OBL	ON	14.9
64260	1	MP2	PTP	LSE 3	GenANA	6/1/2013	6/30/2013	OBL	ON	0.1
64898	1	MP2	PTP	LSE 4	LSE 5	6/1/2013	6/30/2013	OBL	ON	0.1
64572	1	MP2	PTP	LSE 10	LSE 8	6/1/2013	6/30/2013	OBL	ON	42.2
64373	1	MP2	PTP	LSE 5	GenDOS	6/1/2013	6/30/2013	OBL	ON	45.1
64884	1	MP2	PTP	LSE 6	LSE 4	6/1/2013	6/30/2013	OBL	ON	54.1
64200	1	MP2	PTP	LSE 1	HUB 3 SOURCE	6/1/2013	6/30/2013	OBL	ON	36
64333	1	MP2	PTP	LSE 3	HUB 3 LOAD	6/1/2013	6/30/2013	OBL	ON	20.9
64768	1	MP2	PTP	LSE 4	LSE 3	6/1/2013	6/30/2013	OBL	ON	1.9
63805	1	MP2	PTP	GenMOR #2	GenBEL	6/1/2013	6/30/2013	OBL	ON	25.9
64497	1	MP2	PTP	GenJAN	GenMOR #1	6/1/2013	6/30/2013	OBL	ON	13.8
64724	1	MP2	PTP	HUB 3 SOURCE	LSE 2	6/1/2013	6/30/2013	OBL	ON	32.3
64296	1	MP2	PTP	LSE 3	GenJAN	6/1/2013	6/30/2013	OBL	ON	0.1
64511	1	MP2	PTP	HUB 3 LOAD	LSE 3	6/1/2013	6/30/2013	OBL	ON	14.3
64172	1	MP2	PTP	GenNUG	HUB 3 SOURCE	6/1/2013	6/30/2013	OBL	ON	12.7
64691	1	MP2	PTP	LSE 8	GenDOS	6/1/2013	6/30/2013	OBL	ON	0.1
64686	1	MP2	PTP	LSE 5	GenBEL	6/1/2013	6/30/2013	OBL	ON	37.4
64853	1	MP2	PTP	GenBEL	LSE 8	6/1/2013	6/30/2013	OBL	ON	57.4
64862	1	MP2	PTP	GenONE	LSE 5	6/1/2013	6/30/2013	OBL	ON	0.1
63844	1	MP2	PTP	GenMOR #1	LSE 7	6/1/2013	6/30/2013	OBL	ON	3.2
64138	1	MP2	PTP	HUB 3 SOURCE	GenBEL	6/1/2013	6/30/2013	OBL	ON	45.6
64521	1	MP2	PTP	GenDOS	LSE 2	6/1/2013	6/30/2013	OBL	ON	49.6
64436	1	MP2	PTP	GenEJB	GenBEL	6/1/2013	6/30/2013	OBL	ON	51.2
64554	1	MP2	PTP	LSE 2	LSE 11	6/1/2013	6/30/2013	OBL	ON	6.3
63834	1	MP2	PTP	LSE 1	GenONE	6/1/2013	6/30/2013	OBL	ON	20.7
64457	1	MP2	PTP	LSE 3	LSE 5	6/1/2013	6/30/2013	OBL	ON	4.2

Figure 62 Sample Existing TCR List in CSV Format

The following information is available from this file:

- **TCR_ID** – The unique ID of the TCR
- **SegmentID** – The segment number of a profiled TCR

- **MarketParticipant** – Name of the Market Participant who owns the TCR
- **Category**– Flag denoting the type of the TCR – Point-to-Point (PTP)
- **Source** – Name of the Source for the TCR
- **Sink** – Name of the Sink for the TCR
- **StartDate** – The beginning date of the time period for which the TCR is considered valid
- **EndDate** – The end date of the time period for which the TCR is considered valid
- **HedgeType** -- obligation (OBL) of the TCR
- **Class** – Peak market (ON) or off-peak (OFF) time of use of the TCR
- **MW** – The MW value associated with the TCR

10.1.1.2 Selecting a model to download

In the remaining tabs (Network, Market, Results and Historical) of the Public Downloads, the user has to select both a particular Market Term (Annual Allocation, Incremental Allocation, Annual Auction or Monthly Auction) from a drop down list and the specific Market name from the second drop down list. Where applicable, the user has to further select the auction round.

10.1.2 Download and View Network Data

By clicking the **Network** tab on Public TCR interface the users will enter the Network Data download page shown in **Figure 63**.

The screenshot shows the 'Transmission Congestion Rights - Market User Interface' for the Southwest Power Pool. The page includes a navigation menu with 'ARR Nominations', 'TCR Bids/Offers', 'Secondary Market', 'Download', and 'Message'. Below the menu, there are dropdown menus for 'Market Term' (set to 'Annual Allocation') and 'Market' (set to 'Annual Allocation FAT Rr2 Full Moc'). A red arrow points to the 'Network' tab in the main content area. The 'Network' tab contains a table with the following data:

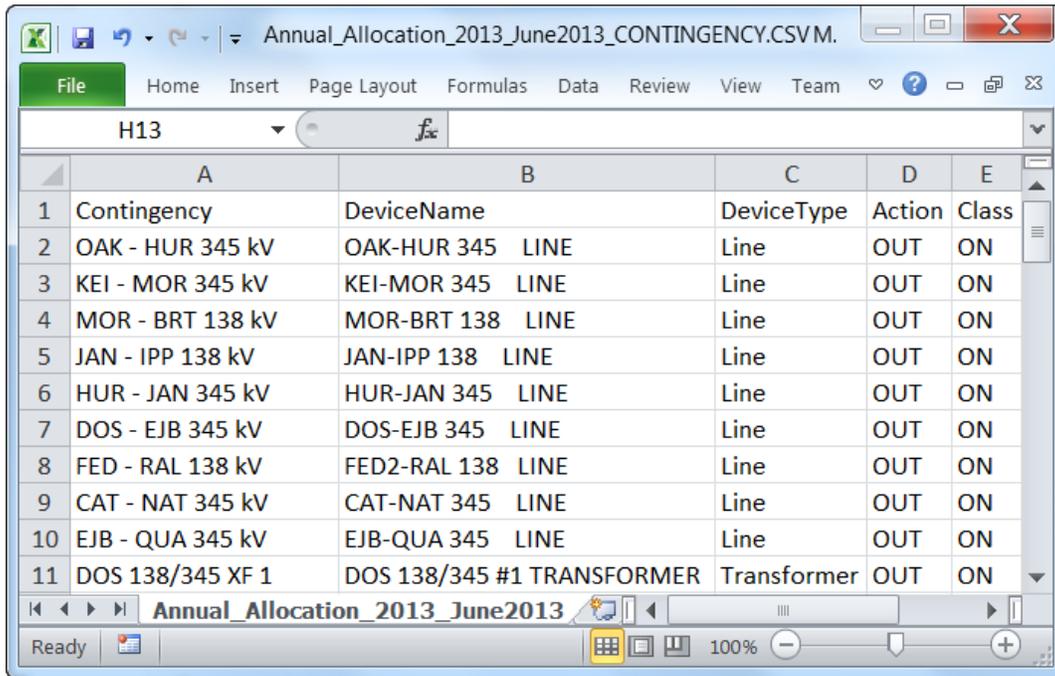
	Format	Last Modified Date
Contingencies	XML <input type="checkbox"/> CSV <input type="checkbox"/>	06/28/2012 09:57:38 CPT
Flowgates	XML <input type="checkbox"/> CSV <input type="checkbox"/>	06/28/2012 09:57:38 CPT
Monitored Lines and Transformers	XML <input type="checkbox"/> CSV <input type="checkbox"/>	06/28/2012 09:57:38 CPT
Network Model	RAW <input type="checkbox"/>	06/28/2012 09:57:38 CPT
Parallel Flows	XML <input type="checkbox"/> CSV <input type="checkbox"/>	06/28/2012 09:57:38 CPT
Scheduled Outages	XML <input type="checkbox"/> CSV <input type="checkbox"/>	06/28/2012 09:57:38 CPT

Below the table is a 'Download' button. The footer of the page reads '© 2011-2012 Nexant, Inc. All rights reserved.'

Figure 63 Network Data on the Public TCR Interface

10.1.2.1 Download and view contingencies in XML or CSV formats

Check the box associated with the **Contingencies** data category as shown in **Figure 63** for XML and/or CSV formats. Then click the **Download** button to download the contingencies data in the chosen formats. The download will be in a zipped format, which can be viewed using an unzipping tool. A sample contingency list in **CSV** format is shown in **Figure 64**.



	A	B	C	D	E
1	Contingency	DeviceName	DeviceType	Action	Class
2	OAK - HUR 345 kV	OAK-HUR 345 LINE	Line	OUT	ON
3	KEI - MOR 345 kV	KEI-MOR 345 LINE	Line	OUT	ON
4	MOR - BRT 138 kV	MOR-BRT 138 LINE	Line	OUT	ON
5	JAN - IPP 138 kV	JAN-IPP 138 LINE	Line	OUT	ON
6	HUR - JAN 345 kV	HUR-JAN 345 LINE	Line	OUT	ON
7	DOS - EJB 345 kV	DOS-EJB 345 LINE	Line	OUT	ON
8	FED - RAL 138 kV	FED2-RAL 138 LINE	Line	OUT	ON
9	CAT - NAT 345 kV	CAT-NAT 345 LINE	Line	OUT	ON
10	EJB - QUA 345 kV	EJB-QUA 345 LINE	Line	OUT	ON
11	DOS 138/345 XF 1	DOS 138/345 #1 TRANSFORMER	Transformer	OUT	ON

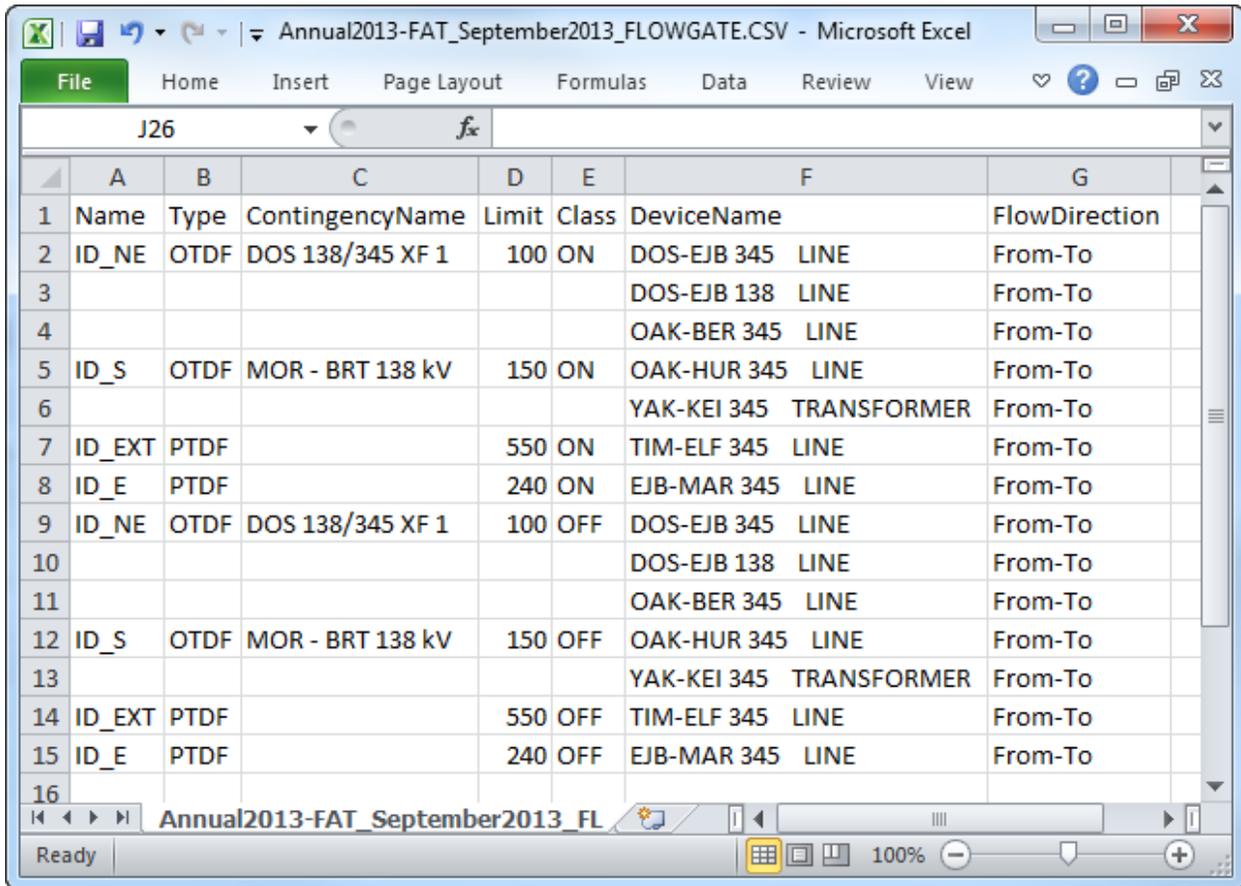
Figure 64 Sample Contingency List in CSV Format

The following information is available from this file:

- **Contingency** – The name of the contingency
- **Device Name** – The name of the device which is inaged or outaged in the contingency
- **Device Type** – The type of the device (Line, Transformer)
- **Action** – Whether the device is “in-aged” (put IN service) or outaged (taken OUT of service)
- **Class** – The time period of use - Peak (ON) or Off-peak(OFF)

10.1.2.2 Download and view Flowgates in XML or CSV formats

Check the box associated with the **Flowgates** data category as shown in **Figure 63** for XML and/or CSV formats. Then click the **Download** button to download the flowgate data in the chosen formats. The download will be in a zipped format, which can be viewed using an unzipping tool. A sample flowgate list in **CSV** format is shown in **Figure 65**.



	A	B	C	D	E	F	G
1	Name	Type	ContingencyName	Limit	Class	DeviceName	FlowDirection
2	ID_NE	OTDF	DOS 138/345 XF 1	100	ON	DOS-EJB 345 LINE	From-To
3						DOS-EJB 138 LINE	From-To
4						OAK-BER 345 LINE	From-To
5	ID_S	OTDF	MOR - BRT 138 kV	150	ON	OAK-HUR 345 LINE	From-To
6						YAK-KEI 345 TRANSFORMER	From-To
7	ID_EXT	PTDF		550	ON	TIM-ELF 345 LINE	From-To
8	ID_E	PTDF		240	ON	EJB-MAR 345 LINE	From-To
9	ID_NE	OTDF	DOS 138/345 XF 1	100	OFF	DOS-EJB 345 LINE	From-To
10						DOS-EJB 138 LINE	From-To
11						OAK-BER 345 LINE	From-To
12	ID_S	OTDF	MOR - BRT 138 kV	150	OFF	OAK-HUR 345 LINE	From-To
13						YAK-KEI 345 TRANSFORMER	From-To
14	ID_EXT	PTDF		550	OFF	TIM-ELF 345 LINE	From-To
15	ID_E	PTDF		240	OFF	EJB-MAR 345 LINE	From-To
16							

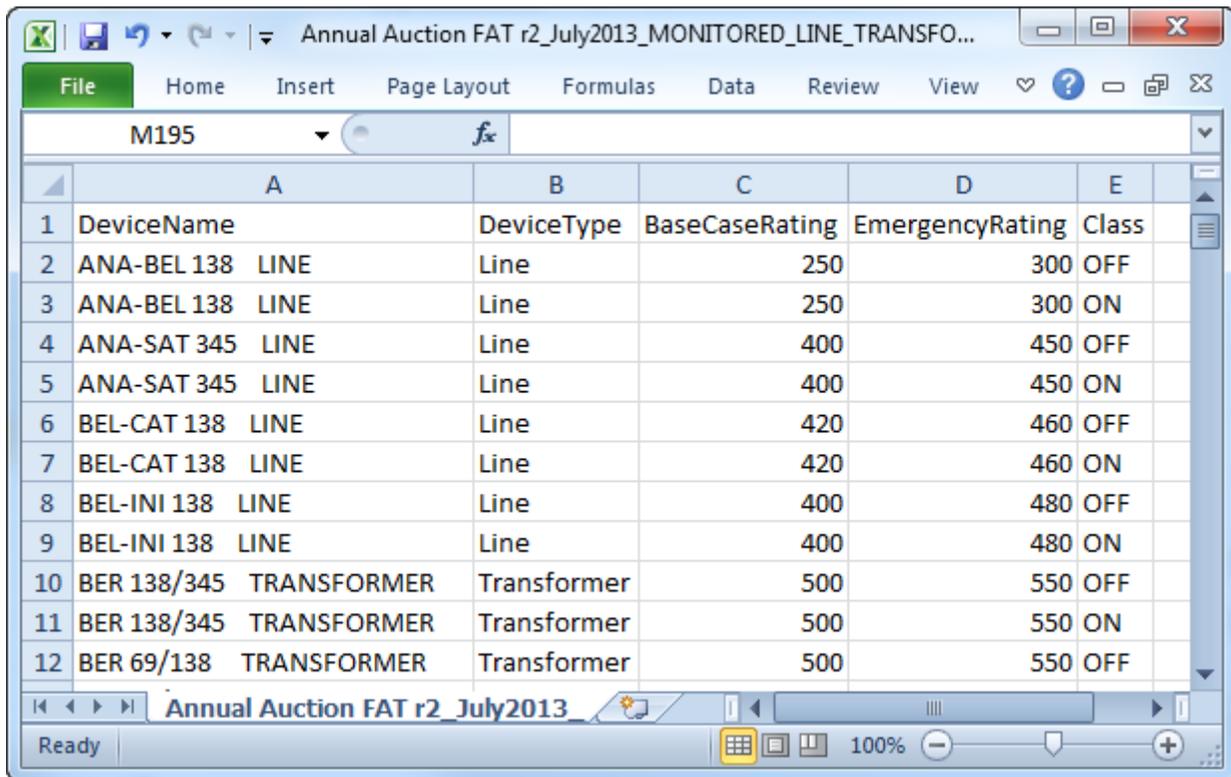
Figure 65 Sample Flowgate List in CSV Format

The following information is available from this file:

- **Name** – The name of the flowgate
- **Type** – The type of flowgate (PTDF or OTDF)
- **Contingency Name** – The device name of the flowgate contingency, if any— applicable only to OTDF flowgates
- **Limit** – MW flow limit on the flowgate
- **Class** – States whether the flowgate MW limit is valid during Peak (ON) or Off-Peak (OFF) hours
- **Device Name** – The name of the device which is a component of the flowgate
- **FlowDirection** – The direction of the flow on the device component

10.1.2.3 Download and view Monitored Branches in XML or CSV formats

Check the box associated with the **Monitored Lines and Transformers** data category as shown in **Figure 63** for XML and/or CSV formats. Then click the **Download** button to download the contingencies data in the chosen formats. The download will be in a zipped format, which can be viewed using an unzipping tool. A sample list of monitored lines and transformers in **CSV** format is shown in **Figure 66**.



	A	B	C	D	E
1	DeviceName	DeviceType	BaseCaseRating	EmergencyRating	Class
2	ANA-BEL 138 LINE	Line	250	300	OFF
3	ANA-BEL 138 LINE	Line	250	300	ON
4	ANA-SAT 345 LINE	Line	400	450	OFF
5	ANA-SAT 345 LINE	Line	400	450	ON
6	BEL-CAT 138 LINE	Line	420	460	OFF
7	BEL-CAT 138 LINE	Line	420	460	ON
8	BEL-INI 138 LINE	Line	400	480	OFF
9	BEL-INI 138 LINE	Line	400	480	ON
10	BER 138/345 TRANSFORMER	Transformer	500	550	OFF
11	BER 138/345 TRANSFORMER	Transformer	500	550	ON
12	BER 69/138 TRANSFORMER	Transformer	500	550	OFF

Figure 66 Sample Monitored Lines and Transformers List in CSV Format

The following information is available from this file:

- **DeviceName** – The name of the device name
- **DeviceType** – The type of device (Line or Transformer)
- **BaseCaseRating** – MW Rating of branch to be observed in the base case
- **EmergencyRating** – MW Rating of branch to be observed in the contingency cases

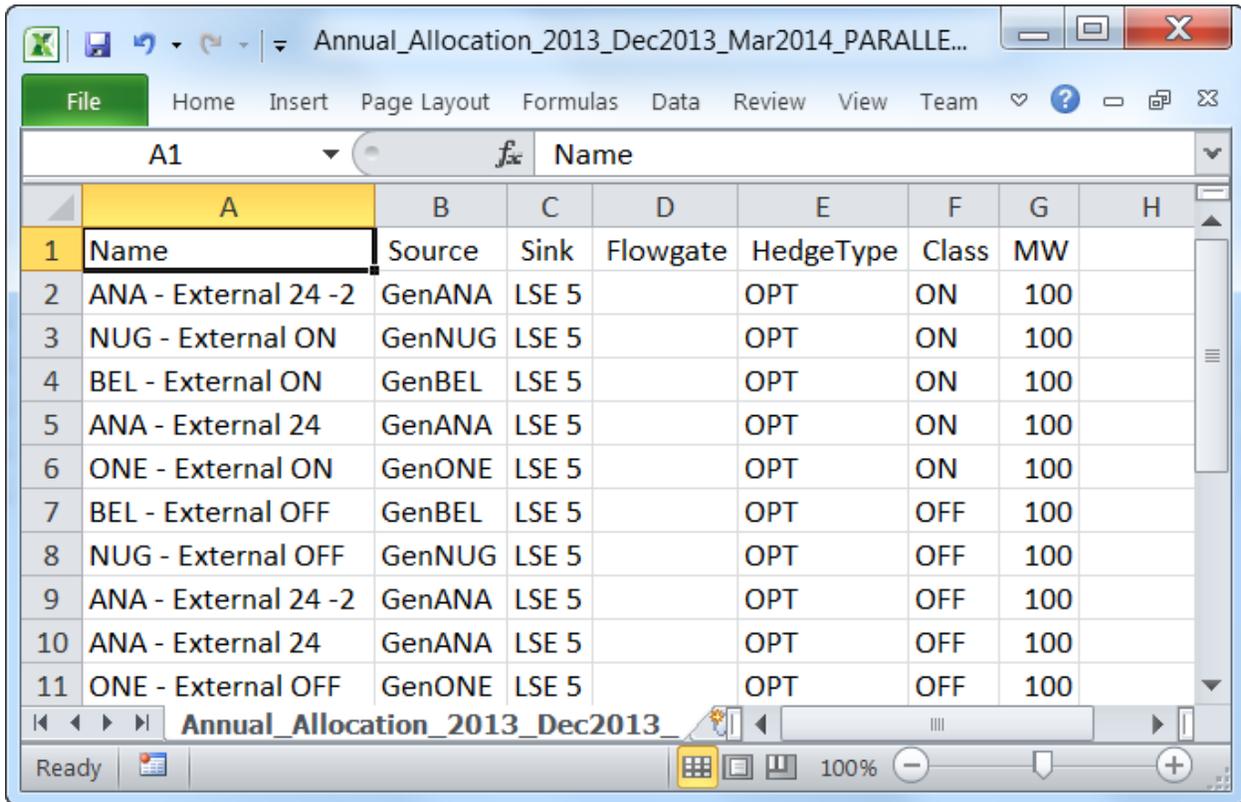
- **Class** – Time of use designation - peak (ON) or off-peak (OFF) where the branch is to be monitored

10.1.2.4 Download network data in PSS/E™ format release 31.0

Check the box associated with the **Network** data category as shown in **Figure 63** and click the **Download** button to download the network model data in PSS/E™ version 31 format for the peak and off-peak times of use. The download will be in a zipped format, which can be viewed using an unzipping tool. The data contained in this file is augmented with a SPP supplied **Device Name** that is included in comment form at the end of each PSS/E™ data record.

10.1.2.5 Download and view Parallel Flows in XML or CSV formats

Check the box associated with the **Parallel Flows** data category as shown in **Figure 63** for XML and/or CSV formats. Then click the **Download** button to download the contingencies data in the chosen formats. The download will be in a zipped format, which can be viewed using an unzipping tool. A sample parallel flows list in **CSV** format is shown in **Figure 67**.



	A	B	C	D	E	F	G	H
1	Name	Source	Sink	Flowgate	HedgeType	Class	MW	
2	ANA - External 24 -2	GenANA	LSE 5		OPT	ON	100	
3	NUG - External ON	GenNUG	LSE 5		OPT	ON	100	
4	BEL - External ON	GenBEL	LSE 5		OPT	ON	100	
5	ANA - External 24	GenANA	LSE 5		OPT	ON	100	
6	ONE - External ON	GenONE	LSE 5		OPT	ON	100	
7	BEL - External OFF	GenBEL	LSE 5		OPT	OFF	100	
8	NUG - External OFF	GenNUG	LSE 5		OPT	OFF	100	
9	ANA - External 24 -2	GenANA	LSE 5		OPT	OFF	100	
10	ANA - External 24	GenANA	LSE 5		OPT	OFF	100	
11	ONE - External OFF	GenONE	LSE 5		OPT	OFF	100	

Figure 67 Sample Parallel Flows list in CSV Format

The following information is available from this file:

- **Name** – Name associated with the Parallel Flow
- **Source** – The name of the source associated with the TCR Parallel Flow
- **Sink** – The name of the sink associated with the TCR Parallel Flow
- **Flowgate** -- The name of the Flowgate
- **HedgeType** — Option or Obligation type of the Loop Flow TCR
- **Class** – -- The time period of use - Peak (ON) or Off-peak (OFF) where the Parallel Flow TCR is valid
- **MW** – The MW value associated with the parallel flow

10.1.2.6 Download and view scheduled outages in XML or CSV formats

Check the box associated with the **Scheduled Outages** data category as shown in **Figure 63** for XML and/or CSV formats. Then click the **Download** button to download the contingencies data in the chosen formats. The download will be in a zipped format, which can be viewed using an unzipping tool. A sample scheduled outage list in **CSV** format is shown in **Figure 68**.

	A	B	C	D
1	Name	DeviceName	DeviceType	Class
2	OUTAGED	FED1-HUR 138	LINE	Line ON
3	OUTAGED	FED1-HUR 138	LINE	Line OFF

Figure 68 Sample Scheduled Outages List in CSV Format

The following information is available from this file:

- **Name** – Designated name for the Outage
- **DeviceName** – The name of the transmission line or transformer being outaged.
- **DeviceType** – Type of device (Line or Transformer)
- **Class** – The time period of use - Peak (ON) or Off-peak (OFF)

10.1.3 Download and View Market Data

By clicking the **Market** tab on Public TCR interface the users will enter the Market Data download page shown in Figure 69.

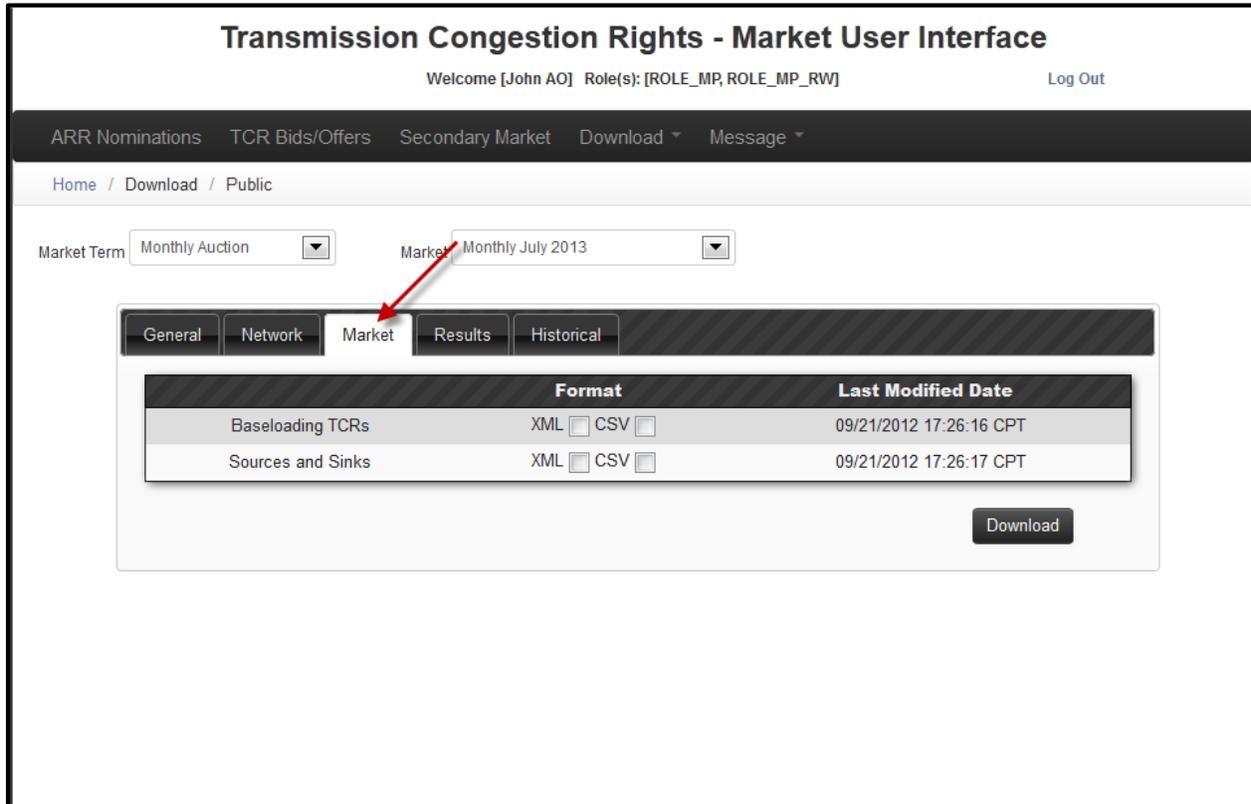


Figure 69 Market Data on the Public TCR Interface

The user selects the market data to download by selecting the Market Term from the drop down list on the left and the required Market from the drop down list on the right.

10.1.3.1 Download and view Sources and Sinks data in XML or CSV formats

Check the box associated with the **Sources and Sinks** data category as shown in **Figure 69** for XML and/or CSV formats. Then click the **Download** button to download the sources and sinks data in the chosen formats. The download will be in a zipped format, which can be viewed using an unzipping tool. A sample source/sink list in **CSV** format is shown in **Figure 70**.

	A	B	C	D	E
1	Name	Type	Class	PriceNode	BusName
2	LSE 10	HUB	ON	KEI 345	KEI 345 1
3	LSE 11 SOURCE	HUB	ON	IPP 138	IPP 138 1
4				BRT 69	BRT 69 1
5				BRT 138	BRT 138 1
6				MOR 138	MOR 138 1
7	LSE 8 SOURCE	HUB	ON	FED 345	FED 345 1
8				HUR 138 #1	HUR 138 1
9				FED 138 #2	FED 138 2
10				FED 138 #1	FED 138 1
11				HUR 138 #2	HUR 138 2
12				HUR 345	HUR 345 1
13	LSE 1	LZN	ON	DOS 138	DOS 138 1
14	LSE 9	HUB	ON	JAN 138	JAN 138 1

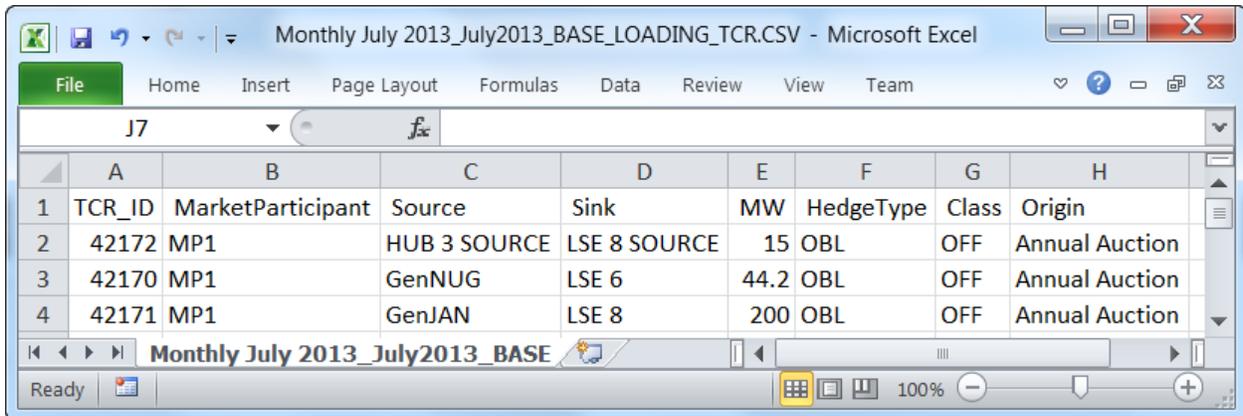
Figure 70 Sample Source/Sink Data in CSV Format

The following information is available from this file:

- **Name** – The name of the Source/Sink
- **Type** – The source/sink type (Generator Node, Load Node, Load Zone, Hub, Fixed Aggregate, Interface, Loop Flow Node, Pseudo-Tie Generator Node, Pseudo-Tie Load Node, Demand Node Type 1, Demand Node Type 2, External Asynchronous Resource Node, Stored Energy Resource)
- **Class** – States whether the source/sink is valid during the peak (ON) hours or off-peak (OFF) hours
- **PriceNode** – The name of the elemental Pnode associated with the source/sink
- **BusName** – The name of the bus associated with the source/sink associated with the source/sink—comes from the augmented name from the PSS/E™ file

10.1.3.2 Download and view Baseloading TCRs data in XML or CSV formats

Check the box associated with the **Baseloading TCRs** data category as shown in **Figure 69** for XML and/or CSV formats. Then click the **Download** button to download the sources and sinks data in the chosen formats. The download will be in a zipped format, which can be viewed using an unzipping tool. A sample Baseloading TCRs list in **CSV** format is shown in **Figure 71**.



	A	B	C	D	E	F	G	H
1	TCR_ID	MarketParticipant	Source	Sink	MW	HedgeType	Class	Origin
2	42172	MP1	HUB 3 SOURCE	LSE 8 SOURCE	15	OBL	OFF	Annual Auction
3	42170	MP1	GenNUG	LSE 6	44.2	OBL	OFF	Annual Auction
4	42171	MP1	GenJAN	LSE 8	200	OBL	OFF	Annual Auction

Figure 71 Sample Baseloading TCRs Data in CSV Format

The following information is available from this file:

- **TCR ID** – The ID of the previously awarded TCR
- **Market Participant** – The name of the Market Participant who owns the TCR
- **Source** – The name of the TCR source
- **Sink** – The name of the TCR sink
- **MW** – The MW associated with the TCR
- **HedgeType** – The Hedge Type of the TCR (Obligation, Option)
- **Class** – States whether the source/sink is valid during the peak (ON) hours or off-peak (OFF) hours
- **Origin** – Describes the origin of the TCR

10.1.4 Download and View Results (Allocation) Data

By clicking the **Results** tab on the Public TCR interface the users will enter the Result download page, and the user is presented with the screen shown in **Figure 72**.

The user selects the market (either auction or allocation) data to download by selecting a Market Type and Term from the drop down list on the left, the required Market from the drop down list in the middle, and the required Round from the drop down list on the right (when Allocation has been selected from Market Type and Term).

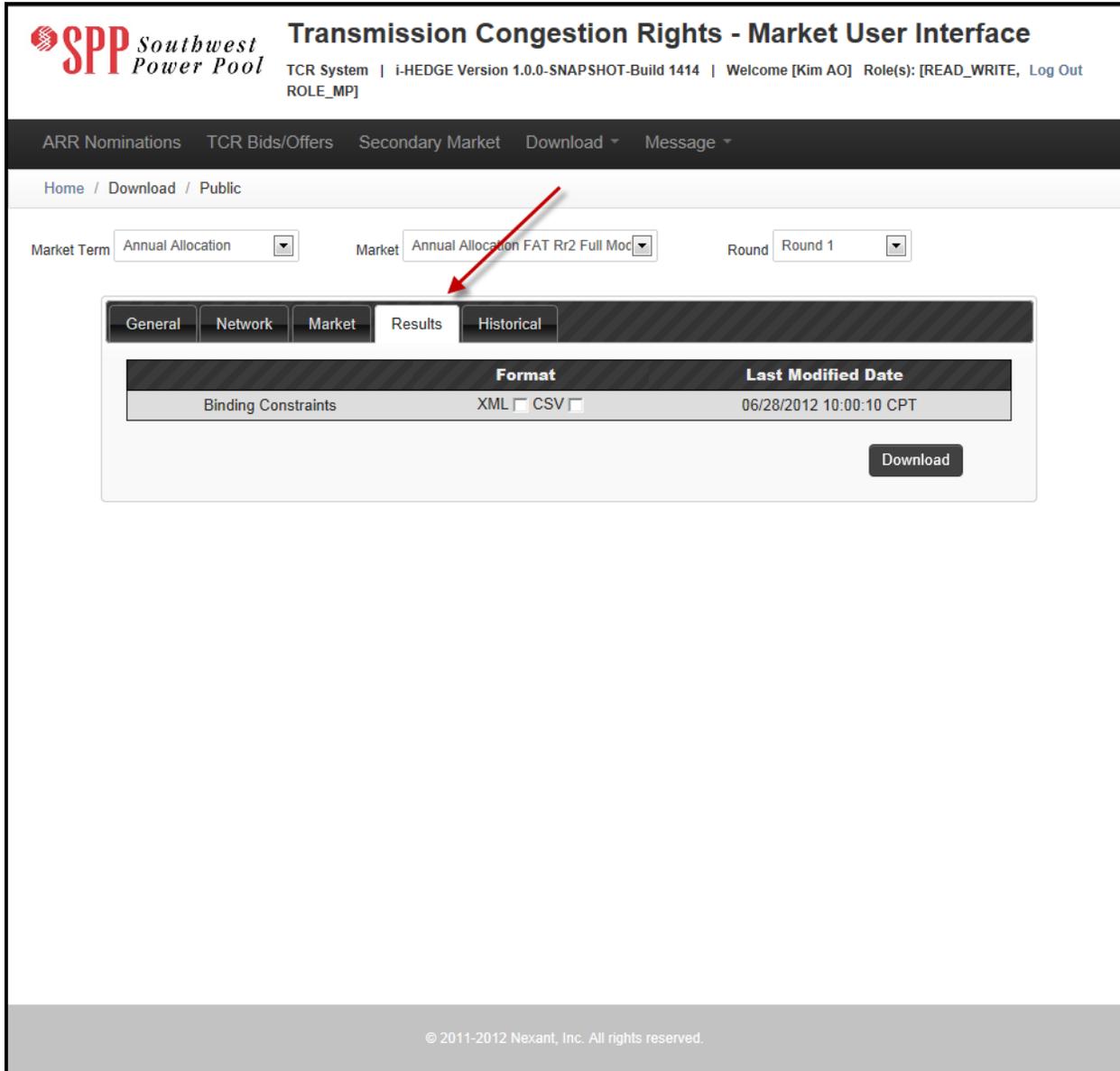
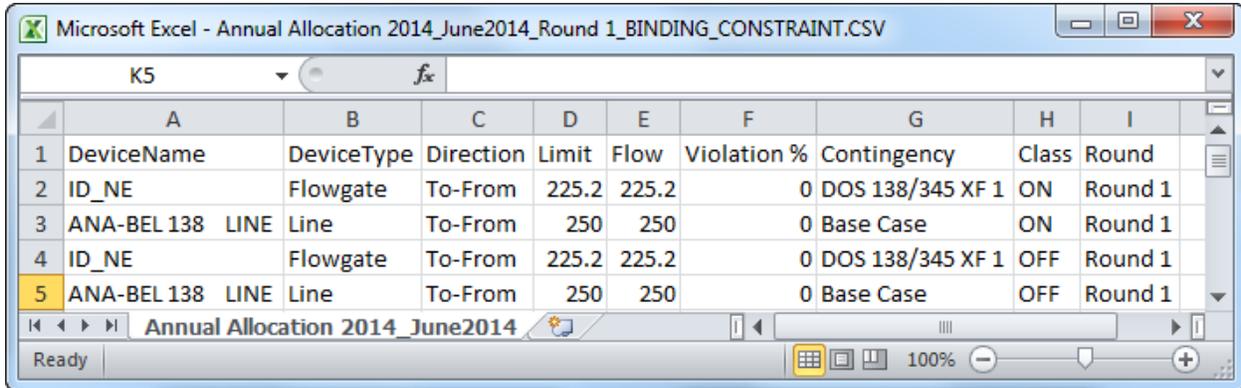


Figure 72 Allocation Results on the Public TCR Interface

10.1.4.1 Download and view Binding Constraints in XML or CSV formats

Check the box associated with the **Binding Constraints** data category as shown in **Figure 72** for XML and/or CSV formats. Then click the **Download** button to download the contingencies data in the chosen formats. The download will be in a zipped format, which can be viewed using an unzipping tool. A sample allocation binding constraints list in **CSV** format is shown in **Figure 73**.



	A	B	C	D	E	F	G	H	I
1	DeviceName	DeviceType	Direction	Limit	Flow	Violation %	Contingency	Class	Round
2	ID_NE	Flowgate	To-From	225.2	225.2	0	DOS 138/345 XF 1	ON	Round 1
3	ANA-BEL 138 LINE	Line	To-From	250	250	0	Base Case	ON	Round 1
4	ID_NE	Flowgate	To-From	225.2	225.2	0	DOS 138/345 XF 1	OFF	Round 1
5	ANA-BEL 138 LINE	Line	To-From	250	250	0	Base Case	OFF	Round 1

Figure 73 Sample Allocation Binding Constraint List in CSV Format

The following information is available from this file:

- **DeviceName** – Name of the binding constraint (transmission line, transformer, flowgate constraint associated with a nomogram)
- **DeviceType** – Type of device that is binding – Line, Transformer, Flowgate, Nomogram
- **Direction** – The direction of the flow on the component device. It can take on the values of “From-To”, “To-From”
- **Limit** – The MW flow limit on the device
- **Flow** – The MW flow on the device
- **Violation** – Percentage violation of the limit:for hard constraints, this value will be zero; and for soft constraints, this value will be a positive number.
- **Contingency** – The name of the contingency associated with the constraint that is binding
- **Class** – The time period of use - Peak (ON) or Off-peak (OFF) where the binding constraint is valid

- **Round-** The round associated with the binding constraint, e.g. “Round 1”, “Round 2” and “Round 3”

10.1.5 Download and View Results (Auction) Data

By selecting an Auction option from the Market Type and Term dropdown list within the Results tab, the user is presented with a screen shown in **Figure 74**. The user must also select a Market name from the Market dropdown list and a Round number from the Round dropdown list.



Transmission Congestion Rights - Market User Interface

TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1415 | Welcome [Kim AO] Role(s): [READ_WRITE, Log Out ROLE_MP]

ARR Nominations TCR Bids/Offers Secondary Market Download Message

Home / Download / Public

Market Term: Annual Auction Market: Annual Auction FAT r2 Round: Round 1

General Network Market Results Historical

	Format	Last Modified Date
Auction Clearing Prices	XML <input type="checkbox"/> CSV <input type="checkbox"/>	06/28/2012 10:38:16 CPT
Auction Results	XML <input type="checkbox"/> CSV <input type="checkbox"/>	06/28/2012 10:38:16 CPT
Binding Constraints	XML <input type="checkbox"/> CSV <input type="checkbox"/>	06/28/2012 10:38:16 CPT

Download

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Figure 74 Auction Results Available from the Public TCR Interface

10.1.5.1 Download/view Auction clearing prices in XML or CSV formats

Check the box associated with the **Auction clearing prices (i.e. source/sink clearing prices)** data category as shown in **Figure 74** for XML and/or CSV formats. Then click the **Download** button to download the auction clearing price data in the chosen formats. The download will be in a zipped format, which can be viewed using an unzipping tool. A sample auction clearing price list in **CSV** format is shown in Figure 75.

	A	B	C	D
1	SourceSink	Class	ClearingPrice	Round
2	LSE 8	ON	-456.51	Round1
3	HUB 3 LOAD	ON	464.73	Round1
4	GenONE	ON	-1767.11	Round1
5	LSE 7	ON	-118.55	Round1
6	LSE 6	ON	414.87	Round1
7	GenDOS	ON	0	Round1
8	LSE 8 SOURCE	ON	-456.51	Round1
9	GenANA	ON	926.51	Round1
10	LSE 5	ON	565.19	Round1
11	GenBEL	ON	-1181.74	Round1

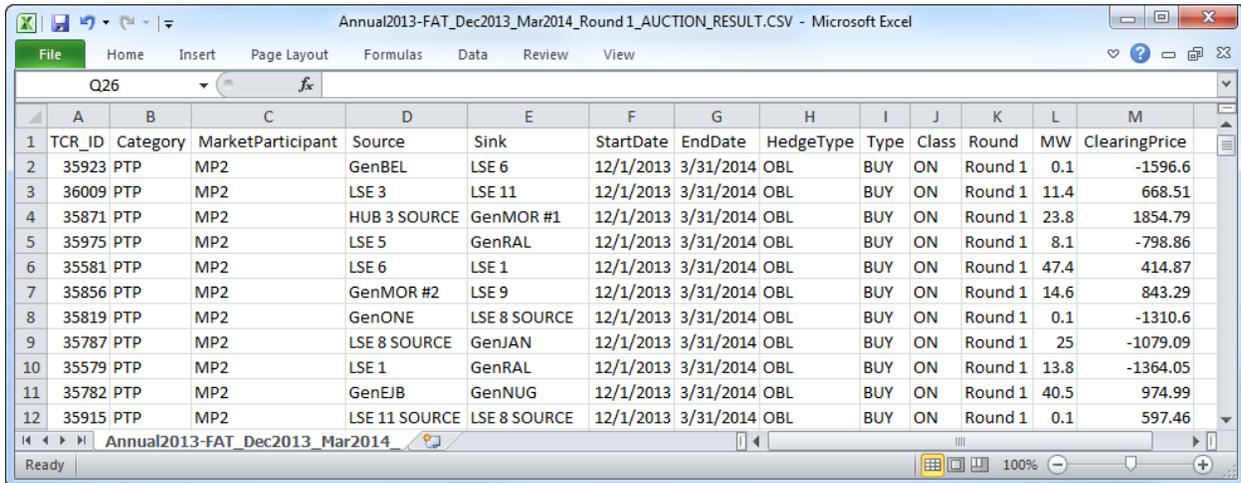
Figure 75 Sample Auction Clearing Price List in CSV Format

The following information is available from this file:

- **SourceSink** – The name of the source or the sink
- **Class** – The time period of use – Peak (ON) or off-peak (OFF) market for which the source/sink clearing price is calculated
- **Clearing Price** – The clearing price of the source/sink in \$/MW
- **Round** – The round number of the auction

10.1.5.2 Download and view Results for an auction in XML or CSV formats

Check the box associated with the **Auction Results** data category as shown in **Figure 74** for XML and/or CSV formats. Then click the **Download** button to download the contingencies data in the chosen formats. The download will be in a zipped format, which can be viewed using an unzipping tool. A sample auction results list in **CSV** format is shown in Figure 76.



	A	B	C	D	E	F	G	H	I	J	K	L	M
1	TCR_ID	Category	MarketParticipant	Source	Sink	StartDate	EndDate	HedgeType	Type	Class	Round	MW	ClearingPrice
2	35923	PTP	MP2	GenBEL	LSE 6	12/1/2013	3/31/2014	OBL	BUY	ON	Round 1	0.1	-1596.6
3	36009	PTP	MP2	LSE 3	LSE 11	12/1/2013	3/31/2014	OBL	BUY	ON	Round 1	11.4	668.51
4	35871	PTP	MP2	HUB 3 SOURCE	GenMOR #1	12/1/2013	3/31/2014	OBL	BUY	ON	Round 1	23.8	1854.79
5	35975	PTP	MP2	LSE 5	GenRAL	12/1/2013	3/31/2014	OBL	BUY	ON	Round 1	8.1	-798.86
6	35581	PTP	MP2	LSE 6	LSE 1	12/1/2013	3/31/2014	OBL	BUY	ON	Round 1	47.4	414.87
7	35856	PTP	MP2	GenMOR #2	LSE 9	12/1/2013	3/31/2014	OBL	BUY	ON	Round 1	14.6	843.29
8	35819	PTP	MP2	GenONE	LSE 8 SOURCE	12/1/2013	3/31/2014	OBL	BUY	ON	Round 1	0.1	-1310.6
9	35787	PTP	MP2	LSE 8 SOURCE	GenJAN	12/1/2013	3/31/2014	OBL	BUY	ON	Round 1	25	-1079.09
10	35579	PTP	MP2	LSE 1	GenRAL	12/1/2013	3/31/2014	OBL	BUY	ON	Round 1	13.8	-1364.05
11	35782	PTP	MP2	GenEJB	GenNUG	12/1/2013	3/31/2014	OBL	BUY	ON	Round 1	40.5	974.99
12	35915	PTP	MP2	LSE 11 SOURCE	LSE 8 SOURCE	12/1/2013	3/31/2014	OBL	BUY	ON	Round 1	0.1	597.46

Figure 76 Sample Public Auction Results in CSV Format

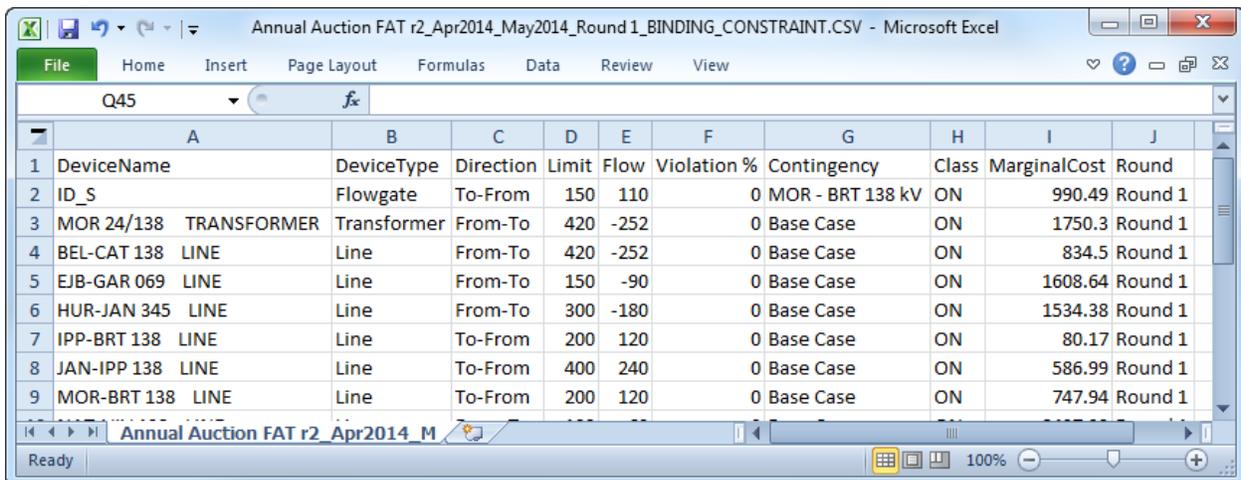
The following information is available from this file:

- **TCR ID** – The unique id of the TCR
- **Category** – Flag denoting the type of the TCR – Point-to-Point (PTP)
- **MarketParticipant** – Name of the Market Participant who owns the TCR
- **Source** – The name of the source for a TCR
- **Sink** – The name of the sink for a TCR
- **StartDate** – The starting date corresponding to the TCR
- **EndDate** – The ending date corresponding to the TCR
- **HedgeType** –TCR type - obligation (OBL)
- **Type** – Buy bid (BUY) or Sell offer (SELL)
- **Class** – The time period of use - peak (ON) or off-peak (OFF) market where the TCR was awarded

- **Round** – The bidding round of the auction where the PTP TCR was awarded
- **MW** – The MW amount of the TCR bought or sold to the nearest tenth of a MW
- **Clearing Price** – The clearing price of the TCR buy bid or sell offer in \$/MW— may be positive or negative.

10.1.5.3 Download/view auction binding constraints in XML or CSV formats

Check the box associated with the **Auction binding constraints** data category as shown in **Figure 74** for XML and/or CSV formats. Then click the **Download** button to download the auction clearing price data in the chosen formats. The download will be in a zipped format, which can be viewed using an unzipping tool. A sample auction clearing price list in **CSV** format is shown in Figure 77.



	A	B	C	D	E	F	G	H	I	J
1	DeviceName	DeviceType	Direction	Limit	Flow	Violation %	Contingency	Class	MarginalCost	Round
2	ID_S	Flowgate	To-From	150	110	0	MOR - BRT 138 kV	ON	990.49	Round 1
3	MOR 24/138 TRANSFORMER	Transformer	From-To	420	-252	0	Base Case	ON	1750.3	Round 1
4	BEL-CAT 138 LINE	Line	From-To	420	-252	0	Base Case	ON	834.5	Round 1
5	EJB-GAR 069 LINE	Line	From-To	150	-90	0	Base Case	ON	1608.64	Round 1
6	HUR-JAN 345 LINE	Line	From-To	300	-180	0	Base Case	ON	1534.38	Round 1
7	IPP-BRT 138 LINE	Line	To-From	200	120	0	Base Case	ON	80.17	Round 1
8	JAN-IPP 138 LINE	Line	To-From	400	240	0	Base Case	ON	586.99	Round 1
9	MOR-BRT 138 LINE	Line	To-From	200	120	0	Base Case	ON	747.94	Round 1

Figure 77 Sample Auction Binding Constraints in CSV Format

The following information is available from this file:

- **DeviceName** – The name of the congested device
- **DeviceType** – The type of device in the binding constraint. It can be transmission line (Line), transformer (Transformer), flowgate (Flowgate) or nomogram (nomogram)
- **Direction** – Direction of MW flow on the congested device. It can take on the values of “From_To”, “To_From”

- **Limit** – The flow limit of the binding constraint: if the limit goes soft (i.e. relaxed), the flow on this binding constraint may be larger than its corresponding limit
- **Flow**: - The MW flow on the device
- **Violation** – Percentage violation of the limit: for hard constraints, this value will be zero; and for soft constraints, this value will be a positive number
- **Contingency** – The name of the contingency associated with the constraint that is binding
- **Class** – The time period of use - peak (ON) or off-peak (OFF) where the constraint is binding
- **Marginal Cost** – The clearing or shadow price of the binding constraint in \$/MW
- **Round** – The round of the auction where the constraint was binding

10.1.6 Download and View Historical Nomination/Bid Information

By clicking the **Historical** tab on the Public section of the TCR interface the users will enter the Historical Data download page shown in **Figure 78** and from which users will be able to download all available historical nomination/bid data for allocations/auctions. This data will be available six months after the end date of the effective period of the allocation/auction, and will be available in a XML or CSV formatted file.

The user selects the market (either auction or allocation) data to download by selecting a Market Type and Term from the drop down list on the left and the required Market from the drop down list on the right.

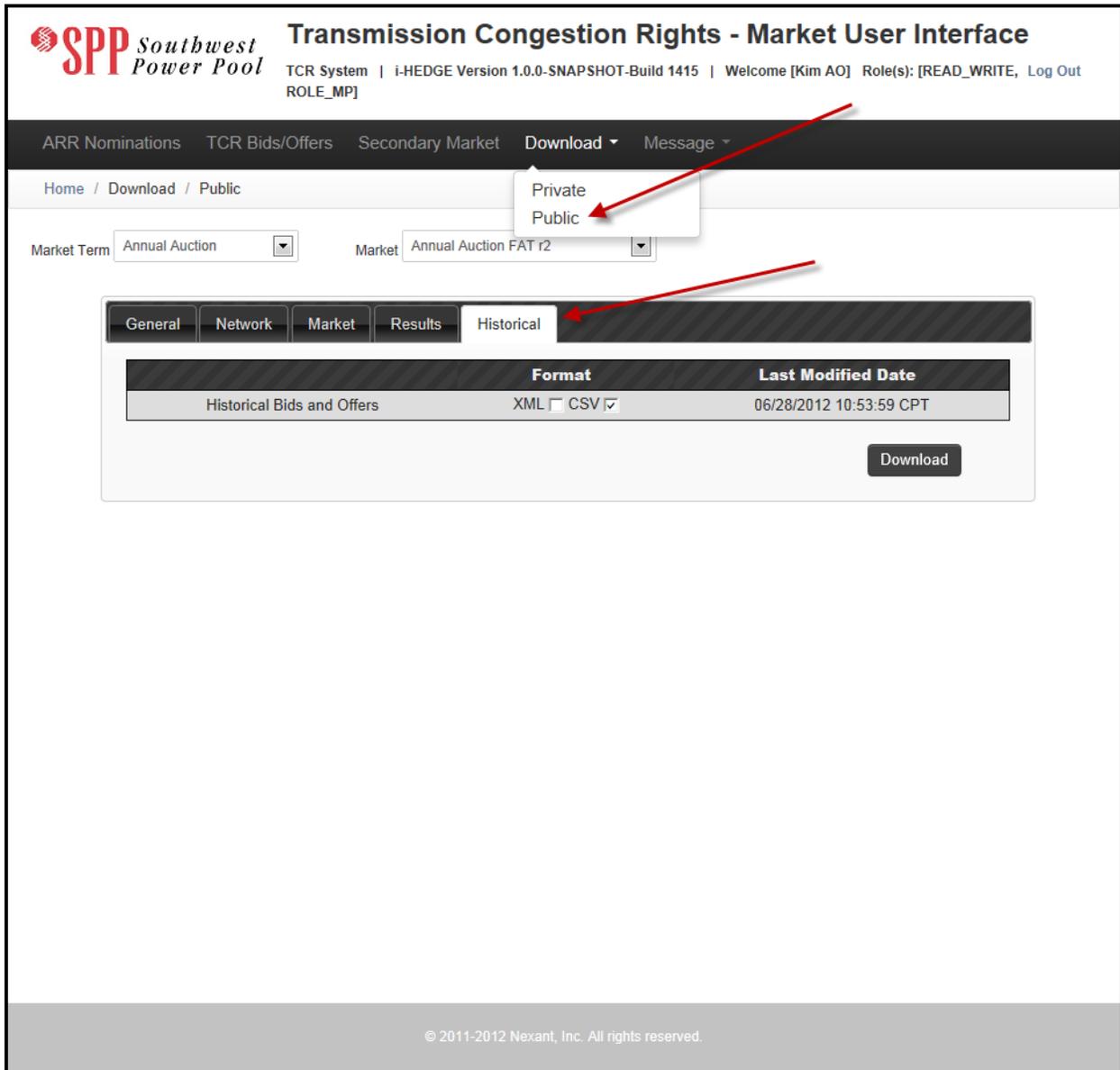


Figure 78 Historical Auction Data Available from the Public TCR Interface

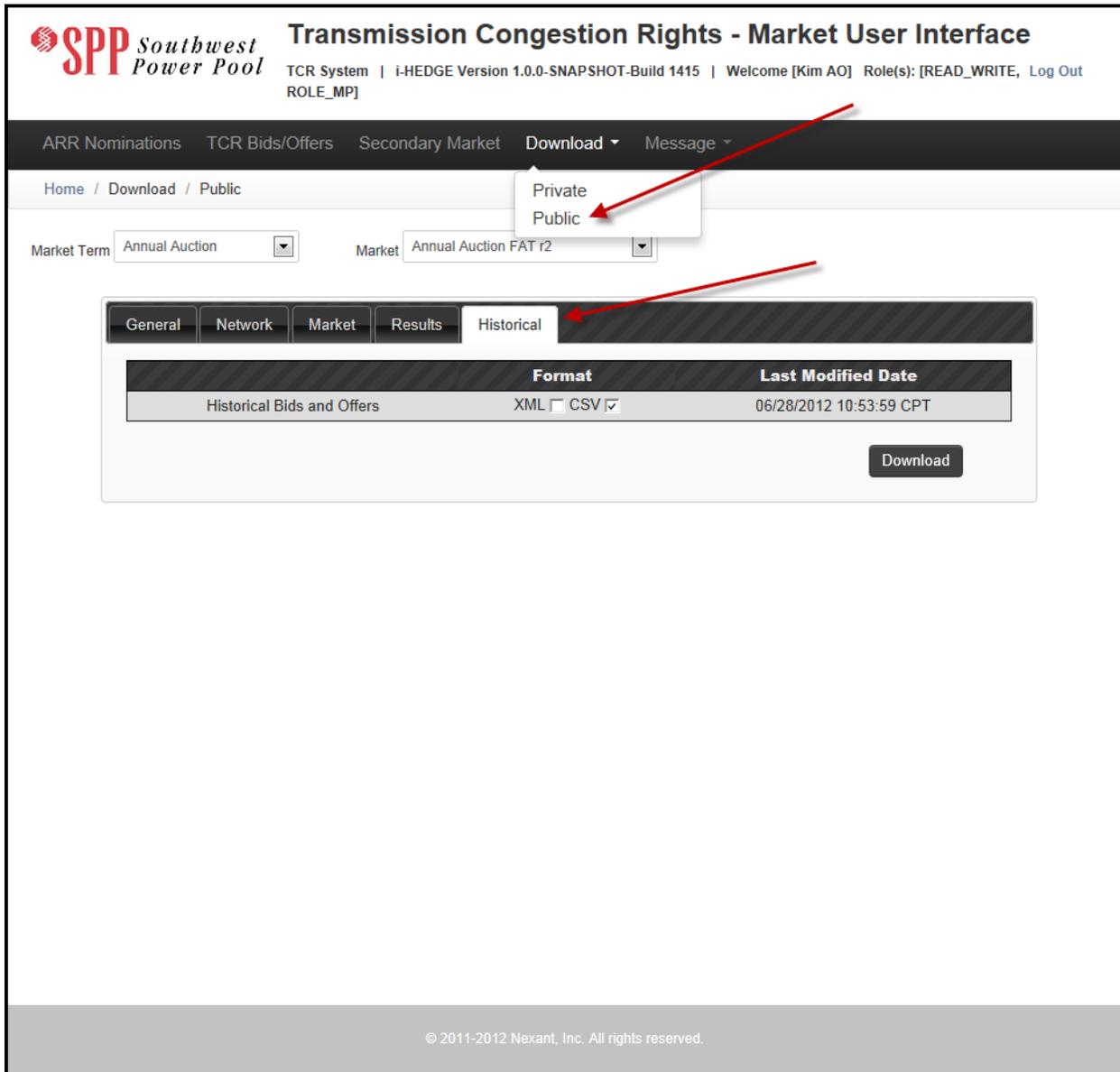
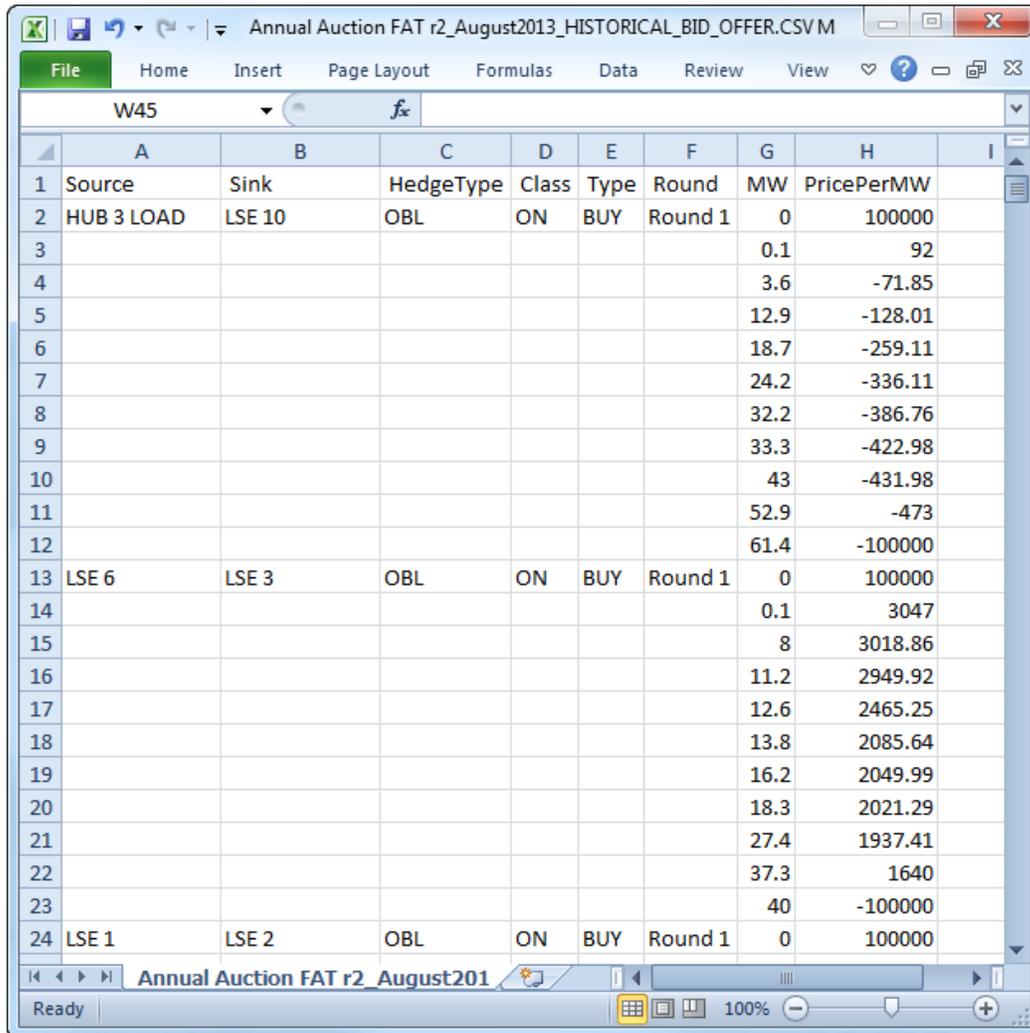


Figure 79 Historical Nomination Data Available from the Public TCR Interface

10.1.6.1 Download and view Historical Bid and Offers Data for an auction

Check the box associated with the **Historical Bids and Offers** data category as shown in **Figure 78** for XML and/or CSV formats. Then click the **Download** button to download the historical bid and offers data in the chosen formats. The download will be in a zipped format, which can be viewed using an unzipping tool. A sample historical bids and offers data file in **CSV** format is shown in Figure 80.



	A	B	C	D	E	F	G	H	I
1	Source	Sink	HedgeType	Class	Type	Round	MW	PricePerMW	
2	HUB 3 LOAD	LSE 10	OBL	ON	BUY	Round 1	0	100000	
3							0.1	92	
4							3.6	-71.85	
5							12.9	-128.01	
6							18.7	-259.11	
7							24.2	-336.11	
8							32.2	-386.76	
9							33.3	-422.98	
10							43	-431.98	
11							52.9	-473	
12							61.4	-100000	
13	LSE 6	LSE 3	OBL	ON	BUY	Round 1	0	100000	
14							0.1	3047	
15							8	3018.86	
16							11.2	2949.92	
17							12.6	2465.25	
18							13.8	2085.64	
19							16.2	2049.99	
20							18.3	2021.29	
21							27.4	1937.41	
22							37.3	1640	
23							40	-100000	
24	LSE 1	LSE 2	OBL	ON	BUY	Round 1	0	100000	

Figure 80 Sample Historical Bid Data in CSV Format

The following information is available from this file:

- **Source** – The name of the source for a TCR bid
- **Sink** – The name of the sink for a TCR bid
- **HedgeType** –TCR bid type - option (OPT) or obligation (OBL)
- **Class** – The time period of use - peak (ON) or off-peak (OFF) where the TCR bid is valid
- **Type** – Indicator if the bid is buy (BUY) or a sell offer (SELL)

- **Round** – Indicates the round of the buy bid/sell offer
- **MW** – The MW amount of the TCR bid curve – bid curve point
- **PricePerMW** – Bid price in \$/MW for the bid curve point

10.1.6.2 Download and view Historical Nomination Data for an allocation

Check the box associated with the **Historical Nomination Data** category as shown in **Figure 79** for XML and/or CSV formats. Then click the **Download** button to download the historical nomination data in the chosen formats. The download will be in a zipped format, which can be viewed using an unzipping tool. A sample historical nomination data file in **CSV** format is shown in

Figure 81.

	A	B	C	D	E	F
1	Source	Sink	HedgeType	Class	NominatedMW	Round
2	GenEJB	LSE 1	OBL	ON		33 Round 3
3	GenDOS	LSE 4	OBL	ON		23 Round 3
4	GenJAN	LSE 11	OBL	ON		33 Round 3
5	GenBEL	LSE 11	OBL	ON		39 Round 3
6	HUB 3 SOURCE	GenDOS	OBL	ON		12 Round 2
7	GenANA	LSE 8	OBL	ON		70 Round 2

Figure 81 Sample Historical Nomination Data in CSV Format

The following information is available from this file:

- **Source** – The name of the source for a Candidate ARR
- **Sink** – The name of the sink for a Candidate ARR
- **StartDate** – The beginning date of the Candidate ARR
- **EndDate** – The end date of the Candidate ARR
- **HedgeType** – Candidate ARR type - obligation (OBL)

- **Class** – Peak market (ON) or off-peak (OFF) market where the Candidate ARR is valid
- **Nominated MW** – The nominated MW amount of the Candidate ARR
- **Round** – The name of the tier of the Candidate ARR, e.g. “Round 1”, “Round 2” and “Round 3”

10.2 Available Private Information on the TCR Download Interface

The TCR Private download interface is available to all SPP Asset Owners and presents confidential information pertinent to a particular Asset Owner.

At any time, users can:

1. Download and view general information such as Existing ARRs or TCRs in CSV and XML formats

Prior to an allocation, users can:

1. Download and view Transmission Service Reservations in CSV and XML formats

Prior to an auction, users can:

2. Download and view Aggregated ARRs in CSV and XML formats

After each round of the allocation has been run, users can:

1. Download and view Allocation results (ARRs) in CSV and XML formats

After an auction round is completed, users can:

1. Download and view Auction results (TCRs) in CSV and XML formats

10.2.1 Private General Data Downloading and Viewing

By clicking the **General Data tab** on the Private section of the Downloads drop-down menu, the user enters the private General Data downloads page, which is shown in **Figure 82**.

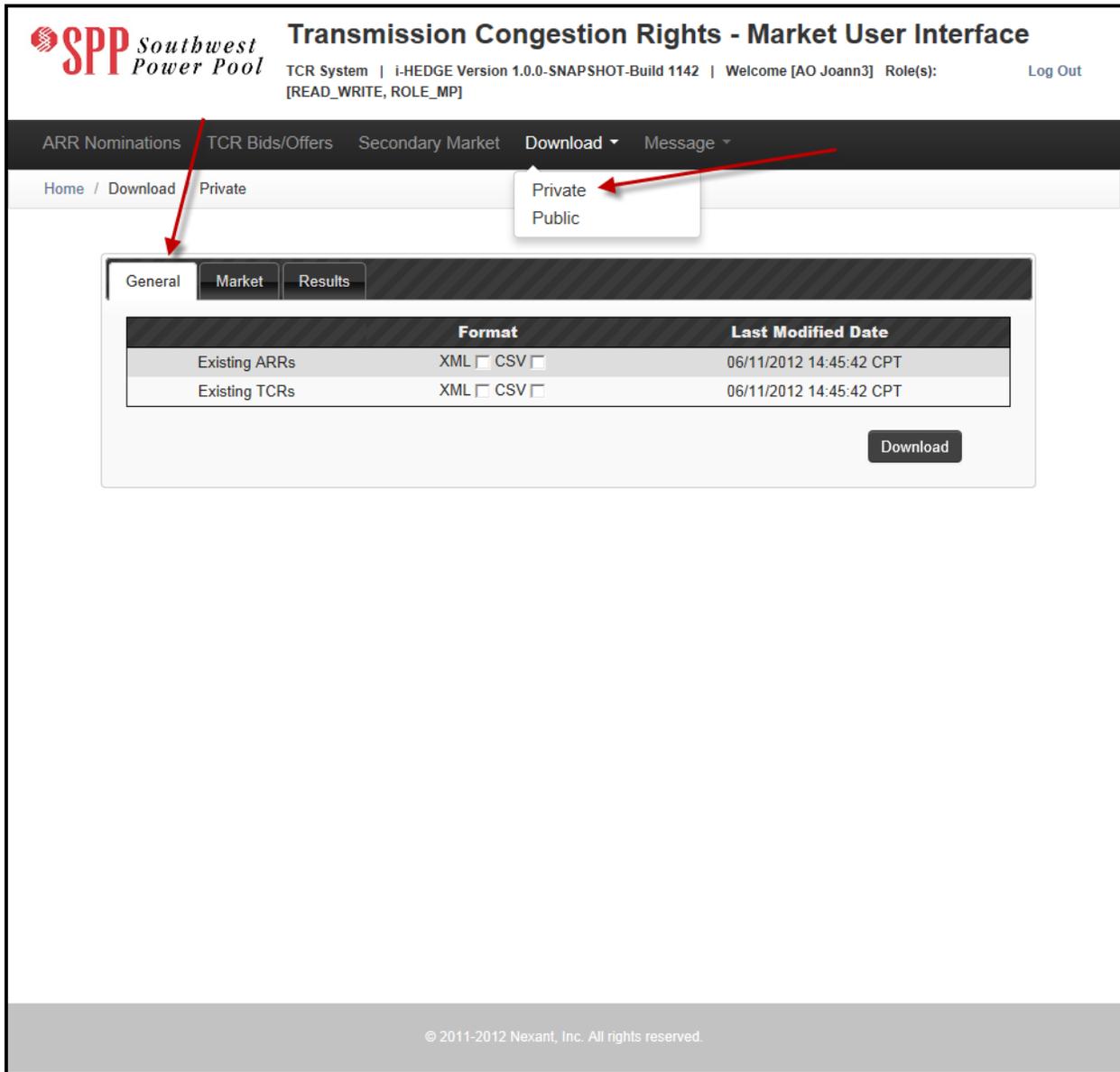
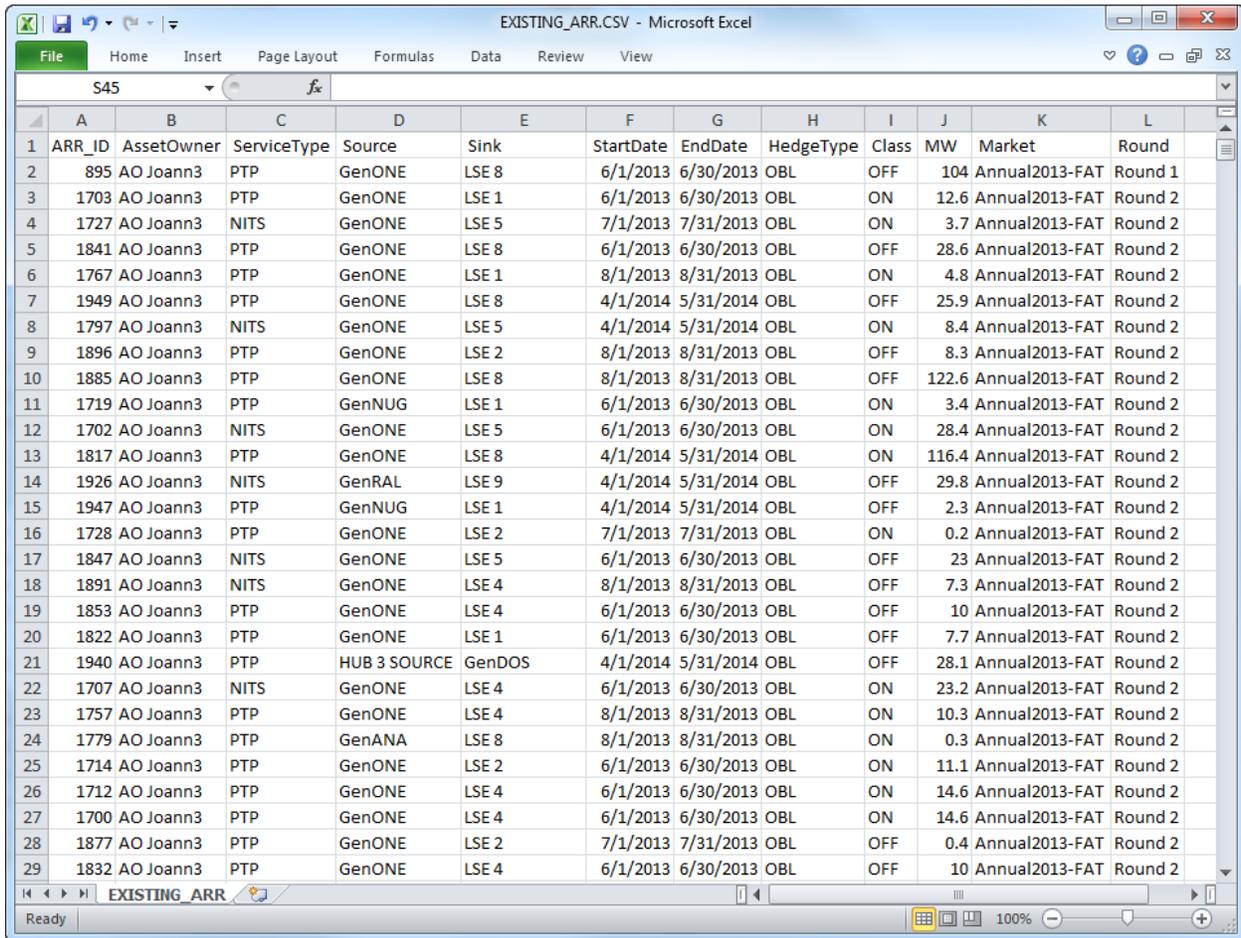


Figure 82 Private General Data Downloads

10.2.1.1 Download and view existing ARRs in XML or CSV formats

Check the box associated with the **Existing ARRs** data category as shown in **Figure 82** for XML and/or CSV formats. Then click the **Download** button to download the existing ARRs data in the chosen formats. The download will be in a zipped format, which can be viewed using an unzipping tool. A sample Existing ARRs list in **CSV** format is shown in **Figure 83**.



	A	B	C	D	E	F	G	H	I	J	K	L
	ARR_ID	AssetOwner	ServiceType	Source	Sink	StartDate	EndDate	HedgeType	Class	MW	Market	Round
1	895	AO Joann3	PTP	GenONE	LSE 8	6/1/2013	6/30/2013	OBL	OFF	104	Annual2013-FAT	Round 1
2	1703	AO Joann3	PTP	GenONE	LSE 1	6/1/2013	6/30/2013	OBL	ON	12.6	Annual2013-FAT	Round 2
3	1727	AO Joann3	NITS	GenONE	LSE 5	7/1/2013	7/31/2013	OBL	ON	3.7	Annual2013-FAT	Round 2
4	1841	AO Joann3	PTP	GenONE	LSE 8	6/1/2013	6/30/2013	OBL	OFF	28.6	Annual2013-FAT	Round 2
5	1767	AO Joann3	PTP	GenONE	LSE 1	8/1/2013	8/31/2013	OBL	ON	4.8	Annual2013-FAT	Round 2
6	1949	AO Joann3	PTP	GenONE	LSE 8	4/1/2014	5/31/2014	OBL	OFF	25.9	Annual2013-FAT	Round 2
7	1797	AO Joann3	NITS	GenONE	LSE 5	4/1/2014	5/31/2014	OBL	ON	8.4	Annual2013-FAT	Round 2
8	1896	AO Joann3	PTP	GenONE	LSE 2	8/1/2013	8/31/2013	OBL	OFF	8.3	Annual2013-FAT	Round 2
9	1885	AO Joann3	PTP	GenONE	LSE 8	8/1/2013	8/31/2013	OBL	OFF	122.6	Annual2013-FAT	Round 2
10	1719	AO Joann3	PTP	GenNUG	LSE 1	6/1/2013	6/30/2013	OBL	ON	3.4	Annual2013-FAT	Round 2
11	1702	AO Joann3	NITS	GenONE	LSE 5	6/1/2013	6/30/2013	OBL	ON	28.4	Annual2013-FAT	Round 2
12	1817	AO Joann3	PTP	GenONE	LSE 8	4/1/2014	5/31/2014	OBL	ON	116.4	Annual2013-FAT	Round 2
13	1926	AO Joann3	NITS	GenRAL	LSE 9	4/1/2014	5/31/2014	OBL	OFF	29.8	Annual2013-FAT	Round 2
14	1947	AO Joann3	PTP	GenNUG	LSE 1	4/1/2014	5/31/2014	OBL	OFF	2.3	Annual2013-FAT	Round 2
15	1728	AO Joann3	PTP	GenONE	LSE 2	7/1/2013	7/31/2013	OBL	ON	0.2	Annual2013-FAT	Round 2
16	1847	AO Joann3	NITS	GenONE	LSE 5	6/1/2013	6/30/2013	OBL	OFF	23	Annual2013-FAT	Round 2
17	1891	AO Joann3	NITS	GenONE	LSE 4	8/1/2013	8/31/2013	OBL	OFF	7.3	Annual2013-FAT	Round 2
18	1853	AO Joann3	PTP	GenONE	LSE 4	6/1/2013	6/30/2013	OBL	OFF	10	Annual2013-FAT	Round 2
19	1822	AO Joann3	PTP	GenONE	LSE 1	6/1/2013	6/30/2013	OBL	OFF	7.7	Annual2013-FAT	Round 2
20	1940	AO Joann3	PTP	HUB 3 SOURCE	GenDOS	4/1/2014	5/31/2014	OBL	OFF	28.1	Annual2013-FAT	Round 2
21	1707	AO Joann3	NITS	GenONE	LSE 4	6/1/2013	6/30/2013	OBL	ON	23.2	Annual2013-FAT	Round 2
22	1757	AO Joann3	PTP	GenONE	LSE 4	8/1/2013	8/31/2013	OBL	ON	10.3	Annual2013-FAT	Round 2
23	1779	AO Joann3	PTP	GenANA	LSE 8	8/1/2013	8/31/2013	OBL	ON	0.3	Annual2013-FAT	Round 2
24	1714	AO Joann3	PTP	GenONE	LSE 2	6/1/2013	6/30/2013	OBL	ON	11.1	Annual2013-FAT	Round 2
25	1712	AO Joann3	PTP	GenONE	LSE 4	6/1/2013	6/30/2013	OBL	ON	14.6	Annual2013-FAT	Round 2
26	1700	AO Joann3	PTP	GenONE	LSE 4	6/1/2013	6/30/2013	OBL	ON	14.6	Annual2013-FAT	Round 2
27	1877	AO Joann3	PTP	GenONE	LSE 2	7/1/2013	7/31/2013	OBL	OFF	0.4	Annual2013-FAT	Round 2
28	1832	AO Joann3	PTP	GenONE	LSE 4	6/1/2013	6/30/2013	OBL	OFF	10	Annual2013-FAT	Round 2
29												

Figure 83 Sample Private Existing ARR in CSV Format

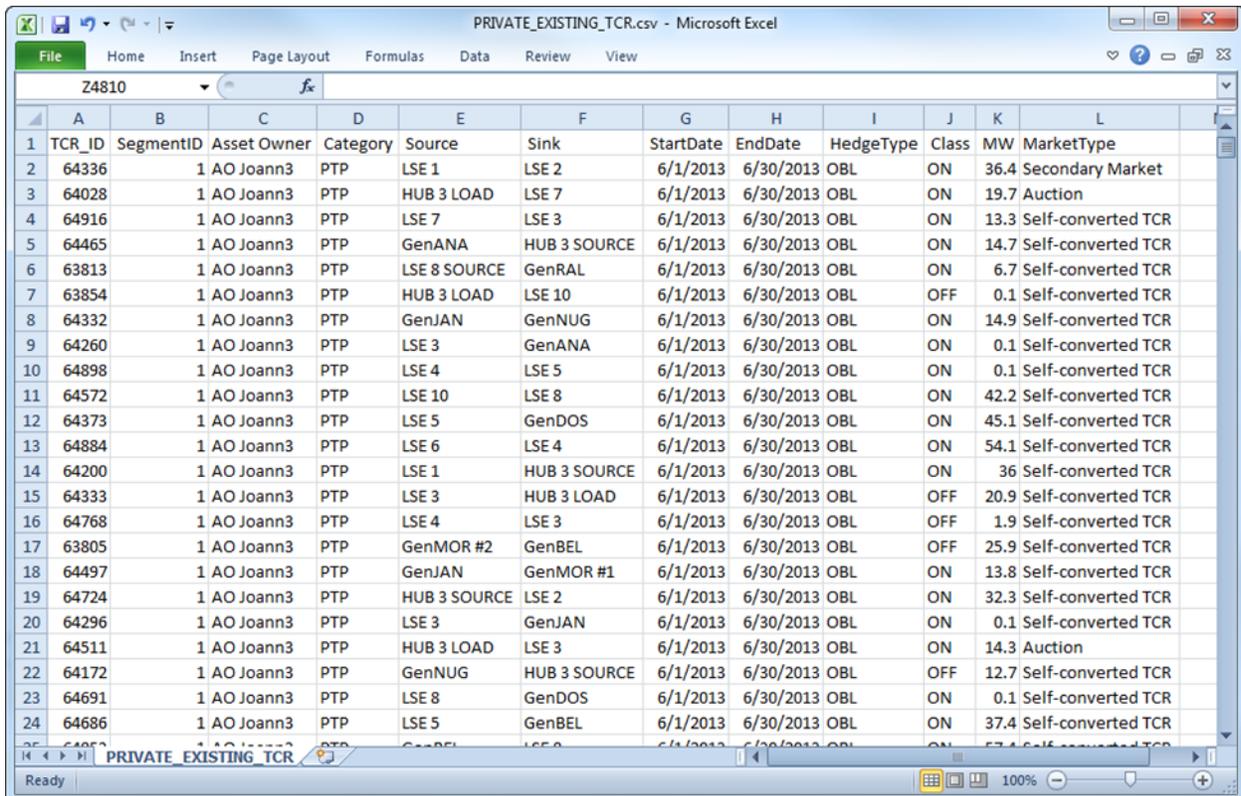
The following information is available from this file:

- **ARR_ID** – The unique ID for the ARR
- **AssetOwner** – The name of the Asset Owner who owns the ARR
- **Service Type**– Flag denoting the type of the ARR – Point-to-Point (PTP)
- **Source** – The name of the ARR’s source
- **Sink** – The name of the ARR’s sink
- **StartDate** – The starting date that the ARR is valid
- **EndDate** – The ending date that the ARR is valid

- **HedgeType** – ARR type - obligation (OBL)
- **Class** – The time period of use - Peak (ON) or off-peak (OFF) market where the ARR is valid
- **MW** – The MW value associated with the ARR
- **Round** – The allocation round from where the Asset Owner received the ARR, e.g. Round 1, Round 2, and Round 3

10.2.1.2 Download and view existing TCRs in XML or CSV formats

Check the box associated with the **Existing TCRs** data category as shown in **Figure 82** for XML and/or CSV formats. Then click the **Download** button to download the contingencies data in the chosen formats. The download will be in a zipped format, which can be viewed using an unzipping tool. A sample Existing TCRs list in **CSV** format is shown in **Figure 84**.



TCR_ID	SegmentID	Asset Owner	Category	Source	Sink	StartDate	EndDate	HedgeType	Class	MW	MarketType
64336	1	AO Joann3	PTP	LSE 1	LSE 2	6/1/2013	6/30/2013	OBL	ON	36.4	Secondary Market
64028	1	AO Joann3	PTP	HUB 3 LOAD	LSE 7	6/1/2013	6/30/2013	OBL	ON	19.7	Auction
64916	1	AO Joann3	PTP	LSE 7	LSE 3	6/1/2013	6/30/2013	OBL	ON	13.3	Self-converted TCR
64465	1	AO Joann3	PTP	GenANA	HUB 3 SOURCE	6/1/2013	6/30/2013	OBL	ON	14.7	Self-converted TCR
63813	1	AO Joann3	PTP	LSE 8 SOURCE	GenRAL	6/1/2013	6/30/2013	OBL	ON	6.7	Self-converted TCR
63854	1	AO Joann3	PTP	HUB 3 LOAD	LSE 10	6/1/2013	6/30/2013	OBL	OFF	0.1	Self-converted TCR
64332	1	AO Joann3	PTP	GenJAN	GenNUG	6/1/2013	6/30/2013	OBL	ON	14.9	Self-converted TCR
64260	1	AO Joann3	PTP	LSE 3	GenANA	6/1/2013	6/30/2013	OBL	ON	0.1	Self-converted TCR
64898	1	AO Joann3	PTP	LSE 4	LSE 5	6/1/2013	6/30/2013	OBL	ON	0.1	Self-converted TCR
64572	1	AO Joann3	PTP	LSE 10	LSE 8	6/1/2013	6/30/2013	OBL	ON	42.2	Self-converted TCR
64373	1	AO Joann3	PTP	LSE 5	GenDOS	6/1/2013	6/30/2013	OBL	ON	45.1	Self-converted TCR
64884	1	AO Joann3	PTP	LSE 6	LSE 4	6/1/2013	6/30/2013	OBL	ON	54.1	Self-converted TCR
64200	1	AO Joann3	PTP	LSE 1	HUB 3 SOURCE	6/1/2013	6/30/2013	OBL	ON	36	Self-converted TCR
64333	1	AO Joann3	PTP	LSE 3	HUB 3 LOAD	6/1/2013	6/30/2013	OBL	OFF	20.9	Self-converted TCR
64768	1	AO Joann3	PTP	LSE 4	LSE 3	6/1/2013	6/30/2013	OBL	OFF	1.9	Self-converted TCR
63805	1	AO Joann3	PTP	GenMOR #2	GenBEL	6/1/2013	6/30/2013	OBL	OFF	25.9	Self-converted TCR
64497	1	AO Joann3	PTP	GenJAN	GenMOR #1	6/1/2013	6/30/2013	OBL	ON	13.8	Self-converted TCR
64724	1	AO Joann3	PTP	HUB 3 SOURCE	LSE 2	6/1/2013	6/30/2013	OBL	ON	32.3	Self-converted TCR
64296	1	AO Joann3	PTP	LSE 3	GenJAN	6/1/2013	6/30/2013	OBL	ON	0.1	Self-converted TCR
64511	1	AO Joann3	PTP	HUB 3 LOAD	LSE 3	6/1/2013	6/30/2013	OBL	ON	14.3	Auction
64172	1	AO Joann3	PTP	GenNUG	HUB 3 SOURCE	6/1/2013	6/30/2013	OBL	OFF	12.7	Self-converted TCR
64691	1	AO Joann3	PTP	LSE 8	GenDOS	6/1/2013	6/30/2013	OBL	ON	0.1	Self-converted TCR
64686	1	AO Joann3	PTP	LSE 5	GenBEL	6/1/2013	6/30/2013	OBL	ON	37.4	Self-converted TCR

Figure 84 Sample Private Existing TCRs in CSV Format

The following information is available from this file:

- **TCR ID** – The unique ID for the TCR
- **SegmentID** – The segment number of a profiled TCR
- **AssetOwner** – The name of the Asset Owner who owns the TCR
- **Category**– Flag denoting the type of the TCR – Point-to-Point (PTP)
- **Source** – The name of the TCR’s source
- **Sink** – The name of the TCR’s sink
- **StartDate** – The starting date that the TCR is valid
- **EndDate** – The ending date that the TCR is valid
- **HedgeType** –TCR type - obligation (OBL)
- **Class** – The time period of use - Peak (ON) or off-peak (OFF) market where the PTP TCR is valid
- **MW** – The MW value associated with the TCR
- **MarketType** – The type of market from where the Asset Owner received the TCR, e.g. Auction, Secondary Market, Self-converted TCR

10.2.2 Private Market Data Downloading and Viewing

By clicking the **MarketData tab** on the Private section of the Downloads drop-down menu, the user enters the private Market Data Downloads page, which is shown in **Figure 85**.

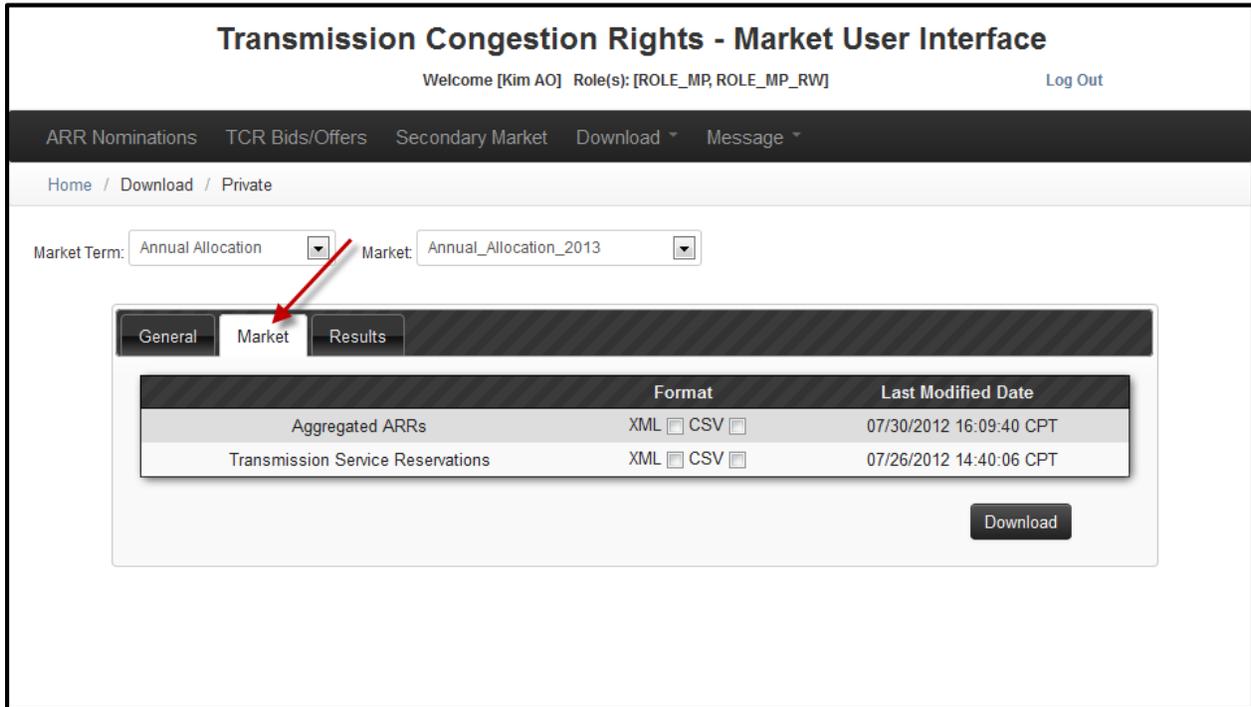
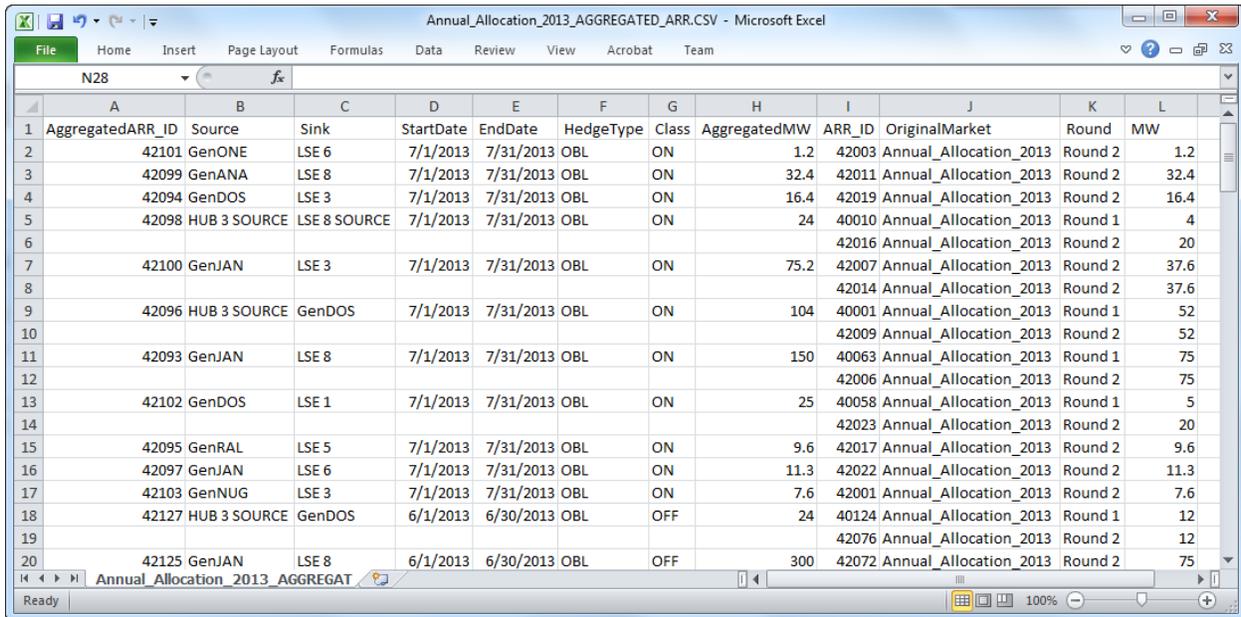


Figure 85 Private Market Data Downloads

10.2.2.1 Download and view Aggregated ARR's in XML or CSV formats

Check the box associated with the **Aggregated ARR's** data category as shown in **Figure 85** for XML and/or CSV formats. Then click the **Download** button to download the aggregated ARR's data in the chosen formats. The download will be in a zipped format, which can be viewed using an unzipping tool. A sample Aggregated ARR's list in **CSV** format is shown in **Figure 86**.



	A	B	C	D	E	F	G	H	I	J	K	L
	AggregatedARR_ID	Source	Sink	StartDate	EndDate	HedgeType	Class	AggregatedMW	ARR_ID	OriginalMarket	Round	MW
2	42101	GenONE	LSE 6	7/1/2013	7/31/2013	OBL	ON	1.2	42003	Annual_Allocation_2013	Round 2	1.2
3	42099	GenANA	LSE 8	7/1/2013	7/31/2013	OBL	ON	32.4	42011	Annual_Allocation_2013	Round 2	32.4
4	42094	GenDOS	LSE 3	7/1/2013	7/31/2013	OBL	ON	16.4	42019	Annual_Allocation_2013	Round 2	16.4
5	42098	HUB 3 SOURCE	LSE 8 SOURCE	7/1/2013	7/31/2013	OBL	ON	24	40010	Annual_Allocation_2013	Round 1	4
6									42016	Annual_Allocation_2013	Round 2	20
7	42100	GenJAN	LSE 3	7/1/2013	7/31/2013	OBL	ON	75.2	42007	Annual_Allocation_2013	Round 2	37.6
8									42014	Annual_Allocation_2013	Round 2	37.6
9	42096	HUB 3 SOURCE	GenDOS	7/1/2013	7/31/2013	OBL	ON	104	40001	Annual_Allocation_2013	Round 1	52
10									42009	Annual_Allocation_2013	Round 2	52
11	42093	GenJAN	LSE 8	7/1/2013	7/31/2013	OBL	ON	150	40063	Annual_Allocation_2013	Round 1	75
12									42006	Annual_Allocation_2013	Round 2	75
13	42102	GenDOS	LSE 1	7/1/2013	7/31/2013	OBL	ON	25	40058	Annual_Allocation_2013	Round 1	5
14									42023	Annual_Allocation_2013	Round 2	20
15	42095	GenRAL	LSE 5	7/1/2013	7/31/2013	OBL	ON	9.6	42017	Annual_Allocation_2013	Round 2	9.6
16	42097	GenJAN	LSE 6	7/1/2013	7/31/2013	OBL	ON	11.3	42022	Annual_Allocation_2013	Round 2	11.3
17	42103	GenNUG	LSE 3	7/1/2013	7/31/2013	OBL	ON	7.6	42001	Annual_Allocation_2013	Round 2	7.6
18	42127	HUB 3 SOURCE	GenDOS	6/1/2013	6/30/2013	OBL	OFF	24	40124	Annual_Allocation_2013	Round 1	12
19									42076	Annual_Allocation_2013	Round 2	12
20	42125	GenJAN	LSE 8	6/1/2013	6/30/2013	OBL	OFF	300	42072	Annual_Allocation_2013	Round 2	75

Figure 86 Sample Private Aggregated ARR's in CSV Format

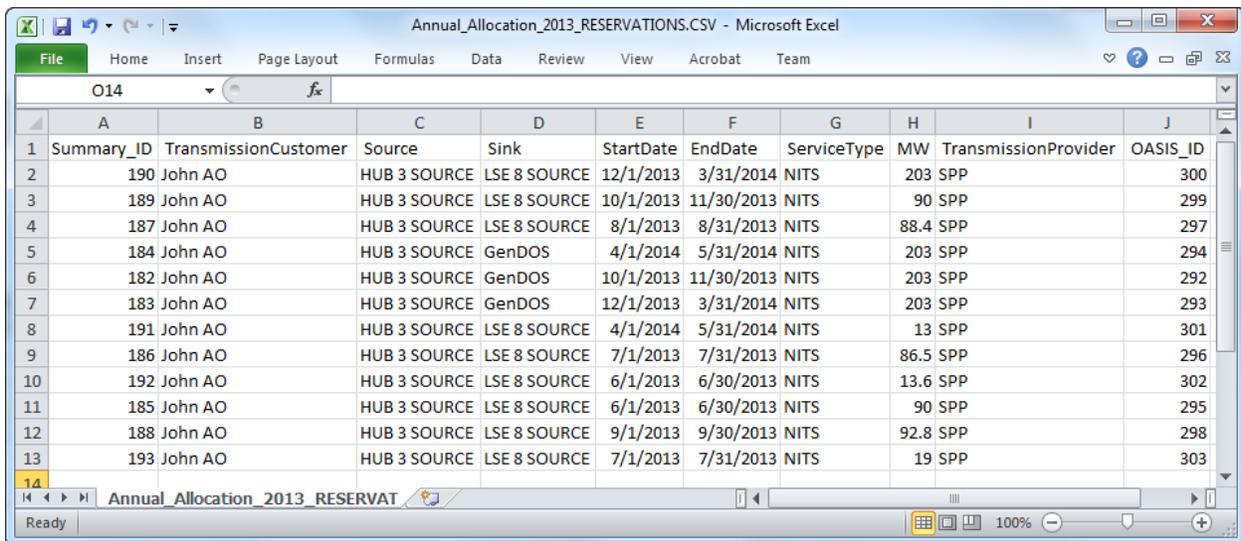
The following information is available from this file:

- **AggregatedARR_ID** – The unique ID for the aggregated ARR. Note that each aggregated ARR is associated with one or more component ARR's
- **Source** – The name of the aggregated ARR's source
- **Sink** – The name of the aggregated ARR's sink
- **StartDate** – The starting date that the aggregated ARR is valid
- **EndDate** – The ending date that the aggregated ARR is valid
- **HedgeType** – Aggregated ARR type - obligation (OBL)
- **Class** – The time period of use - Peak (ON) or off-peak (OFF) market where the aggregated ARR is valid
- **AggregatedMW** – The MW value associated with the aggregated ARR
- **ARR_ID** – The ID of a component ARR that was allocated in one of the rounds of this allocation market
- **OriginalMarket** – The name of the allocation market where the component ARR was allocated

- **Round** – The allocation round from where the Asset Owner received the component ARR, e.g. Round 1, Round 2, and Round 3
- **MW** – The MW value associated with the component ARR

10.2.2.2 Download and view Transmission Service Reservations in XML or CSV formats

Check the box associated with the **Transmission Service Reservations** data category as shown in **Figure 85** for XML and/or CSV formats. Then click the **Download** button to download the transmission service reservations data the chosen formats. The download will be in a zipped format, which can be viewed using an unzipping tool. A sample Transmission Service Reservations list in **CSV** format is shown in Figure 87.



	A	B	C	D	E	F	G	H	I	J
	Summary_ID	TransmissionCustomer	Source	Sink	StartDate	EndDate	ServiceType	MW	TransmissionProvider	OASIS_ID
1	190	John AO	HUB 3 SOURCE	LSE 8 SOURCE	12/1/2013	3/31/2014	NITS	203	SPP	300
2	189	John AO	HUB 3 SOURCE	LSE 8 SOURCE	10/1/2013	11/30/2013	NITS	90	SPP	299
3	187	John AO	HUB 3 SOURCE	LSE 8 SOURCE	8/1/2013	8/31/2013	NITS	88.4	SPP	297
4	184	John AO	HUB 3 SOURCE	GenDOS	4/1/2014	5/31/2014	NITS	203	SPP	294
5	182	John AO	HUB 3 SOURCE	GenDOS	10/1/2013	11/30/2013	NITS	203	SPP	292
6	183	John AO	HUB 3 SOURCE	GenDOS	12/1/2013	3/31/2014	NITS	203	SPP	293
7	191	John AO	HUB 3 SOURCE	LSE 8 SOURCE	4/1/2014	5/31/2014	NITS	13	SPP	301
8	186	John AO	HUB 3 SOURCE	LSE 8 SOURCE	7/1/2013	7/31/2013	NITS	86.5	SPP	296
9	192	John AO	HUB 3 SOURCE	LSE 8 SOURCE	6/1/2013	6/30/2013	NITS	13.6	SPP	302
10	185	John AO	HUB 3 SOURCE	LSE 8 SOURCE	6/1/2013	6/30/2013	NITS	90	SPP	295
11	188	John AO	HUB 3 SOURCE	LSE 8 SOURCE	9/1/2013	9/30/2013	NITS	92.8	SPP	298
12	193	John AO	HUB 3 SOURCE	LSE 8 SOURCE	7/1/2013	7/31/2013	NITS	19	SPP	303
13										

Figure 87 Sample Transmission Service Reservations in CSV Format

The following information is available from this file:

- **Summary ID** – The unique summary ID for the Transmission Service Reservation on OASIS
- **Transmission Owner** – The name of the Transmission Owner (i.e. Asset Owner) who owns this reservation
- **Source** – The name of the Transmission Service Reservation’s source
- **Sink** – The name of the Transmission Service Reservation’s sink

- **StartDate** – The starting date that the Transmission Service Reservation ARR is valid
- **EndDate** – The ending date that the Transmission Service Reservation ARR is valid
- **ServiceType** – Service Type of the Transmission Service Reservation – Point-to-Point (PTP) and Network Integrated Transmission Service (NITS)
- **MW** – The MW value associated with the Transmission Service Reservation
- **Transmission Provider** – The name of the Transmission Provider of this transmission service
- **OASIS ID** – The unique OASIS ID for the Transmission Service Reservation on OASIS

10.2.3 Private Results Data Downloading

By clicking the Results Data tab on the Private section of the Downloads drop-down menu, the user enters the private Results Data Downloads page, which is shown in Figure 88.

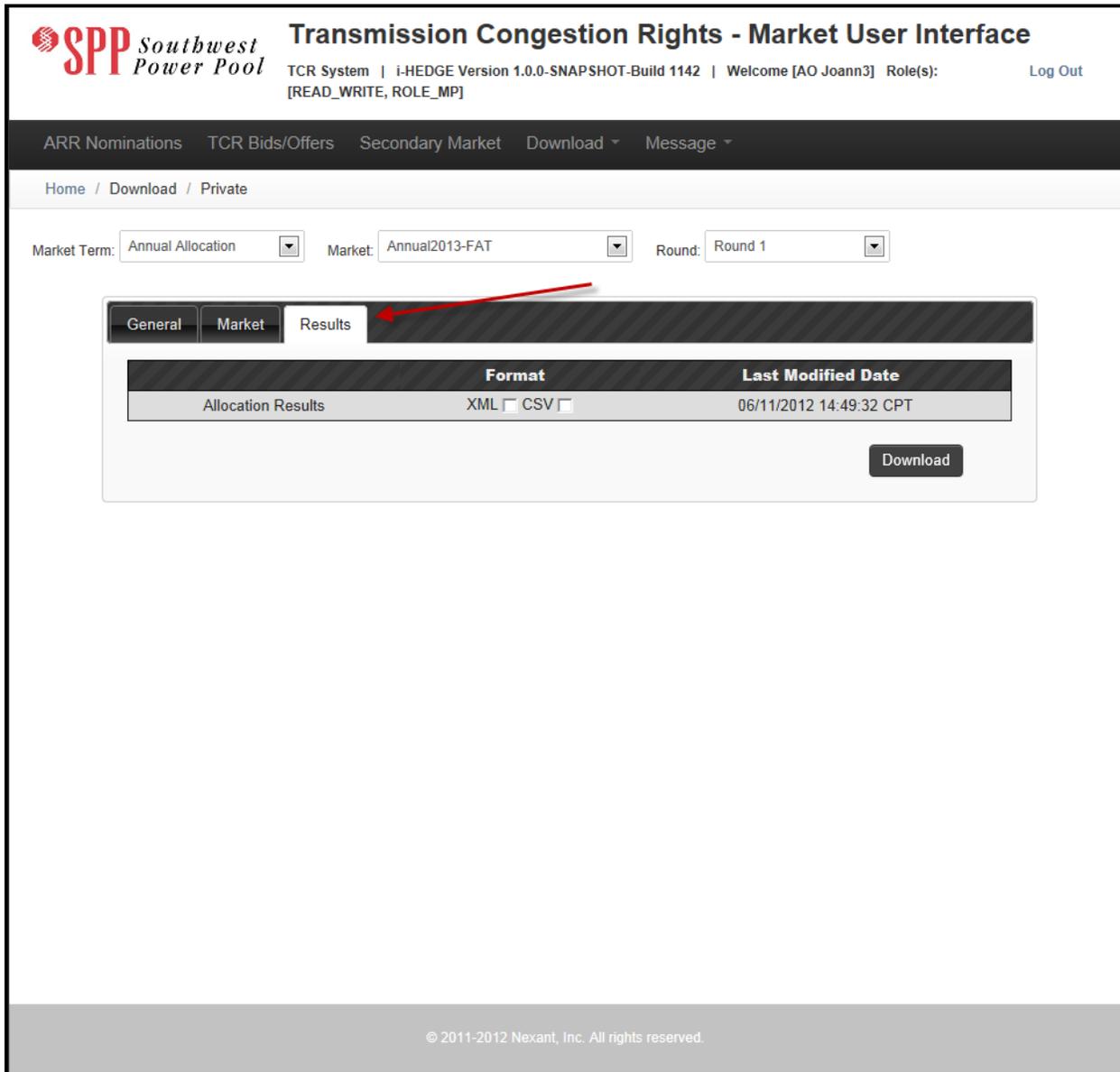


Figure 88 Private Allocation Data Downloads

10.2.3.1 ata Download and View Allocation Results in XML or CSV

In the Results tab, the user is presented with the following display for the Private Allocation Data as shown in Figure 89 by:

1. Selecting an Allocation market with the Market Term dropdown menu
2. Selecting the appropriate market from the Market dropdown menu
3. Selecting the desired allocation round from the Round dropdown menu

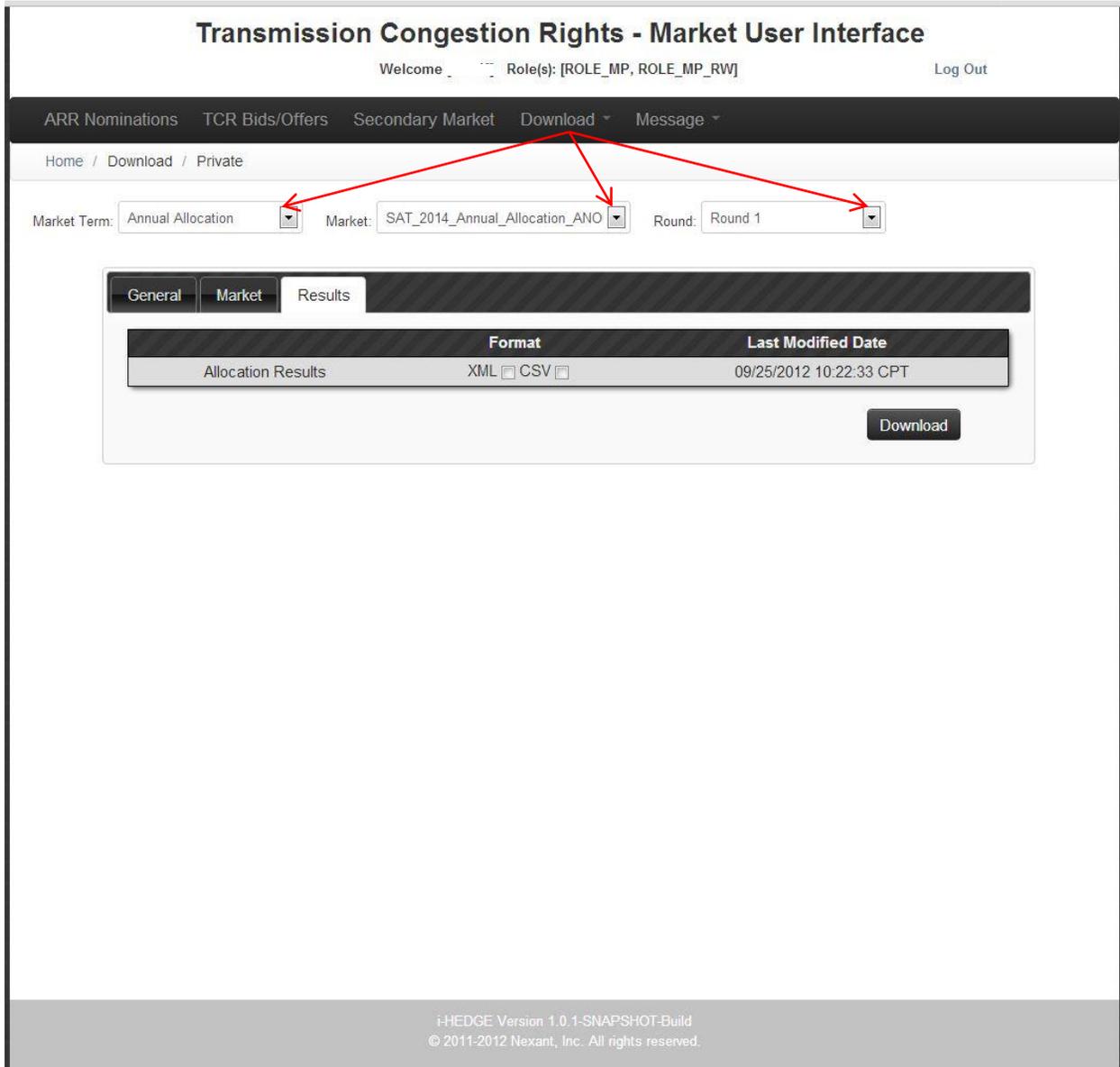
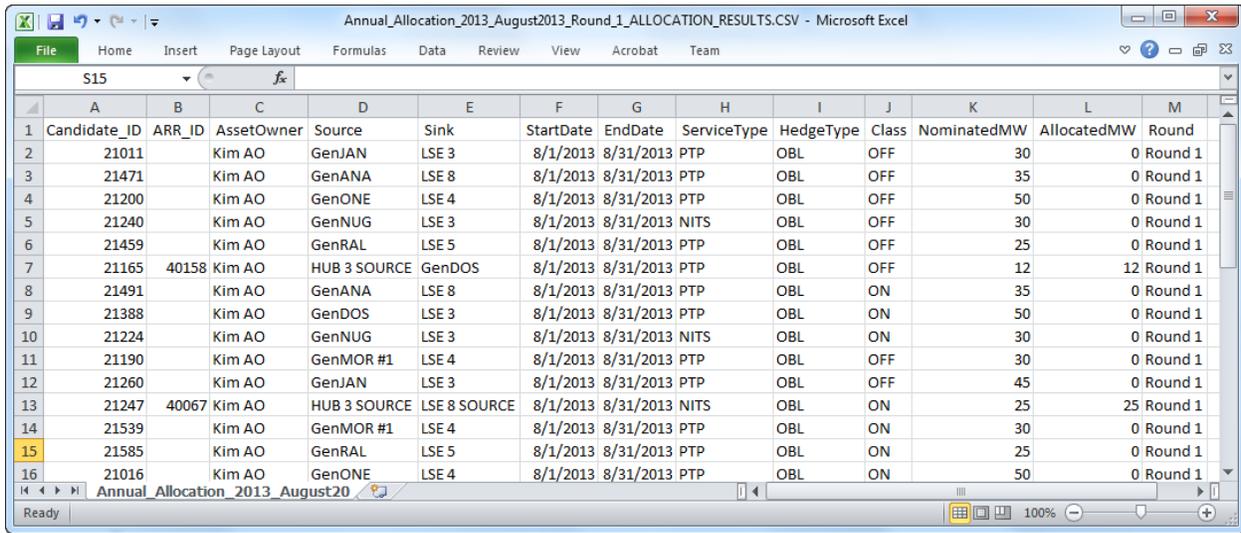


Figure 89 Private Allocation Data Downloads

Check the box associated with the **Allocation Results** data category as shown in **Error! Reference source not found.** for XML and/or CSV formats. Then click the **Download** button to download the allocation results data in the chosen formats. The download will be in a zipped format, which can be viewed using an unzipping tool. A sample private allocation results list in **CSV** format is shown in Figure 90.



	A	B	C	D	E	F	G	H	I	J	K	L	M
	Candidate_ID	ARR_ID	AssetOwner	Source	Sink	StartDate	EndDate	ServiceType	HedgeType	Class	NominatedMW	AllocatedMW	Round
1	21011		Kim AO	GenJAN	LSE 3	8/1/2013	8/31/2013	PTP	OBL	OFF	30		0 Round 1
2	21471		Kim AO	GenANA	LSE 8	8/1/2013	8/31/2013	PTP	OBL	OFF	35		0 Round 1
3	21200		Kim AO	GenONE	LSE 4	8/1/2013	8/31/2013	PTP	OBL	OFF	50		0 Round 1
4	21240		Kim AO	GenNUG	LSE 3	8/1/2013	8/31/2013	NITS	OBL	OFF	30		0 Round 1
5	21459		Kim AO	GenRAL	LSE 5	8/1/2013	8/31/2013	PTP	OBL	OFF	25		0 Round 1
6	21165	40158	Kim AO	HUB 3 SOURCE	GenDOS	8/1/2013	8/31/2013	PTP	OBL	OFF	12	12	Round 1
7	21491		Kim AO	GenANA	LSE 8	8/1/2013	8/31/2013	PTP	OBL	ON	35		0 Round 1
8	21388		Kim AO	GenDOS	LSE 3	8/1/2013	8/31/2013	PTP	OBL	ON	50		0 Round 1
9	21224		Kim AO	GenNUG	LSE 3	8/1/2013	8/31/2013	NITS	OBL	ON	30		0 Round 1
10	21190		Kim AO	GenMOR #1	LSE 4	8/1/2013	8/31/2013	PTP	OBL	OFF	30		0 Round 1
11	21260		Kim AO	GenJAN	LSE 3	8/1/2013	8/31/2013	PTP	OBL	OFF	45		0 Round 1
12	21247	40067	Kim AO	HUB 3 SOURCE	LSE 8 SOURCE	8/1/2013	8/31/2013	NITS	OBL	ON	25	25	Round 1
13	21539		Kim AO	GenMOR #1	LSE 4	8/1/2013	8/31/2013	PTP	OBL	ON	30		0 Round 1
14	21585		Kim AO	GenRAL	LSE 5	8/1/2013	8/31/2013	PTP	OBL	ON	25		0 Round 1
15	21016		Kim AO	GenONE	LSE 4	8/1/2013	8/31/2013	PTP	OBL	ON	50		0 Round 1
16													

Figure 90 Sample Private Allocation results in CSV Format

The following information is available from this file:

- **Candidate ID** – The unique ID for the Candidate ARR
- **ARR ID** – The unique ID of the allocated ARR
- **AssetOwner** – The name of the Asset Owner who owns the Candidate ARR
- **Source** – The name of the Candidate ARR’s source
- **Sink** – The name of the Candidate ARR’s sink
- **StartDate** – The starting date that the Candidate ARR is valid
- **EndDate** – The ending date that the Candidate ARR is valid
- **Service Type** – Flag denoting the type of the ARR – Network Integration Transmission Service (NITS) or Point-To-Point transmission (PTP).
- **HedgeType** – Candidate ARR type –obligation (OBL)
- **Class** – The time period of use - Peak (ON) or off-peak (OFF) market where the Candidate ARR is valid
- **NominatedMW** – The MW amount requested for the Candidate ARR by the Asset Owner during the ARR Nomination Process

- **AllocatedMW** – The MW amount assigned to the Candidate ARR after the Allocation

- **Round** – The Round in which the Candidate ARR is nominated

10.2.3.2 Auction Results Data Downloading and Viewing

In the Results tab, the user is presented with the following display for the Private Auction Data as shown in Figure 91 by:

4. Selecting an Allocation market with the Market Term dropdown menu
5. Selecting the appropriate market from the Market dropdown menu
6. Selecting the desired allocation round from the Round dropdown menu

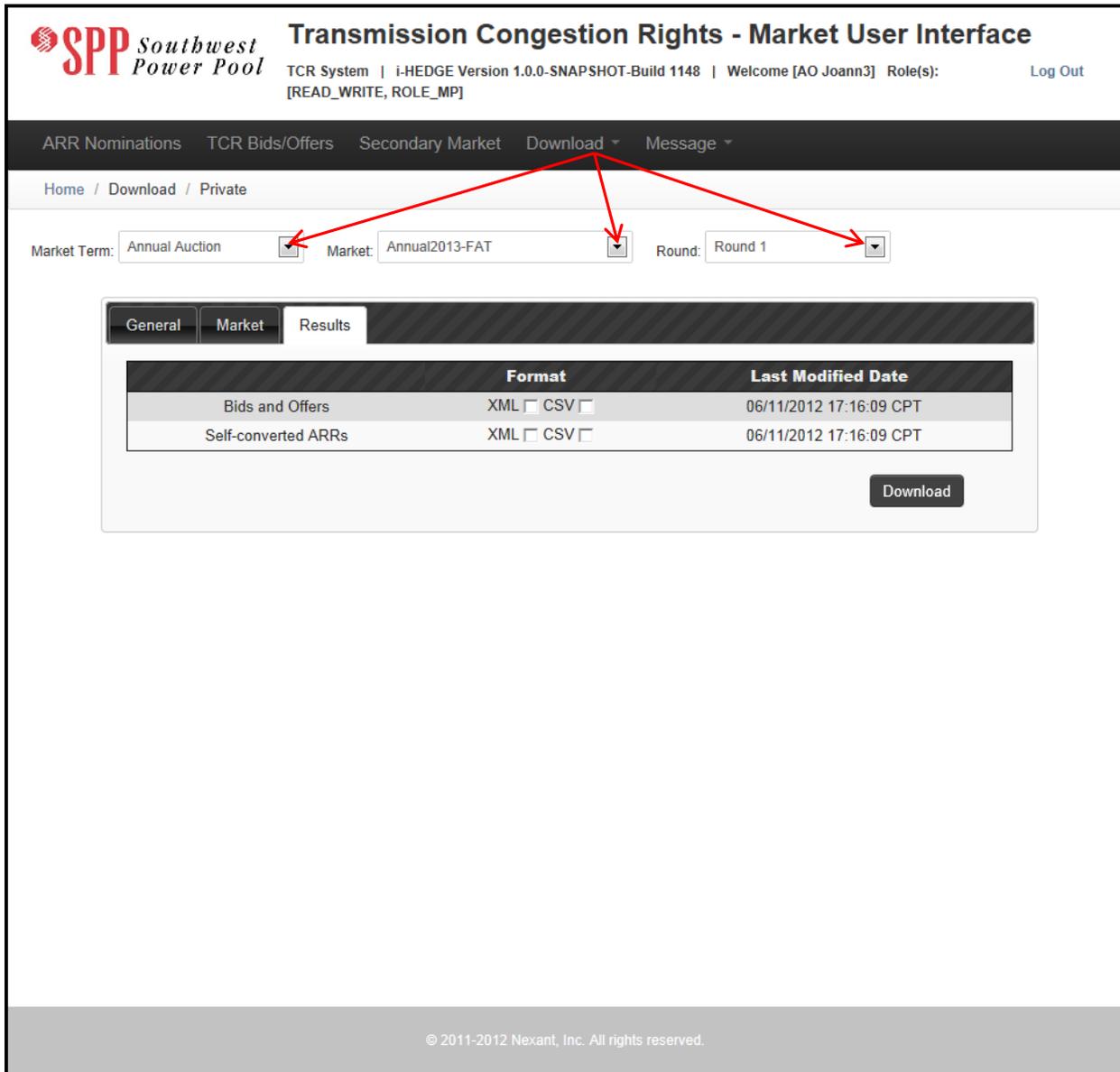
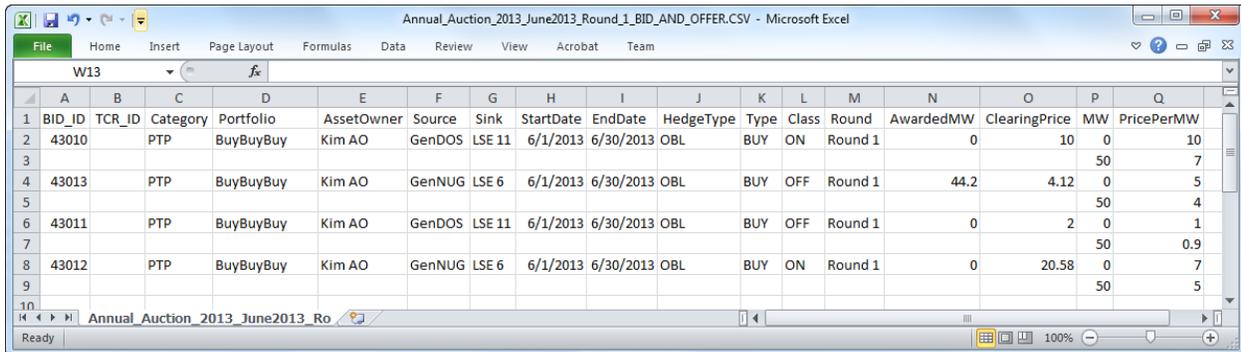


Figure 91 Private Auction Data Downloads

10.2.3.2.1 Download and view Bids and Offers Results in XML or CSV formats

Check the box associated with the **Bids and Offers Results** data category as shown in Figure 91 for XML and/or CSV formats. Then click the **Download** button to download the auction results data in the chosen formats. The download will be in a zipped format, which can be viewed using an unzipping tool. A sample private auction results list in **CSV** format is shown in Figure 92.



BID_ID	TCR_ID	Category	Portfolio	AssetOwner	Source	Sink	StartDate	EndDate	HedgeType	Type	Class	Round	AwardedMW	ClearingPrice	MW	PricePerMW
43010		PTP	BuyBuyBuy	Kim AO	GenDOS	LSE 11	6/1/2013	6/30/2013	OBL	BUY	ON	Round 1	0	10	0	10
43013		PTP	BuyBuyBuy	Kim AO	GenNUG	LSE 6	6/1/2013	6/30/2013	OBL	BUY	OFF	Round 1	44.2	4.12	0	5
43011		PTP	BuyBuyBuy	Kim AO	GenDOS	LSE 11	6/1/2013	6/30/2013	OBL	BUY	OFF	Round 1	0	2	0	1
43012		PTP	BuyBuyBuy	Kim AO	GenNUG	LSE 6	6/1/2013	6/30/2013	OBL	BUY	ON	Round 1	0	20.58	0	7

Figure 92 Sample Private Bids and Offers data in CSV Format

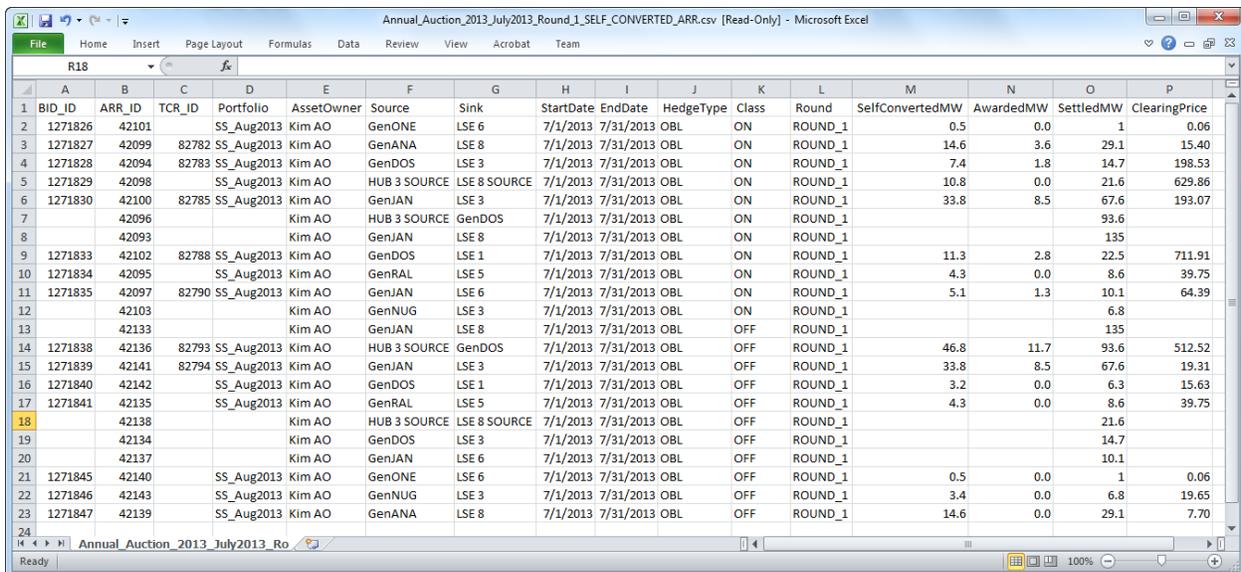
The following information is available from this file:

- **BidID** – The ID of the auction bid
- **TCR ID** – The unique ID of the TCR associated within the Bid
- **Category** – Flag denoting the type of the TCR – Point-to-Point (PTP)
- **Portfolio** – The name of the portfolio containing the bids
- **AssetOwner** – The name of the asset owner associated with the TCR
- **Source** – The name of the source associated with the TCR
- **Sink** – The name of the sink associated with the TCR
- **StartDate** – The starting date that the TCR is valid
- **EndDate** – The ending date that the TCR is valid
- **HedgeType** –TCR type –Obligation (OBL)
- **Type** – States that the type of the bid – BUY or SELL
- **Class** – Peak market (ON) or off-peak (OFF) market where the TCR is valid
- **Round** – the round of the auction for which the results are published
- **AwardedMW** – The MW amount of the TCR awarded to the nearest tenth of a MW

- **ClearingPrice** – The clearing price of the TCR awarded in \$/MW. The clearing price may be positive or negative
- **MW** – The bid MW amount (part of the bid curve)
- **PricePerMW** – The bid price in \$/MW (part of the bid curve)

10.2.3.2.2 Download and view Self-converted ARR

Check the box associated with the **Self Converted ARRs data** category shown in Figure 6.10 for XML and/or CSV formats. Then click the **Download** button to download the auction results data in the chosen formats. The download will be in a zipped format, which can be viewed using an unzipping tool. A sample private Self-converted ARR results file is shown in Figure 93.



BID_ID	ARR_ID	TCR_ID	Portfolio	AssetOwner	Source	Sink	StartDate	EndDate	HedgeType	Class	Round	SelfConvertedMW	AwardedMW	SettledMW	ClearingPrice
1271826	42101	SS_Aug2013	Kim AO	GenONE	LSE 6		7/1/2013	7/31/2013	OBL	ON	ROUND_1	0.5	0.0	1	0.06
1271827	42099	82782 SS_Aug2013	Kim AO	GenANA	LSE 8		7/1/2013	7/31/2013	OBL	ON	ROUND_1	14.6	3.6	29.1	15.40
1271828	42094	82783 SS_Aug2013	Kim AO	GenDOS	LSE 3		7/1/2013	7/31/2013	OBL	ON	ROUND_1	7.4	1.8	14.7	198.53
1271829	42098	SS_Aug2013	Kim AO	HUB 3 SOURCE	LSE 8 SOURCE		7/1/2013	7/31/2013	OBL	ON	ROUND_1	10.8	0.0	21.6	629.86
1271830	42100	82785 SS_Aug2013	Kim AO	GenJAN	LSE 3		7/1/2013	7/31/2013	OBL	ON	ROUND_1	33.8	8.5	67.6	193.07
	42096		Kim AO	HUB 3 SOURCE	GenDOS		7/1/2013	7/31/2013	OBL	ON	ROUND_1			93.6	
	42093		Kim AO	GenJAN	LSE 8		7/1/2013	7/31/2013	OBL	ON	ROUND_1			135	
1271833	42102	82788 SS_Aug2013	Kim AO	GenDOS	LSE 1		7/1/2013	7/31/2013	OBL	ON	ROUND_1	11.3	2.8	22.5	711.91
1271834	42095	SS_Aug2013	Kim AO	GenRAL	LSE 5		7/1/2013	7/31/2013	OBL	ON	ROUND_1	4.3	0.0	8.6	39.75
1271835	42097	82790 SS_Aug2013	Kim AO	GenJAN	LSE 6		7/1/2013	7/31/2013	OBL	ON	ROUND_1	5.1	1.3	10.1	64.39
	42103		Kim AO	GenNUG	LSE 3		7/1/2013	7/31/2013	OBL	ON	ROUND_1			6.8	
	42133		Kim AO	GenJAN	LSE 8		7/1/2013	7/31/2013	OBL	OFF	ROUND_1			135	
1271838	42136	82793 SS_Aug2013	Kim AO	HUB 3 SOURCE	GenDOS		7/1/2013	7/31/2013	OBL	OFF	ROUND_1	46.8	11.7	93.6	512.52
1271839	42141	82794 SS_Aug2013	Kim AO	GenJAN	LSE 3		7/1/2013	7/31/2013	OBL	OFF	ROUND_1	33.8	8.5	67.6	19.31
1271840	42142	SS_Aug2013	Kim AO	GenDOS	LSE 1		7/1/2013	7/31/2013	OBL	OFF	ROUND_1	3.2	0.0	6.3	15.63
1271841	42135	SS_Aug2013	Kim AO	GenRAL	LSE 5		7/1/2013	7/31/2013	OBL	OFF	ROUND_1	4.3	0.0	8.6	39.75
	42138		Kim AO	HUB 3 SOURCE	LSE 8 SOURCE		7/1/2013	7/31/2013	OBL	OFF	ROUND_1			21.6	
	42134		Kim AO	GenDOS	LSE 3		7/1/2013	7/31/2013	OBL	OFF	ROUND_1			14.7	
	42137		Kim AO	GenJAN	LSE 6		7/1/2013	7/31/2013	OBL	OFF	ROUND_1			10.1	
1271845	42140	SS_Aug2013	Kim AO	GenONE	LSE 6		7/1/2013	7/31/2013	OBL	OFF	ROUND_1	0.5	0.0	1	0.06
1271846	42143	SS_Aug2013	Kim AO	GenNUG	LSE 3		7/1/2013	7/31/2013	OBL	OFF	ROUND_1	3.4	0.0	6.8	19.65
1271847	42139	SS_Aug2013	Kim AO	GenANA	LSE 8		7/1/2013	7/31/2013	OBL	OFF	ROUND_1	14.6	0.0	29.1	7.70

Figure 93 Sample Private Self-converted ARR in CSV Format

The following information is available from this file:

- **BidID** – The ID of the BID
- **ARR ID** – The ID of the ARR which was self-converted in the auction
- **TCR ID** – The unique ID of the TCR associated within the Bid
- **Portfolio** – The name of the portfolio containing the bids

- **AssetOwner** – The name of the asset owner associated with the TCR
- **Source** – The name of the source associated with the TCR
- **Sink** – The name of the sink associated with the TCR
- **StartDate** – The starting date that the TCR is valid
- **EndDate** – The ending date that the TCR is valid
- **HedgeType** –TCR type –Obligation (OBL)
- **Class** – Peak market or off-peak market where the TCR is valid
- **Round** – the round of the auction for which the results are published.
- **SelfConvertedMW** – The amount of MW that was self-converted for the market
- **AwardedMW** – The MW amount of the TCR awarded to the nearest tenth of a MW
- **SettledMW** – The MW amount of the TCR that was settled
- **ClearingPrice** – The clearing price of the TCR awarded in \$/MW—may be positive or negative

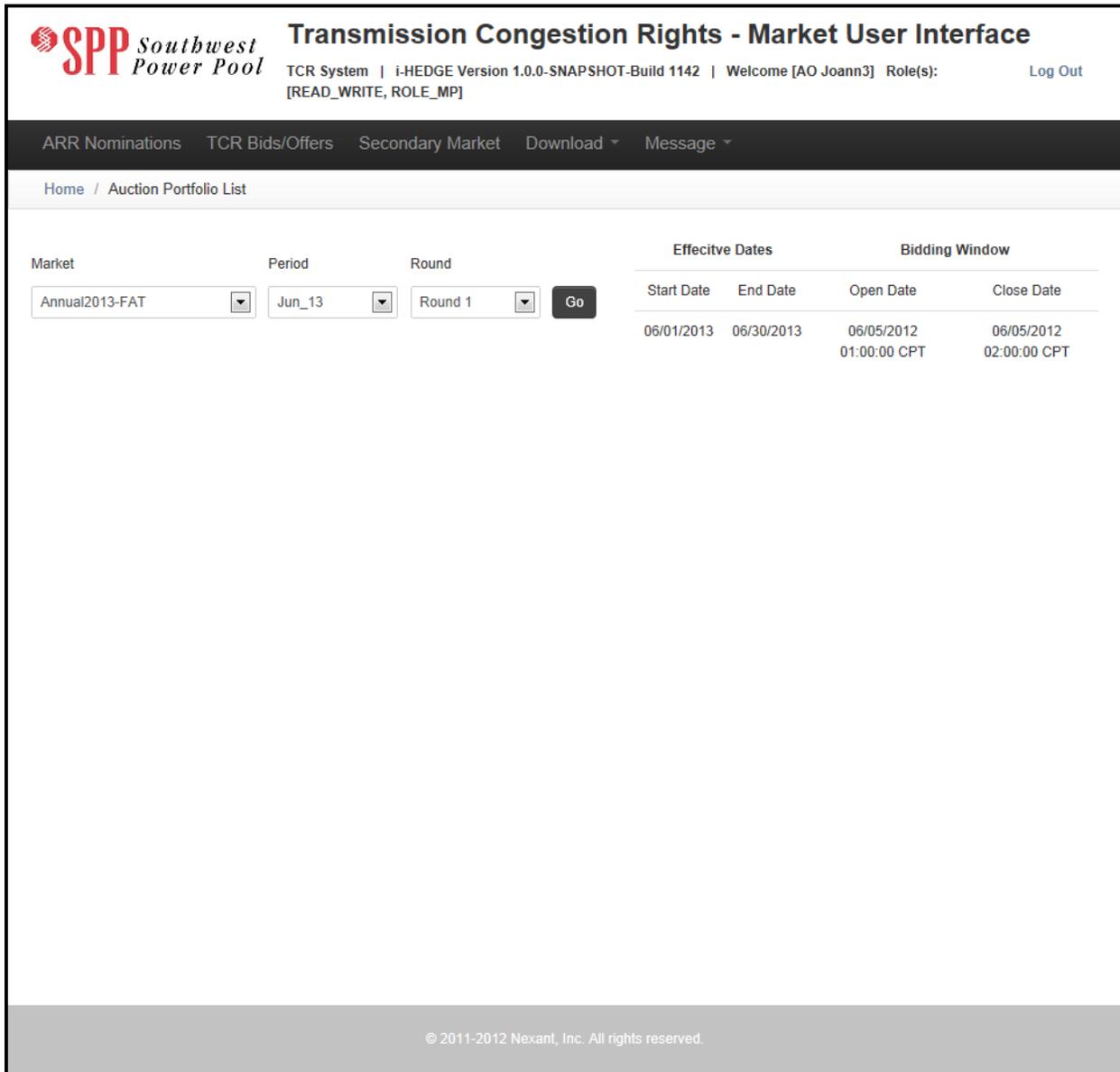
10.3 Other Downloads

10.3.1 Accessing TCR Bid Portfolios

Depending on information contained in the digital security certificate, a user is possesses either a “view” role or a “submit” role. Functionally the view(**READ_ONLY**) and submit roles(**READ_WRITE**) are equivalent, except that a view role(**READ_ONLY**) is not afforded the opportunity to submit bid portfolios to an auction.

Submit Role(**READ_WRITE**) Access

By clicking the menu item **TCR Bids/Offers** a submitter automatically enters the web-page display show in Figure 94.



The screenshot displays the 'Transmission Congestion Rights - Market User Interface'. At the top left is the SPP Southwest Power Pool logo. To its right, the page title 'Transmission Congestion Rights - Market User Interface' is shown, followed by system information: 'TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1142 | Welcome [AO Joann3] Role(s): [READ_WRITE, ROLE_MP]' and a 'Log Out' link. Below this is a navigation bar with links for 'ARR Nominations', 'TCR Bids/Offers', 'Secondary Market', 'Download', and 'Message'. The main content area has a breadcrumb 'Home / Auction Portfolio List'. Below this is a filter section with dropdown menus for 'Market' (set to 'Annual2013-FAT'), 'Period' (set to 'Jun_13'), and 'Round' (set to 'Round 1'), along with a 'Go' button. To the right of the filters is a table with columns for 'Effective Dates' and 'Bidding Window'. The table contains the following data:

Effective Dates		Bidding Window	
Start Date	End Date	Open Date	Close Date
06/01/2013	06/30/2013	06/05/2012 01:00:00 CPT	06/05/2012 02:00:00 CPT

At the bottom of the page, there is a copyright notice: '© 2011-2012 Nexant, Inc. All rights reserved.'

Figure 94 Portfolio List for a Submitter

A submitter is allowed to perform the following tasks:

1. Add new portfolios and then the display will be immediately switched to Portfolio Editor for TCR bid editing.
2. Upload portfolios.
3. Download portfolios in XML or CSV formats.
4. Submit portfolios to an auction (during the bidding windows for auctions).
5. Remove a portfolio from an auction (during the bidding windows for auctions).
6. Delete a portfolio.

Either clicking on “**ADD NEW**” or clicking on an existing portfolio in the list brings the user into the Portfolio Editor. If the user chooses the “**ADD NEW**” button, they are presented with a new empty portfolio; otherwise the portfolio is populated with the existing bids from the portfolio they chose.

Portfolio Editor

Figure 95 depicts the Portfolio Editor. The Portfolio Editor allows the users to edit the TCR bids for the selected (existing or newly created) portfolio.

Transmission Congestion Rights - Market User Interface

TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1143 | Welcome [AO Joann3] Role(s): [READ_WRITE, ROLE_MP] [Log Out](#)

ARR Nominations TCR Bids/Offers Secondary Market Download Message

Home / Auction Portfolio List

Market: Annual2013-FAT | Period: Jun_13 | Round: Round 1 | **Go**

Effective Dates		Bidding Window	
Start Date	End Date	Open Date	Close Date
06/01/2013	06/30/2013	06/05/2012 01:00:00 CPT	06/05/2012 02:00:00 CPT

Portfolio Name	Date Modified	Download	Status	Submit	Retract	Delete	Msg
Testcase	06/11/2012 14:24:54 CPT	CSV	New			Delete	msg
first	06/05/2012 10:56:00 CPT	CSV	Approved				msg

Showing 1 to 2 of 2 entries

Refresh **Add New**

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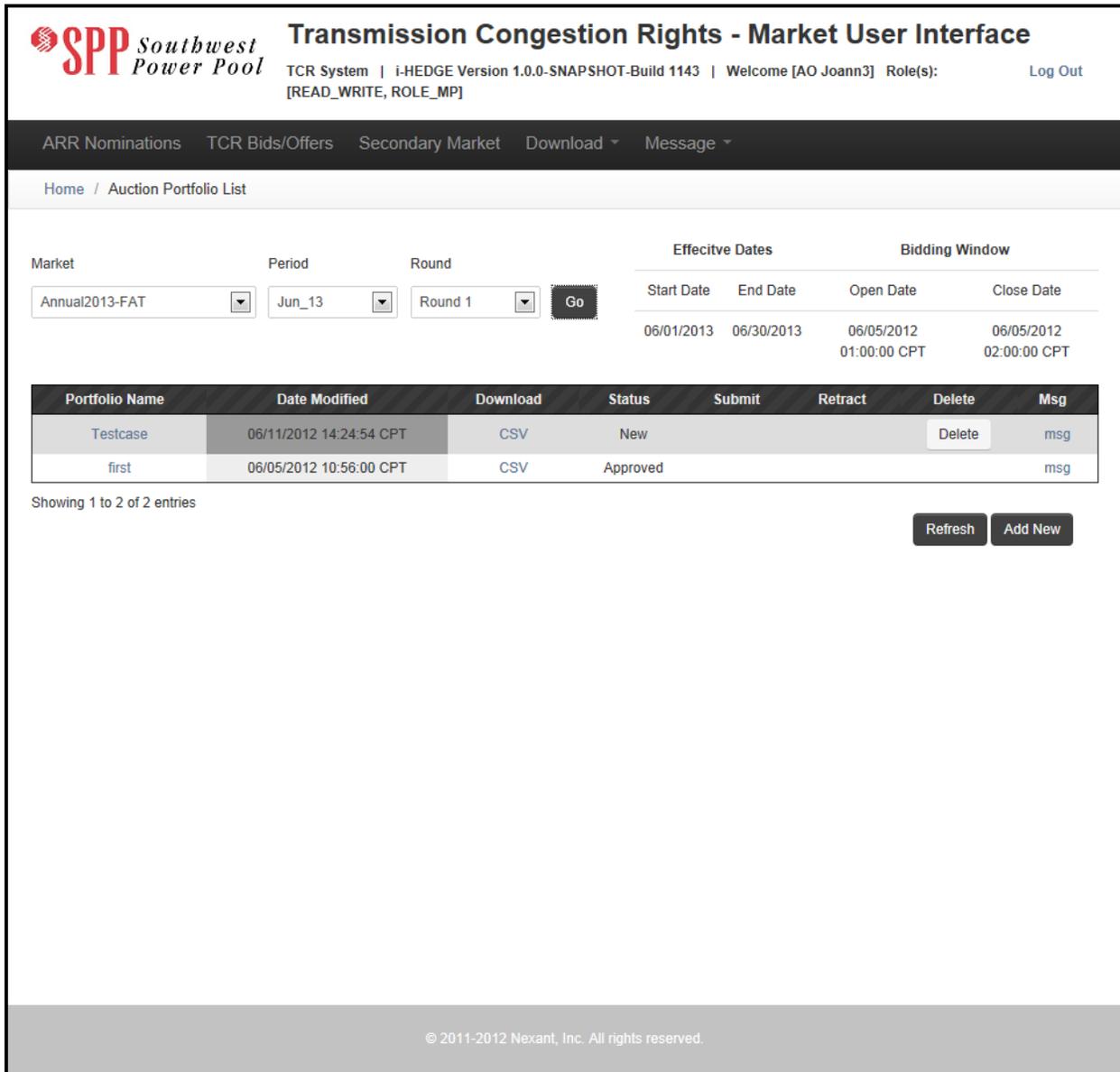
Figure 95 Portfolio Editor

The users can use Portfolio Editor to perform the following tasks on the selected portfolio:

1. Add new TCR buy bids, sell offers and Self-converts.
2. Modify existing TCR buy bids, sell offers and Self-converts.
3. Delete existing TCR buy bids, sell offers and Self-converts.
4. Save the bids updated in the current portfolio.

View Role(READ_ONLY) Access

By clicking the menu item **TCR Bids**, then **selecting a market, period, and round** and then selecting Go, a viewer automatically enters the web-page display shown in Figure 96.



Transmission Congestion Rights - Market User Interface
 TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1143 | Welcome [AO Joann3] Role(s): [READ_WRITE, ROLE_MP] [Log Out](#)

ARR Nominations TCR Bids/Offers Secondary Market Download Message

Home / Auction Portfolio List

Market: Annual2013-FAT | Period: Jun_13 | Round: Round 1 |

Effective Dates		Bidding Window	
Start Date	End Date	Open Date	Close Date
06/01/2013	06/30/2013	06/05/2012 01:00:00 CPT	06/05/2012 02:00:00 CPT

Portfolio Name	Date Modified	Download	Status	Submit	Retract	Delete	Msg
Testcase	06/11/2012 14:24:54 CPT	CSV	New			<input type="button" value="Delete"/>	msg
first	06/05/2012 10:56:00 CPT	CSV	Approved				msg

Showing 1 to 2 of 2 entries

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Figure 96 Portfolio List for a Viewer

From this page the viewer can perform the following tasks:

1. View Portfolio List
2. View the contents of an existing portfolio.

The viewer role differs from the submitter role in that the user is not afforded the opportunity to submit or remove a bid portfolio from an upcoming auction. By clicking on one of portfolios in the Portfolio list page, a viewer automatically enters the Bid

Portfolio Editor web-page display shown in Figure 97. Here the user is permitted to view the web pages but is not allowed to make any changes to the portfolio.

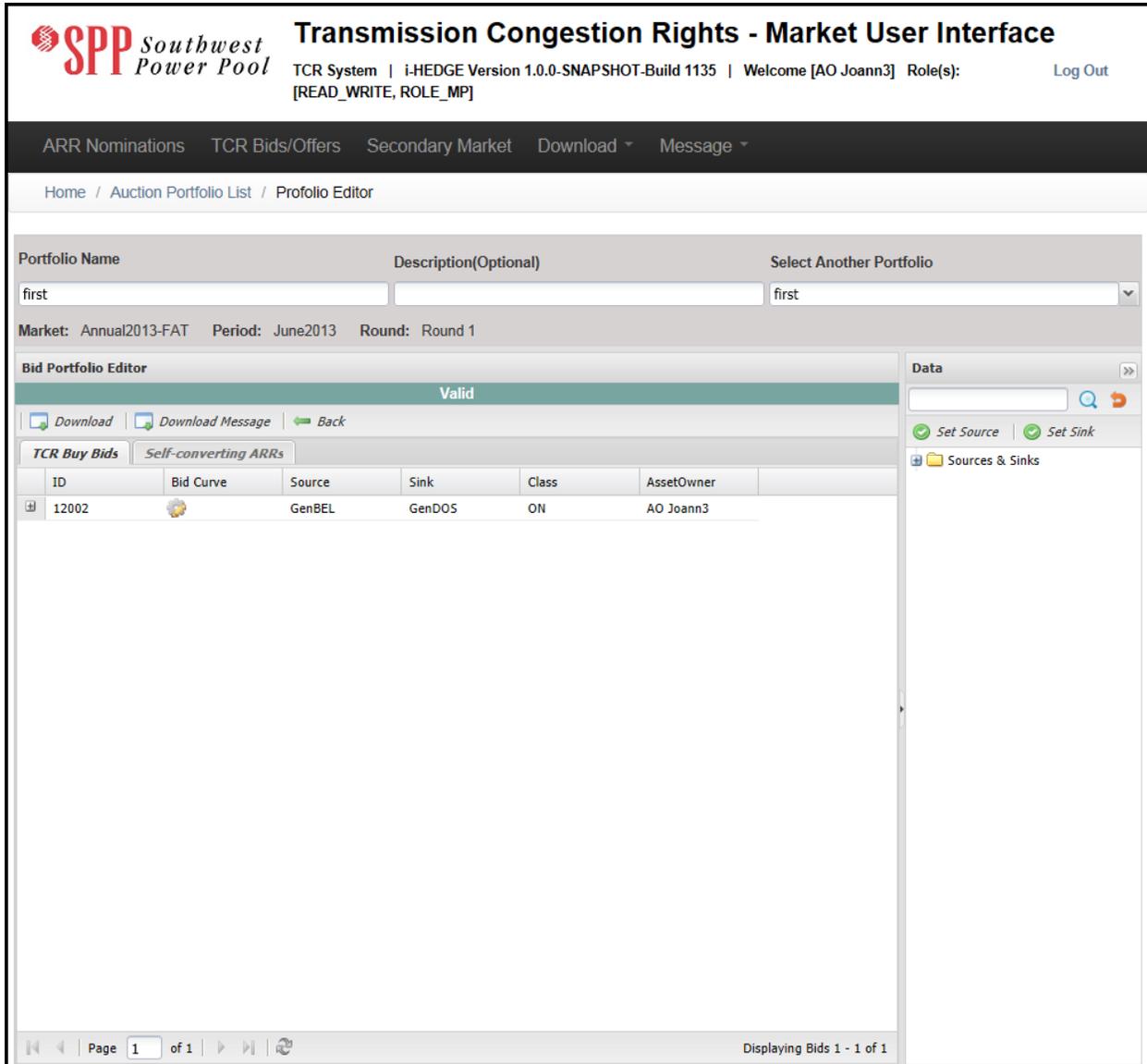


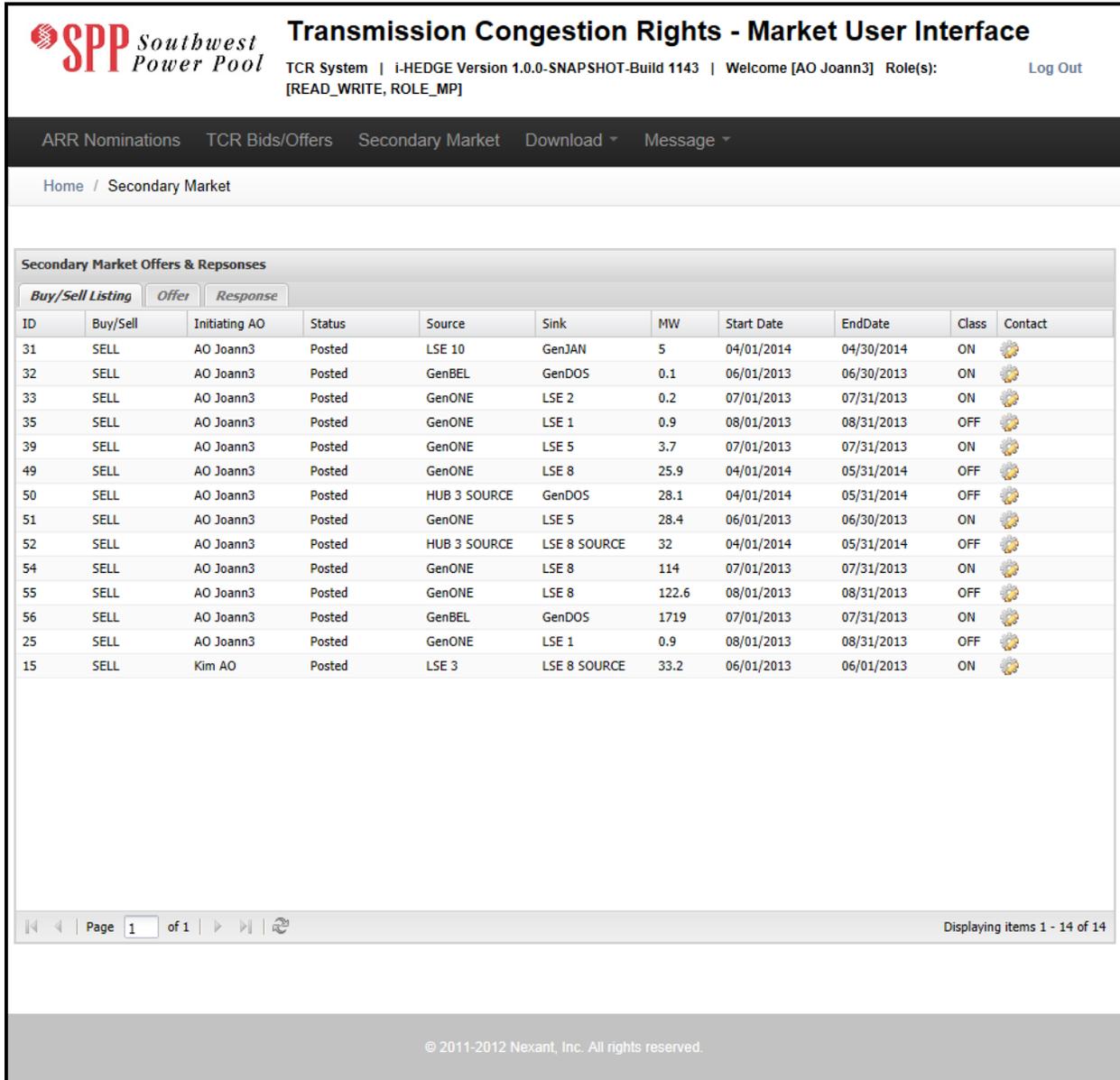
Figure 97 Auction Portfolio Editor for a Viewer

10.3.2 Accessing the TCR Secondary Market

Depending on information contained in the digital security certificate, an Asset Owner enters the TCR Secondary Market as either a “viewer” or a “submitter”.

10.3.2.1 Submitter Access

By clicking the menu item **Secondary Market** a submitter automatically enters the web-page display shown in Figure 98.



SPP Southwest Power Pool Transmission Congestion Rights - Market User Interface
 TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1143 | Welcome [AO Joann3] Role(s): [READ_WRITE, ROLE_MP] [Log Out](#)

ARR Nominations TCR Bids/Offers **Secondary Market** Download Message

Home / Secondary Market

Secondary Market Offers & Responses

Secondary Market Offers & Responses										
Buy/Sell Listing Offer Response										
ID	Buy/Sell	Initiating AO	Status	Source	Sink	MW	Start Date	EndDate	Class	Contact
31	SELL	AO Joann3	Posted	LSE 10	GenJAN	5	04/01/2014	04/30/2014	ON	
32	SELL	AO Joann3	Posted	GenBEL	GenDOS	0.1	06/01/2013	06/30/2013	ON	
33	SELL	AO Joann3	Posted	GenONE	LSE 2	0.2	07/01/2013	07/31/2013	ON	
35	SELL	AO Joann3	Posted	GenONE	LSE 1	0.9	08/01/2013	08/31/2013	OFF	
39	SELL	AO Joann3	Posted	GenONE	LSE 5	3.7	07/01/2013	07/31/2013	ON	
49	SELL	AO Joann3	Posted	GenONE	LSE 8	25.9	04/01/2014	05/31/2014	OFF	
50	SELL	AO Joann3	Posted	HUB 3 SOURCE	GenDOS	28.1	04/01/2014	05/31/2014	OFF	
51	SELL	AO Joann3	Posted	GenONE	LSE 5	28.4	06/01/2013	06/30/2013	ON	
52	SELL	AO Joann3	Posted	HUB 3 SOURCE	LSE 8 SOURCE	32	04/01/2014	05/31/2014	OFF	
54	SELL	AO Joann3	Posted	GenONE	LSE 8	114	07/01/2013	07/31/2013	ON	
55	SELL	AO Joann3	Posted	GenONE	LSE 8	122.6	08/01/2013	08/31/2013	OFF	
56	SELL	AO Joann3	Posted	GenBEL	GenDOS	1719	07/01/2013	07/31/2013	ON	
25	SELL	AO Joann3	Posted	GenONE	LSE 1	0.9	08/01/2013	08/31/2013	OFF	
15	SELL	Kim AO	Posted	LSE 3	LSE 8 SOURCE	33.2	06/01/2013	06/01/2013	ON	

Page 1 of 1 | Displaying items 1 - 14 of 14

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Figure 98 Secondary Market - Submitter

A submitter is allowed to perform the following tasks in the Secondary Market:

1. View listed market postings.
2. Post bids to buy.

3. Post offers to sell.
4. Accept posted bids to buy.
5. Accept posted offers to sell.

10.3.2.2 Viewer Access

By clicking the menu item **Secondary Market** a viewer automatically enters the web-page display shown in Figure 99.

The screenshot displays the SPP Transmission Congestion Rights - Market User Interface. The page title is "Transmission Congestion Rights - Market User Interface". The user is logged in as "AO Joann3" with roles [READ_WRITE, ROLE_MP]. The navigation menu includes "ARR Nominations", "TCR Bids/Offers", "Secondary Market", "Download", and "Message". The current page is "Secondary Market Offers & Responses".

The interface shows a table of offers and responses. The table has columns for ID, Type, Responding AO, Status, TCRID, Source, Sink, and MW. The data is as follows:

ID	Type	Responding AO	Status	TCRID	Source	Sink	MW
31	PUBLIC		Posted	45453	LSE 10	GenJAN	5
32	PUBLIC		Posted	29072	GenBEL	GenDOS	0.1
33	PUBLIC		Posted	39121	GenONE	LSE 2	0.2
35	PUBLIC		Posted	36699	GenONE	LSE 1	0.9
39	PUBLIC		Posted	38783	GenONE	LSE 5	3.7
49	PUBLIC		Posted	38606	GenONE	LSE 8	25.9
50	PUBLIC		Posted	38603	HUB 3 SOURCE	GenDOS	28.1
51	PUBLIC		Posted	30900	GenONE	LSE 5	28.4
52	PUBLIC		Posted	38607	HUB 3 SOURCE	LSE 8 SOURCE	32
54	PUBLIC		Posted	38718	GenONE	LSE 8	114
55	PUBLIC		Posted	36697	GenONE	LSE 8	122.6
56	PUBLIC		Posted	38742	GenBEL	GenDOS	1719
25	PUBLIC		Posted	36699	GenONE	LSE 1	0.9
9	PRIVATE	John AO	Approved	36701	GenONE	LSE 2	8.3
7	PRIVATE	Kim AO	Approved	36701	GenONE	LSE 2	8.3
3	PUBLIC	Kim AO	Approved	38605	GenNUG	LSE 1	2.3

The interface also includes a "Data" sidebar with "Set AO" and "Set TCR" buttons, and a "My Buy Offer" / "My Sell Offer" section. The page footer indicates "© 2011-2012 Nexant, Inc. All rights reserved." and "Displaying items 1 - 16 of 16".

Figure 99 Secondary Market - Viewer

A viewer is only allowed to view listed market postings in the Secondary Market. A viewer may not post bids to buy, post offers to sell, accept posted bids to buy, or accept posted offers to sell.

Details of the functionality of the Secondary Market can be found in Chapter 9.

10.3.3 Accessing ARR Nomination Editor

Depending on information contained in the digital security certificate, a user is designated to possessing either a “view” role or a “submit(READ_WRITE)” role. Functionally the view and submit roles(**READ_WRITE**) are equivalent, except that a view role(**READ_ONLY**) is not afforded the opportunity to nominate MW for candidate ARRs in an allocation.

Submit Role(**READ_WRITE**) Access

By clicking the menu item **ARR Nomination**, then selecting the market, period and round for which you wish to nominate, then selecting go, a submitter automatically enters the Nomination Editor. Selecting the Profile you wish to view brings the user to the website shown in Figure 100.



Transmission Congestion Rights - Market User Interface

TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1143 | Welcome [AO Joann3] Role(s): [READ_WRITE, ROLE_MP] [Log Out](#)

ARR Nominations
TCR Bids/Offers
Secondary Market
Download ▾
Message ▾

Home / Nomination

Market: Period: Round:

Effective Dates		Nomination Window	
Start Date	End Date	Open Date	Close Date
06/01/2013	06/30/2013	06/04/2012 05:00:00 CPT	06/04/2012 08:00:00 CPT

Summary			
	Round Cap	Round Nomination	Round Allocation
NITS-OFF	141.1	0.0	0.0
PTP-ON	416.6	0.0	0.0
PTP-OFF	401	0.0	0.0
NITS-ON	128.4	0.0	0.0

Round 3 Nomination Editor

Valid

|

|

Candidate ID	Nominated MW	Allocated MW	Source	Sink	Class	AssetOwner	St
No Candidate ARRs to display							

Page 0 of 0

Data

Set Source | Set Sink

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Figure 100 Nomination Editor for a Submitter

A submitter is allowed to perform the following tasks:

1. View the Candidate ARRs associated with the Asset Owner.
2. Nominate MW for each of the Candidate ARRs.
3. Calculate if the nominated MW amounts meet the round caps, using the **Refresh** and **Recalc** icons.
4. Submit nominations to an allocation, using the **Save** icon.

View Role(READ_ONLY) Access

By clicking the menu item **ARR Nomination**, then selecting the market, period and round for which you wish to nominate, then selecting go, a submitter automatically enters the Nomination Editor. Selecting the Profile you wish to view brings the user to the website shown in Figure 101.



Transmission Congestion Rights - Market User Interface

TCR System | i-HEDGE Version 1.0.0-SNAPSHOT-Build 1426 | Welcome [AO Joann3] Role(s): [READ_ONLY, ROLE_MP] [Log Out](#)

ARR Nominations
TCR Bids/Offers
Secondary Market
Download ▾
Message ▾

Home / Nomination

Market:

Period:

Round:

Effective Dates		Nomination Window	
Start Date	End Date	Open Date	Close Date
06/01/2013	06/30/2013	06/27/2012 05:00:00 CPT	06/28/2012 19:00:00 CPT

Summary			
	Round Cap	Round Nomination	Round Allocation
PTP-ON	580	0.0	0.0
NITS-ON	180	0.0	0.0
NITS-OFF	180	0.0	0.0
PTP-OFF	580	0.0	0.0

Round 3 Nomination Editor

Valid

Candidate ID	Status ▾	Nominated MW	Allocated MW	Source	Sink	Class	At
No record to display							

Data

Set Source Set Sink

Page 0 of 0

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Figure 101 Nomination Editor for a Viewer

From this page the viewer can perform the following tasks:

1. View the Candidate ARRs associated with the Asset Owner.

The viewer role differs from the submitter role in that the user is not afforded the opportunity to submit (save) nominations to the allocation, as evidenced by the absence of the **Recalc** and **Save** icons in the Nomination Editor.

11. Message Board

11.1 Overview of the Message board

The primary function of the message board is to provide an easy way for the Market Operators to communicate with the Market Users. While The Market User cannot send messages, it provides a medium for which vital information can be transferred. The Messages are all classified by importance, and that is indicated by color of the text, Green text indicates a message of low importance, Yellow indicates medium importance, and Red text indicates a message of high importance.

11.2 Public and Private Message Board

Public messages are messages from the Market Operator to all Asset Owners while Private messages are messages written to an individual Asset Owner. These two message boards are located separately in their respective tabs on the Message drop down menu, shown below in **Error! Reference source not found.**

Error! Reference source not found. illustrates some of the Public messages sent to the Asset Owners. Figure 103 provides an example of the Private messages sent to the Asset Owners.

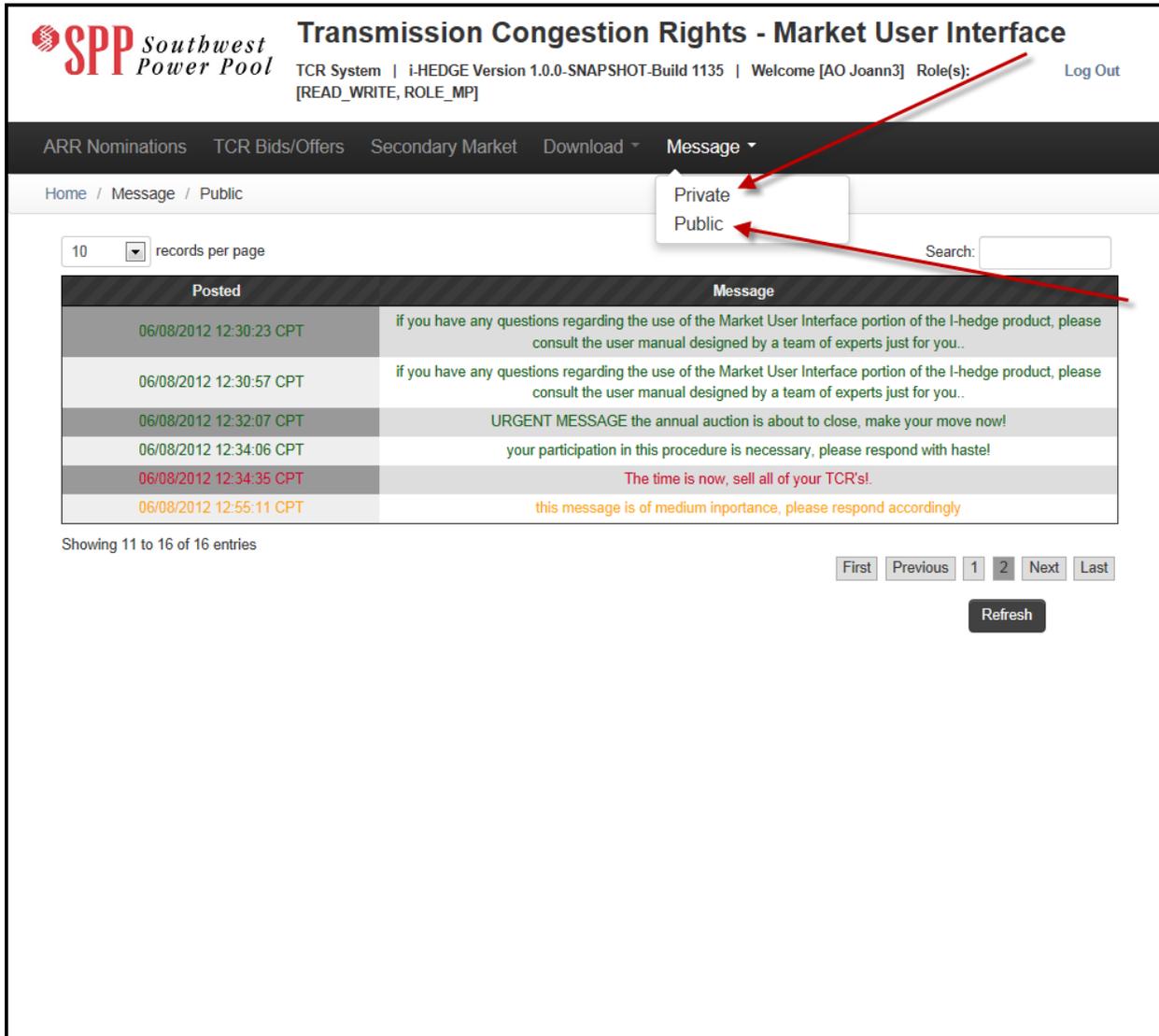


Figure 102 Public Message Board

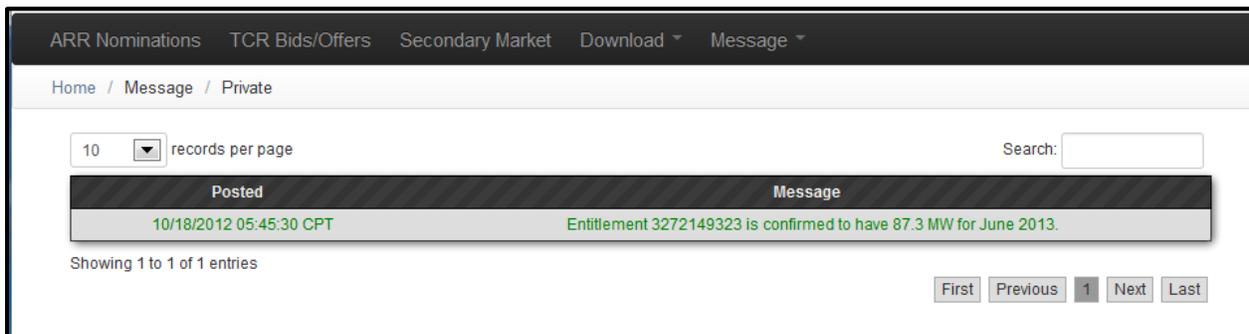


Figure 103 Private Message Board