



California ISO
Shaping a Renewed Future

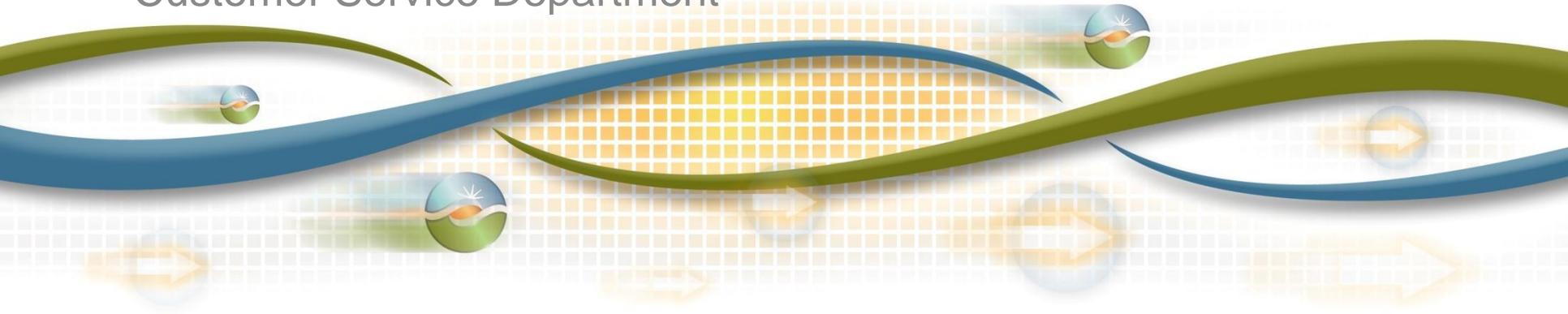
Enabling Demand Response: Demand Response Location Registration

Pre-Market Simulation Training Session

January 27, 2015 (updated with new screenshots on 3/19/15)

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Customer Service Department



Agenda



- Terms and acronyms
- Review business process changes
- New Demand Response Registration System
- Changes to existing Demand Response System
- Registration management



California ISO
Shaping a Renewed Future

Terms and Acronyms

Terms and Acronyms

- Demand Response Provider (DRP)
- Load Serving Entity (LSE)
- Utility Distribution Company (UDC)
- Locations
 - Physical location of the demand response entity
 - Includes customer data such as service account number, physical service location, curtailable load amounts

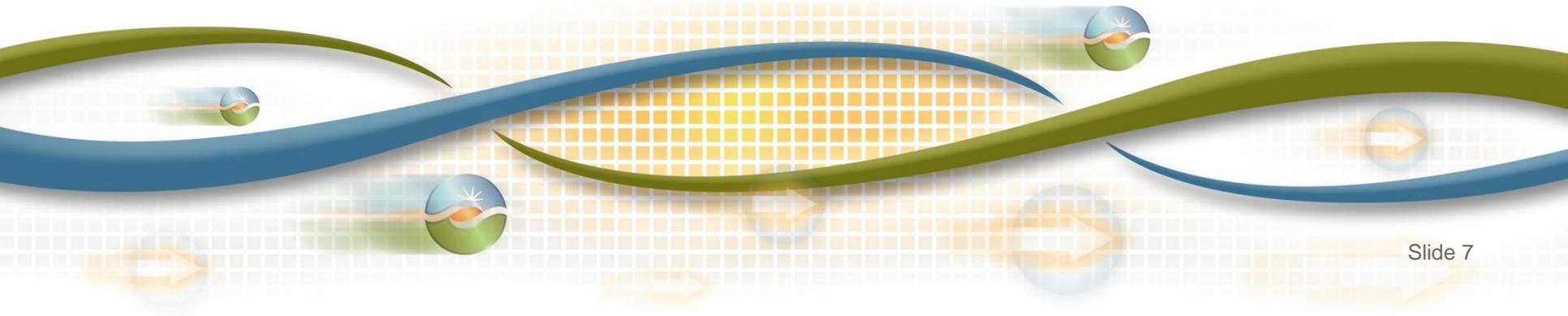
Terms and Acronyms

- **Aggregate Location (ALOC)**
 - A grouping of one or more locations
 - Aggregate locations must be served by the same LSE and located in same Sub-LAP for approval by LSE and UDC
- **Service Account Number (SAN)**
 - Unique number assigned to a location by the UDC
- **Load Reduction Capacity Value (LRCV)**
 - total available kW load reduction

Terms and Acronyms

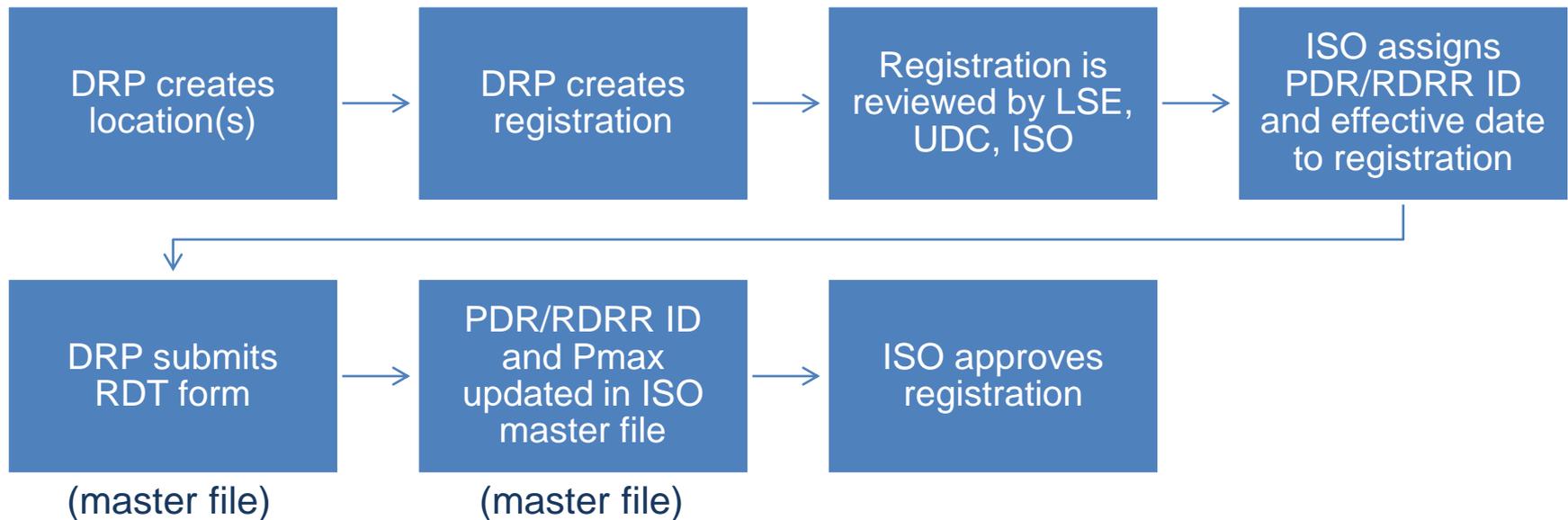
- **Registration**
 - May be comprised of a single location or an aggregation of many locations
 - Registration submitted for LSE, UDC review and ISO approval
 - Meter Data information submitted at registration level for baseline calculation prior to market participation
- **PDR/RDRR Resource ID**
 - Assigned by ISO
 - One ID per registration
 - Unique ID used for participation in the ISO wholesale markets (scheduling/bidding and settlement)
 - Resource specific information for the ID resides in the ISO Master File

Review Business Process Changes



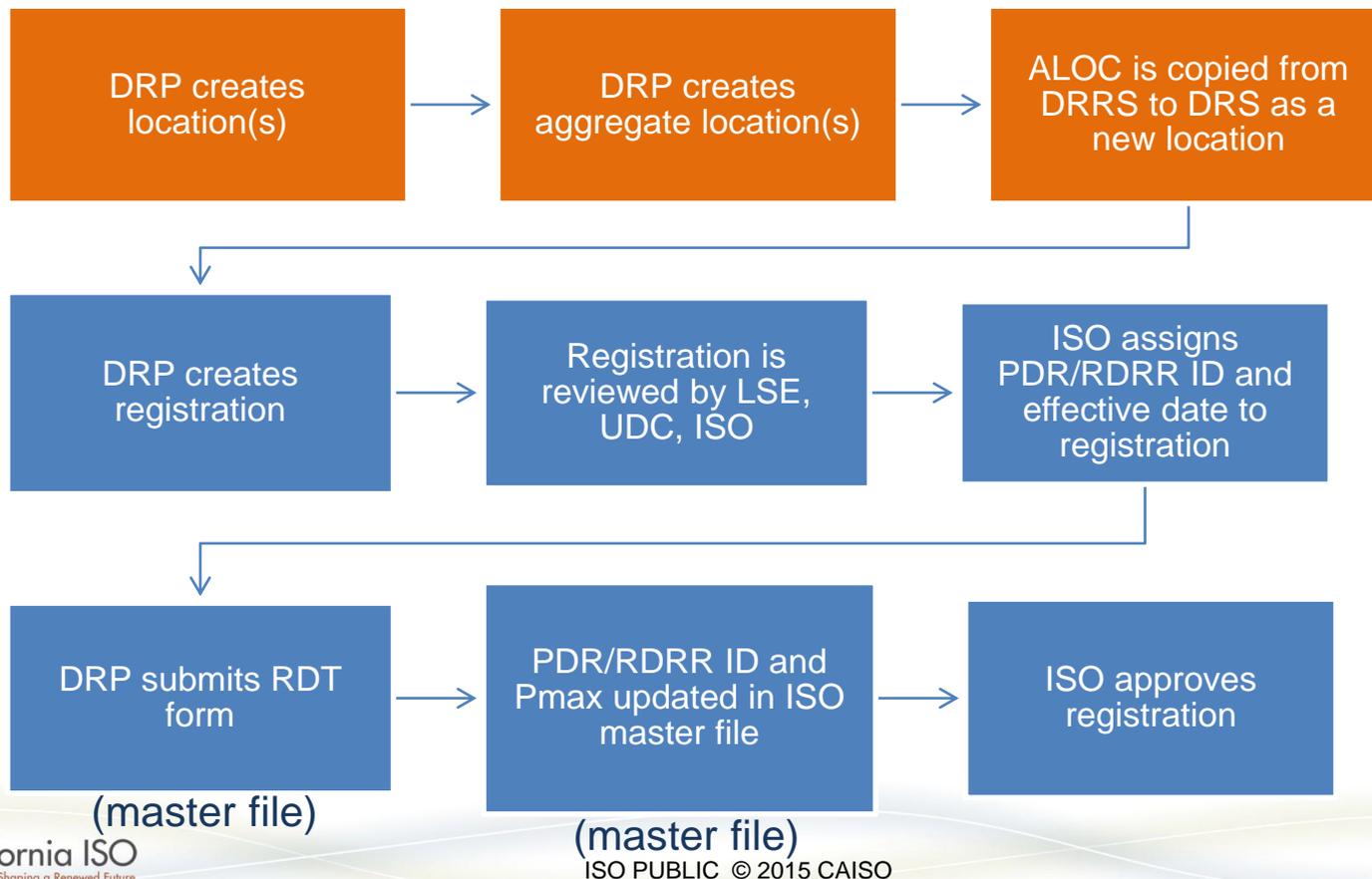
As-Is Business Process

- Locations are created, registered, reviewed, verified, and approved in the Demand Response System (DRS)
- No API functionality



To-Be Business Process

- Locations and aggregate locations are created in the Demand Response Registration System (DRRS) via user interface or API
- Locations are registered, reviewed, verified, and approved in the Demand Response System (DRS) via user interface



New Demand Response Registration System (DRRS)

High-level Goals for DRRS Implementation

Application Access

DRRS Functionality

High-level Goals for DRRS Implementation

- New application to provide bulk upload/download of locations for market participants
- Provides scalability to accommodate input of the volume of locations participating in demand response programs
- Maintain duplication check of a location within active registrations

Application Access

- Work with your application access Point of Contact (POC) to obtain access to DRRS
- Access to DRRS is managed using the Access and Identity Management (AIM) application
 - Access for endorsed users is managed using the Application Access Request Form (AARF)
- Submit requests for access to DRRS in market simulation and production environments
 - Look for market notice with additional instructions
- Request DRS access if you do not have it today
 - DRS is a legacy application; access is managed using the Application Access Request Form (AARF)

Application Access

- Icons for both applications will be visible in the market simulation environment for users who have access

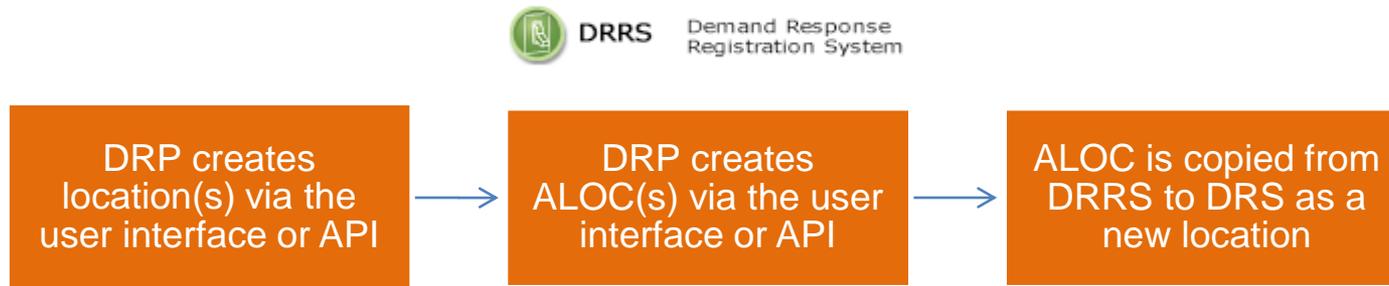
 **California ISO**
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Market Applications

[Market Participant Portal
CAISO.com](http://MarketParticipantPortal.CAISO.com)
MAP-STAGE

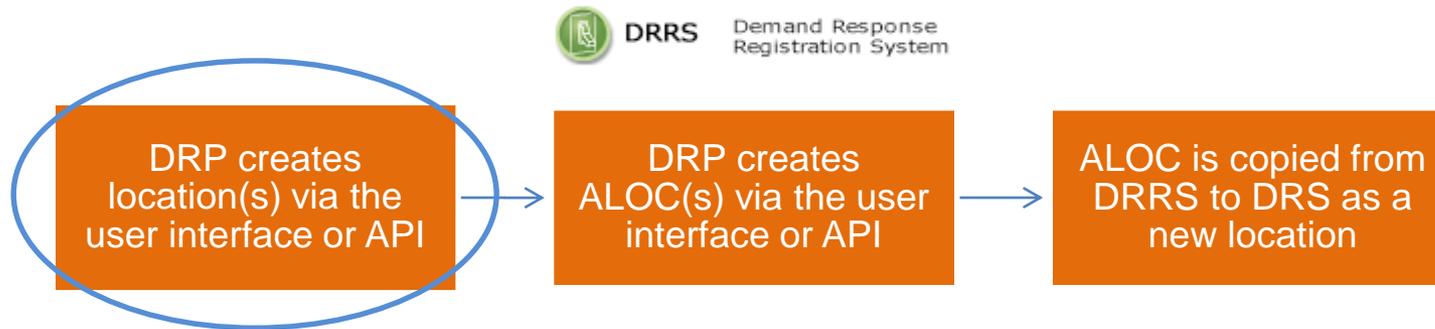
Application Access  AIM Access and Identity Management	Metering  OMAR Operational Meter Analysis & Reporting	Renewables & Demand Response  DRS Demand Response System  DRRS Demand Response Registration System  PIRP Participating Intermittent Resource Program
Inquiries & Disputes  CIDI Customer Inquiry Dispute and Information	OASIS  OASIS Open Access Same-Time Information System	Settlements  MRI-S Market Results Interface - Settlements
Market & Operations  CMRI Customer Market Results Interface  CRR Congestion Revenue Rights  SIBR Scheduling Infrastructure & Business Rules  SIBR Reports Scheduling Infrastructure & Business Rules Reports	Outage Coordination  WebOMS Outage Management System	Systems & Resource Modeling  TR Transmission Registry  Master File  RIMS Resource Interconnection Management System  RIMSG Resource Interconnection Management System - Generation
	Reliability Requirements  CIRA California ISO Interface for Resource Adequacy  RAAM Resource Adequacy Availability Management	

DRRS Application Functionality



- DRRS is built using the common UI framework
- Application functionality
 - Create new location
 - Create new aggregate location (ALOC)
 - Manage locations and ALOCs
- ALOCs are copied to DRS once completed

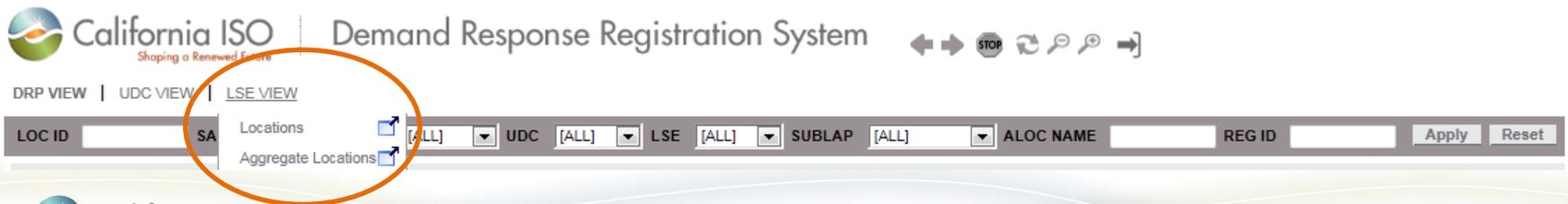
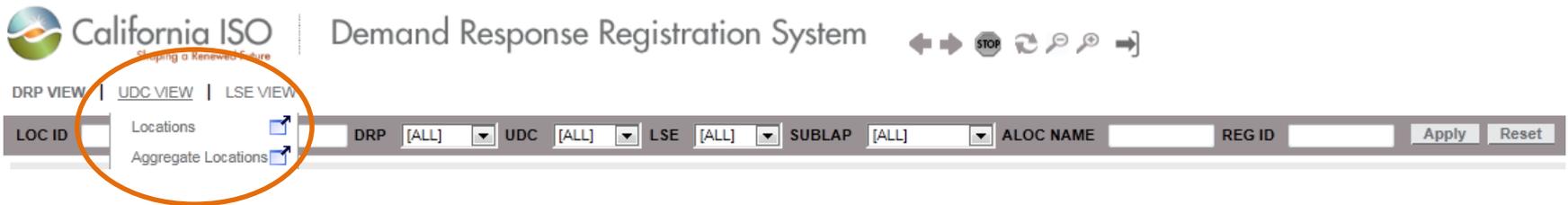
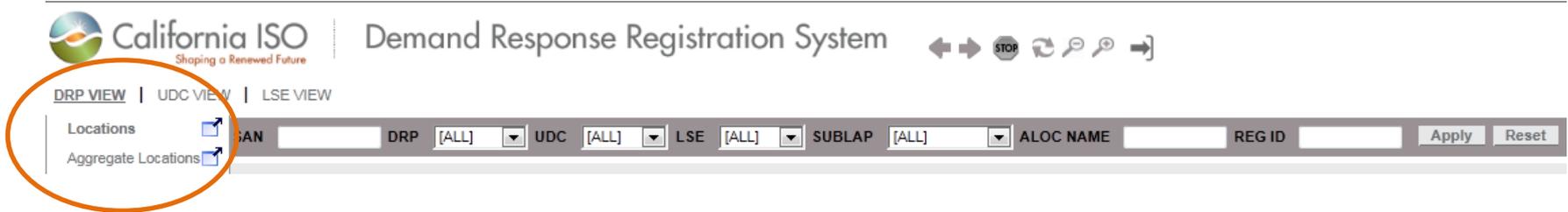
DRRS Application Functionality



- Application functionality
 - Create new location

Role-based Tabs

- Users will see one or more tab(s) based on their roles
- Users with multiple tabs should select the tab that corresponds with the role they are performing at that moment
 - For example, select **UDC VIEW** to see all locations that are assigned to you as the UDC



DRRS Application: Create New Location

- Functionality for DRP only

California ISO | Demand Response Registration System

DRP VIEW | UDC VIEW | LSE VIEW

Locations  SAN **Select Locations from the DRP VIEW Tab** NAME REG ID Apply Reset

Aggregate Locations 

California ISO | Demand Response Registration System

DRP VIEW | UDC VIEW | LSE VIEW

LOC ID SAN DRP [ALL] UDC [ALL] LSE [ALL] SUBLAP [ALL] ALOC NAME REG ID Apply Reset

Create New Location

Locations

DRRS Application: Create New Location



DRP VIEW | UDC VIEW | LSE VIEW

Apply Reset

Create New Location

Name *	<input type="text"/>
SAN *	<input type="text"/>
Start Date *	<input type="text" value="31"/>
End Date *	<input type="text" value="31"/>
DRP *	<input type="text"/>
UDC *	<input type="text"/>
LSE *	<input type="text"/>
SUBLAP *	<input type="text"/>

Address 1	<input type="text"/>
Address 2	<input type="text"/>
City	<input type="text"/>
State	CA <input type="text"/>
Zip	<input type="text"/>
Business Segment	<input type="text"/>

* Required fields

LRCV (in kW)

Load Reduction Types

Backup Generator	<input type="text"/>
HVAC	<input type="text"/>
Refrigeration	<input type="text"/>
Lighting	<input type="text"/>
Manufacturing	<input type="text"/>
Water Heating	<input type="text"/>
Other	<input type="text"/>

Cancel

Submit New Location

DRRS Application: Create New Location



DRP VIEW | UDC VIEW | LSE VIEW

Apply Reset

Create New Location

Name *	<input type="text" value="Sample Location for Training - rkm"/>	Address 1	<input type="text" value="250 Outcropping Way"/>
SAN *	<input type="text" value="123456789"/>	Address 2	<input type="text"/>
Start Date *	<input type="text" value="03/01/2015"/> 31	City	<input type="text" value="Folsom"/>
End Date *	<input type="text" value="12/31/2015"/> 31	State	<input type="text" value="CA"/>
DRP *	<input type="text" value="DSCE"/>	Zip	<input type="text" value="95630"/>
UDC *	<input type="text" value="USCE"/>	Business Segment	<input type="text"/>
LSE *	<input type="text" value="LSCE"/>		
SUBLAP *	<input type="text"/>		
LRCV (in kW)	<ul style="list-style-type: none">SLAP_PGCCSLAP_PGEBSLAP_PGF1SLAP_PGFGSLAP_PGHBSLAP_PGLPSLAP_PGNBSLAP_PGNCSLAP_PGNVSLAP_PGP2SLAP_PGSASLAP_PGSBSLAP_PGSFSLAP_PGSISLAP_PGSNSLAP_PGSTSLAP_SCECSLAP_SCENSLAP_SCEWSLAP_SCHDSLAP_SCLDSLAP_SCNWSLAP_SDG1		
Load Reduction	<input type="checkbox"/>		
Backup Generator	<input type="checkbox"/>		
HVAC	<input type="checkbox"/>		
Refrigeration	<input type="checkbox"/>		
Lighting	<input type="checkbox"/>		
Manufacturing	<input type="checkbox"/>		
Water Heating	<input type="checkbox"/>		
Other	<input type="checkbox"/>		

Choices in **SUBLAP** field are determined by **Start Date/End Date**

Cancel

Submit New Location

DRRS Application: Locations menu option (full screen)

- A location is Non-Participating if it does not belong to an ALOC
- Status changes to Participating Active or Participating Inactive when added to an ALOC

The screenshot displays the California ISO Demand Response Registration System interface. At the top, the header includes the California ISO logo and the text "Demand Response Registration System". Below the header, there are navigation tabs for "DRP VIEW", "UDC VIEW", and "LSE VIEW". A search bar contains various filters: "LOC ID", "SAN", "DRP [ALL]", "UDC [ALL]", "LSE [ALL]", "SUBLAP [ALL]", "ALOC NAME", and "REG ID". There are "Apply" and "Reset" buttons next to the search bar.

The main content area is titled "Locations" and shows a table of location records. The table has columns for "LOC ID", "LOC Name", "SAN", "DRP", "UDC", "LSE", "SUBLAP", "Start Date", "End Date", and "Loc Status". The first row in the table has "Non-Participating" in the "Loc Status" column, which is circled in orange. A text box with an orange border is overlaid on the table, containing the text: "Status set to Non-Participating when location is first created".

Below the table, there is a "Site Info" section with a "Profile" tab. The "Site Info" section displays the following information:

Address 1	Address 2 City	State	Zip
255 Outcropping Way	FOLSOM	CA	95630

On the right side of the interface, there is an "Aggregate Locations" section. It has a search icon and a table with columns for "ALOC ID", "ALOC NAME", and "Status". Below the table, it says "No Data found".

DRRS Application: Locations menu option (full screen)

- This screen displays a list of locations
- DRP can create new locations
- DRP can modify information (in some cases)
- LSE and UDC have read-only access

California ISO | Demand Response Registration System

DRP VIEW | UDC VIEW | LSE VIEW

LOC ID SAN DRP [ALL] UDC [ALL] LSE [ALL] SUBLAP [ALL] ALOC NAME REG ID Apply Reset

Create New Location

Locations

LOC ID	LOC Name	SAN	DRP	UDC	LSE	SUBLAP	Start Date	End Date	LocStatus
Edit									Non-Participating
									End Dated
Edit									Participating Inactive
Edit									Non-Participating
Edit									Participating Inactive
									End Dated
									Participating Active Edit TR Override
									Participating Active Edit TR Override

Aggregate Locations:

ALOC ID	ALOC NAME	Status
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Site Info Profile

Site Info:

Address 1 Address 2 City State Zip

DRRS Application: Locations menu option (full screen)

- Locations are displayed on the left
- Click on a location to see
 - What aggregate location it belongs to (if any) – right side
 - Site Information (address) – bottom
 - Profile (type of load reduction) – bottom

The screenshot displays the California ISO Demand Response Registration System interface. At the top, the California ISO logo and the text "Demand Response Registration System" are visible. Below this, there are navigation tabs for "DRP VIEW", "UDC VIEW", and "LSE VIEW", with "DRP VIEW" highlighted. A search bar contains fields for "LOC ID", "SAN", "DRP", "UDC", "LSE", "SUBLAP", "ALOC NAME", and "REG ID", along with "Apply" and "Reset" buttons. The main content area is divided into three sections:

- Locations:** A table listing individual locations with columns for "LOC ID", "LOC Name", "SAN", "DRP", "UDC", "LSE", "SUBLAP", "Start Date", "End Date", "LocStatus", and "Status". The table contains several rows, with the first row highlighted in blue. A label "Locations" is overlaid on this section.
- Aggregate Locations:** A table listing aggregate locations with columns for "ALOC ID", "ALOC NAME", and "Status". A label "Aggregate Locations" is overlaid on this section.
- Site Info & Profile:** A section at the bottom left containing "Site Info" and "Profile" tabs, with a "Site Info:" label and fields for "Address 1", "Address 2", "City", "State", and "Zip". A label "Site Information & Profile" is overlaid on this section.

DRRS Application: Locations menu option (left side)

- Edit buttons are available to DRP based on location status

The screenshot shows the California ISO Demand Response Registration System (DRRS) interface. The top navigation bar includes the California ISO logo, the system name, and navigation icons. Below the navigation bar, there are tabs for 'DRP VIEW', 'UDC VIEW', and 'LSE VIEW'. A search bar contains various filters: 'LOC ID', 'SAN', 'DRP' (with a dropdown menu set to '[ALL]'), 'UDC' (with a dropdown menu set to '[ALL]'), 'LSE' (with a dropdown menu set to '[ALL]'), 'SUBLAP' (with a dropdown menu set to '[ALL]'), 'ALOC NAME', and 'REG ID'. There are 'Apply' and 'Reset' buttons next to the search bar. Below the search bar is a 'Create New Location' button. The main content area is titled 'Locations' and features a table with columns: 'LOC ID', 'LOC Name', 'SAN', 'DRP', 'UDC', 'LSE', 'SUBLAP', 'Start Date', 'End Date', and 'LocStatus'. The table contains several rows of data. The first row has a green 'Edit' button circled in orange. A text box with an orange border is overlaid on the table, containing a list of bullet points. The bottom of the interface has a 'Site Info' section with tabs for 'Site Info' and 'Profile', and a form for entering site information.

California ISO | Demand Response Registration System

DRP VIEW | UDC VIEW | LSE VIEW

LOC ID [] SAN [] DRP [ALL] UDC [ALL] LSE [ALL] SUBLAP [ALL] ALOC NAME [] REG ID [] Apply Reset

Create New Location

Locations

LOC ID LOC Name SAN DRP UDC LSE SUBLAP Start Date End Date LocStatus

- Green edit button allows editing of required fields
- Available for:
 - Non-Participating
 - Participating Inactive
- Not available for end dated

Site Info Profile

Site Info:

Address 1 Address 2 City State Zip

DRRS Application: Locations menu option (left side)

- Edit buttons are available to DRP based on location status

California ISO | Demand Response Registration System

DRP VIEW | UDC VIEW | LSE VIEW

LOC ID [] SAN [] DRP [ALL] UDC [ALL] LSE [ALL] SUBLAP [ALL] ALOC NAME [] REG ID [] Apply Reset

Create New Location

Locations

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LOC ID	LOC Name	SAN	DRP	UDC	LSE	SUBLAP	Start Date	End Date	LocStatus	
Edit									Non-Participating	
									End Dated	
Edit									Participating Inactive	
Edit									Non-Participating	
Edit									Participating Inactive	
									End Dated	
									Participating Active	Edit TR Override
									Participating Active	Edit TR Override

Site Info Profile

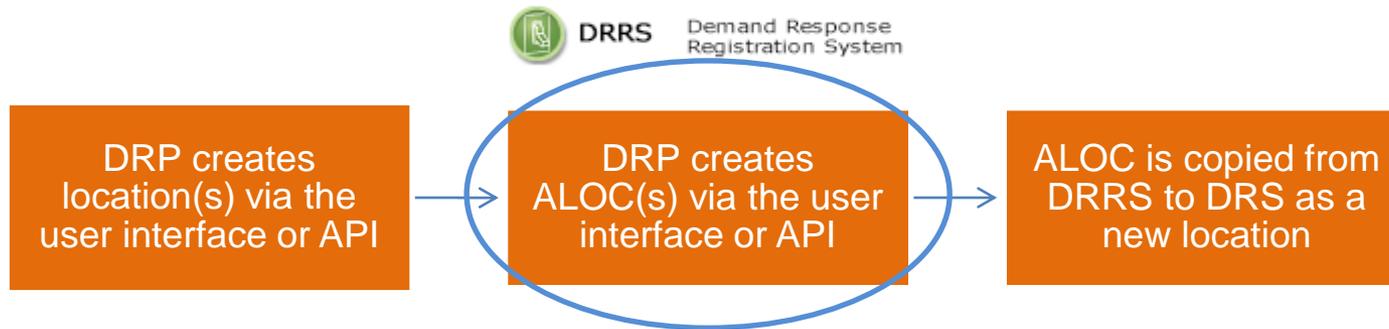
Site Info:

Address 1 Address 2 City State Zip >>>

- Yellow edit button allows editing of optional fields
- Available for:
 - Participating active

[Edit](#) [TR Override](#)

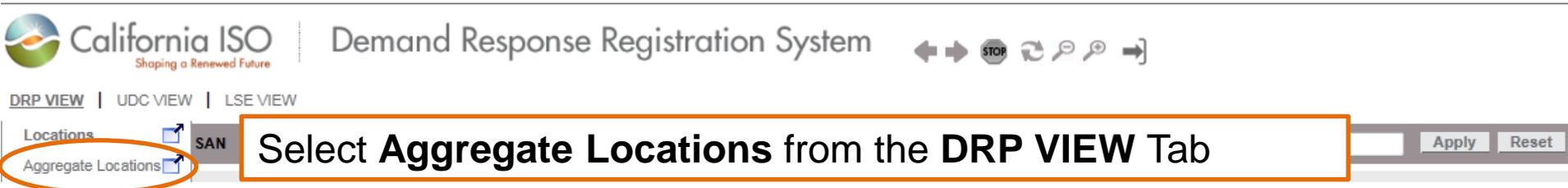
DRRS Application Functionality



- Application functionality
 - Create new aggregate location (ALOC)
- An aggregate location must be created for all locations, even if there is only one location to register

DRRS Application: Create New ALOC

- Functionality for DRP only

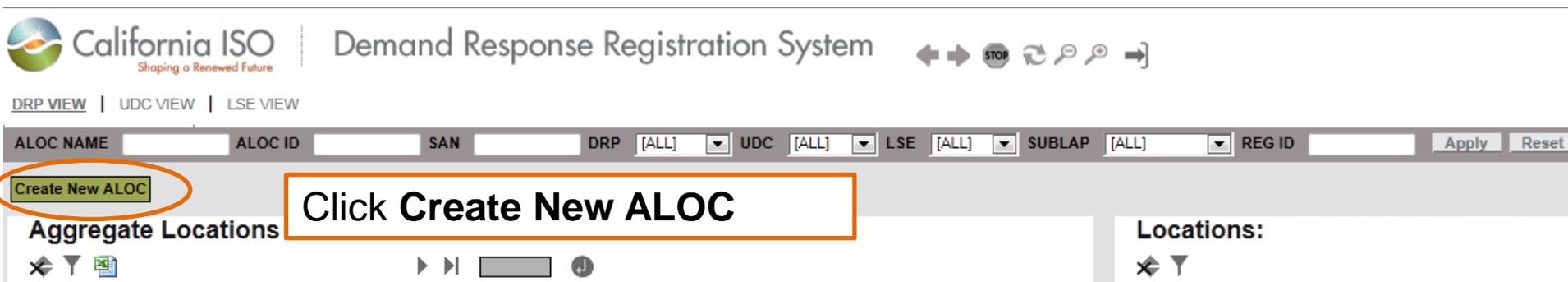


California ISO | Demand Response Registration System

DRP VIEW | UDC VIEW | LSE VIEW

Locations SAN **Select Aggregate Locations from the DRP VIEW Tab**

Aggregate Locations



California ISO | Demand Response Registration System

DRP VIEW | UDC VIEW | LSE VIEW

ALOC NAME ALOC ID SAN DRP [ALL] UDC [ALL] LSE [ALL] SUBLAP [ALL] REG ID

Create New ALOC **Click Create New ALOC**

Aggregate Locations Locations:

DRRS Application: Create New ALOC



DRP VIEW | UDC VIEW | LSE VIEW

Apply

Reset

Create New Aggregate Location

ALoc Name *

DRP *

UDC *

LSE *

SUBLAP *

LRCV *

Cancel

Continue

- Fill out all fields and click **Continue**

DRRS Application: Create New ALOC



DRP VIEW | UDC VIEW | LSE VIEW

Aloc ID 2527

Edit ALOC

Aloc ID 2527 ALoc Name* Sample ALOC for Training - rkm DRP* DSCE UDC* USCE LSE* LSCE SUBLAP* SLAP_SCEN LRCV (in kW)* 2000

All available locations that match the combination of DRP/UDC/LSE/SUBLAP will be shown here

Edit ALOC Association

Available Locations



LOC ID	SAN	LOC NAME
2520	123456789	Sample Location for Training - rkm
2528	11223345667	Another Sample Location for Training - rkm

Selected Locations



LOC ID	SAN	LOC NAME
X No Data found		

DRRS Application: Create New ALOC

ALoc ID 2527 ALoc Name * Sample ALOC for Training - rkm DRP * DSCE UDC * USCE LSE * LSCE SUBLAP * SLAP_SCEN LRCV (in kW) * 2000

Update ALOC Attributes

Return to ALOC List

Available Locations



LOC ID SAN LOC NAME

No Data found

Add

Add All

Remove

Remove All

Confirm ALOC Association

Cancel

Selected Locations



LOC ID SAN LOC NAME

2520	123456789	Sample Location for Training - rkm
2528	11223345667	Another Sample Location for Training - rkm

- Click **Add** or **Add All** to select available locations
- Locations move to **Selected Locations** list
- Click **Confirm ALOC Association** to continue

DRRS Application: Create New ALOC

- Aggregate location status set to New upon creation
- Location status changes to Participating Inactive when added to a new ALOC

The screenshot displays the California ISO Demand Response Registration System interface. At the top, the California ISO logo and the text "Shaping a Renewed Future" are visible. The main header reads "Demand Response Registration System". Below this, there are navigation tabs for "DRP VIEW", "UDC VIEW", and "LSE VIEW". A search bar contains fields for "ALOC NAME", "ALOC ID", "SAN", "DRP", "UDC", "LSE", "SUBLAP", and "REG ID", with "Apply" and "Reset" buttons. A "Create New ALOC" button is present in the top left of the main content area.

The main content area is divided into two panels. The left panel, titled "Aggregate Locations", shows a table with columns: ALOC ID, ALOC NAME, DRP, UDC, SUBLAP, LSE, LRCV, Status, and Reg ID. The first row has ALOC ID 2527, ALOC NAME "Sample ALOC for Training - rkm", DRP "DSCE", UDC "USCE", SUBLAP "SLAP_SCEN", LSE "LSCE", LRCV "2010", and Status "New". The "New" status is circled in orange. A text box with an orange border is overlaid on the table, containing the text: "Status set to New when aggregate location is first created".

The right panel, titled "Locations: Sample ALOC for Training - rkm", shows a table with columns: LOC ID, SAN, Start Date, End Date, Status, and View LOC. The first row has LOC ID 2520, SAN 123456789, Start Date 03/01/2015, End Date 12/31/2015, and Status "Participating Inactive". The "Participating Inactive" status is circled in orange. The second row has LOC ID 2528, SAN 11223345667, Start Date 03/01/2015, End Date 12/31/2015, and Status "Participating Inactive".

DRRS Application: Aggregate Locations menu option (full screen)

- This screen displays a list of aggregate locations
- DRP can create new aggregate locations
- DRP can modify information (in some cases)
- LSE and UDC have read-only access

California ISO | Demand Response Registration System

DRP VIEW | UDC VIEW | LSE VIEW

ALOC NAME [] ALOC ID [] SAN [] DRP [ALL] UDC [ALL] LSE [ALL] SUBLAP [ALL] REG ID [] Apply Reset

Create New ALOC

Aggregate Locations

ALOC ID	ALOC NAME	DRP	UDC	SUBLAP	LSE	LRCV	Status	Reg ID
[Edit]							Active	TR Override
[Edit]							Inactive	
[Edit]							New	
[Edit]							Inactive	
[Edit]							Terminated	
[Edit]							New	

Locations:

LOC ID	SAN	Start Date	End Date	Status
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DRRS Application: Aggregate Locations menu option (full screen)

- Aggregate locations are displayed on the left
- Click on an aggregate location to see
 - What location(s) are included (if any) – right side

The screenshot displays the California ISO Demand Response Registration System (DRRS) interface. At the top left is the California ISO logo with the tagline 'Shaping a Renewed Future'. The main header reads 'Demand Response Registration System' with navigation icons. Below the header are tabs for 'DRP VIEW', 'UDC VIEW', and 'LSE VIEW'. A search bar contains fields for 'ALOC NAME', 'ALOC ID', 'SAN', 'DRP', 'UDC', 'LSE', 'SUBLAP', and 'REG ID', with 'Apply' and 'Reset' buttons. A 'Create New ALOC' button is visible. The main content area is titled 'Aggregate Locations' and features a table with columns: ALOC ID, ALOC NAME, DRP, UDC, SUBLAP, LSE, LRCV, Status, and Reg ID. The table lists several aggregate locations with 'Edit' buttons and a 'TR Override' button. A red box highlights the 'Aggregate Locations' text. To the right, a 'Locations:' panel shows a table with columns: LOC ID, SAN, Start Date, End Date, and Status. A red box highlights the 'Locations' text in this panel.

ALOC ID	ALOC NAME	DRP	UDC	SUBLAP	LSE	LRCV	Status	Reg ID
							Active	
							Inactive	
							New	
							Inactive	
							Terminated	
							New	

DRRS Application: Aggregate Locations menu option (left side)

- Edit button is available to DRP based on status

The screenshot displays the California ISO Demand Response Registration System (DRRS) interface. At the top, the California ISO logo is on the left, and the text "Demand Response Registration System" is in the center. Below the logo is the tagline "Shaping a Renewed Future". To the right of the title are navigation icons: a left arrow, a right arrow, a "STOP" button, a refresh icon, a search icon, and a right arrow.

Below the title bar, there are tabs for "DRP VIEW", "UDC VIEW", and "LSE VIEW". Underneath are search filters for "ALOC NAME", "ALOC ID", "SAN", "DRP" (with a dropdown menu set to "[ALL]"), "UDC" (with a dropdown menu set to "[ALL]"), "LSE" (with a dropdown menu set to "[ALL]"), "SUBLAP" (with a dropdown menu set to "[ALL]"), and "REG ID".

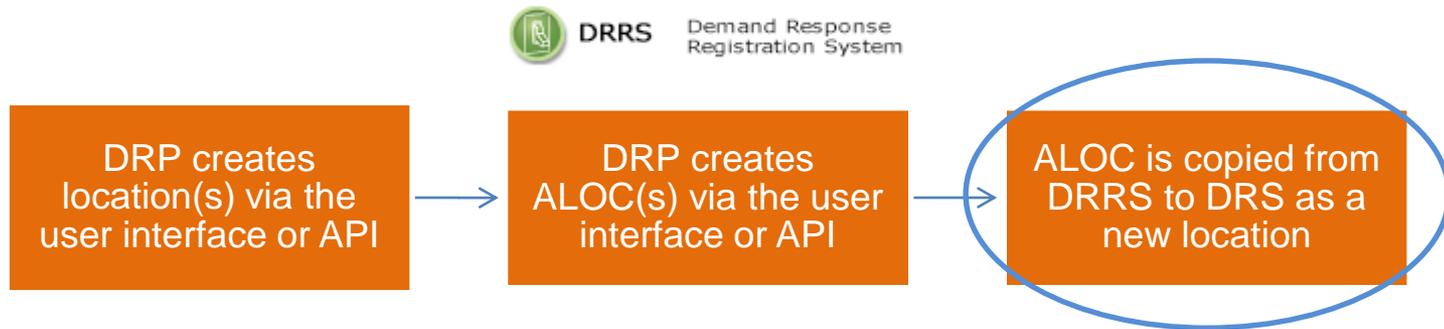
The main content area is titled "Aggregate Locations" and includes a "Create New ALOC" button. Below the title are navigation icons: a search icon, a filter icon, a refresh icon, and a right arrow. There is a "61" next to the right arrow. Below these icons are columns for "ALOC ID" and "ALOC NAME".

On the left side of the table, there are four "Edit" buttons, each in a green box. The first "Edit" button is circled in orange. A text box with an orange border is overlaid on the table, containing the following text:

- Green edit button allows editing of required fields
- Available for:
 - New
 - Inactive
- Not available for:
 - Active
 - Terminated

The table shows several rows of data. The first row has a "Status" of "Active" and a "TR Override" button. The second row has a "Status" of "Inactive". The third row has a "Status" of "New". The fourth row has a "Status" of "Inactive". The fifth row has a "Status" of "Terminated". The sixth row has a "Status" of "New".

DRRS Application Functionality



- ALOCs are copied to DRS once completed

Changes to Existing Demand Response System (DRS)

As-Is DRS Functionality

Create & modify
locations

Create & modify
registrations

Review and
comment by LSE
and UDC

ISO review and
assignment of
PDR/RDRR ID

Upload &
download meter
data

Calculate &
download
customer baseline
information

Evaluate
compliance and
event information

To-Be DRS Functionality

View aggregate locations

Create & modify registrations

Review and comment by LSE and UDC

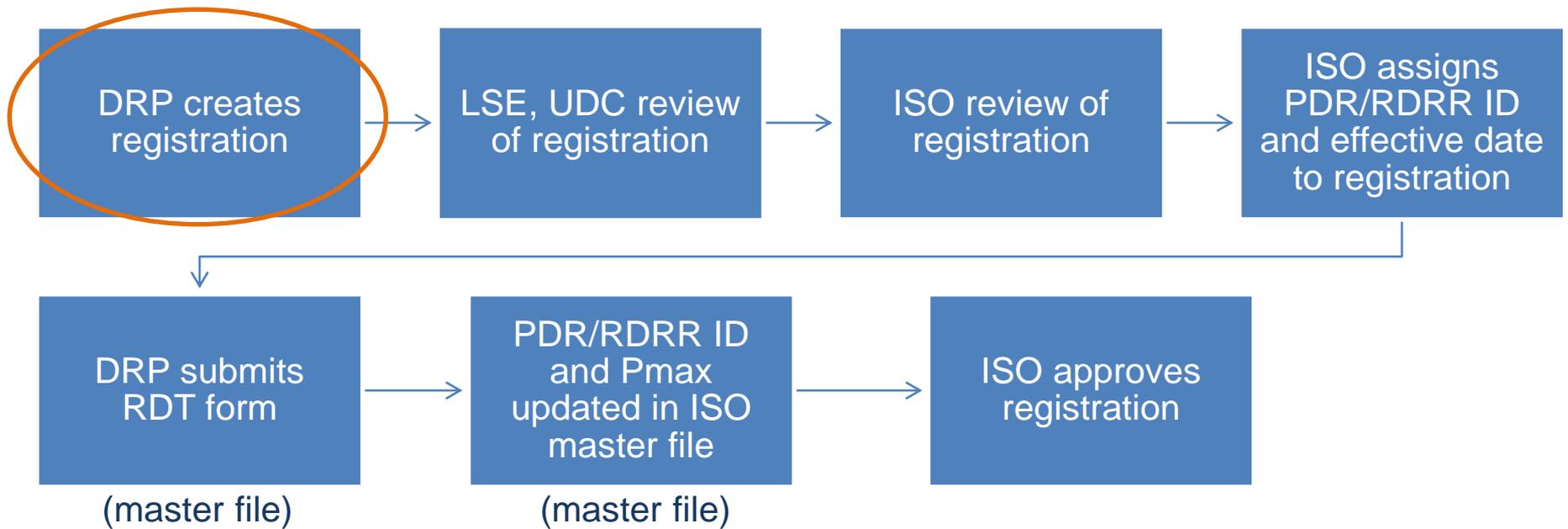
ISO review and assignment of PDR/RDRR ID

Upload & download meter data

Calculate & download customer baseline information

Evaluate compliance and event information

DRS Application Functionality



DRS Application: Create Registration

Location Search

Page Size 20

Loc ID	Name	UDC Account#	DRP	UDC	SubLAP	Load Reduction	Zip	Status
2527	Sample ALOC for Training - rkm	CISO00002527	DSCE	USCE	SLAP_SCEN	2000.0	99999	New
								Active
								New
								New
								New
								New
								New
								Terminated
								New
								New

- Click the hyperlink in the **Loc ID** or **Name** field

1 2 3 4 5

Total : 958

Note: the Action button has been removed from the location screen. Locations are no longer created in DRS.

DRS Application: Create Registration

The screenshot shows the California ISO DRS Application interface. At the top left is the California ISO logo with the tagline "Shaping a Renewed Future". Below the logo are navigation tabs for "Home", "Management", and "Administration". A secondary menu includes "My Tasks", "Locations", and "Registration". A top navigation bar contains "Data", "Tools", "Reports", and "Preferences". The main content area is titled "Registration Details" and features a "Locations" button with a help icon. An orange box highlights the "Register" option in the "Actions" dropdown menu. Below this, the registration form includes fields for "Location Name" (Sample ALOC for Training - rkm), "UDC Account#" (CISO00002527), "DRP" (DSCE), "UDC" (USCE), "Status" (New), and "SubLAP" (SLAP_SCEN). A tabbed interface at the bottom shows "Site", "Profile", "Registration" (selected), and "Data History". The "Registration" tab contains fields for "Address" (ALOC - No Address Line1), "City" (ALOC - No City), "State" (California), "Zip Code" (99999), and "BUS PNode" (with a note "(At least 2 characters required)").

- Select **Register** from the Actions menu

- Note: Register will be available for locations that are New or Inactive

DRS Application: Create Registration

- Complete all fields
- Select **Submit** from the Actions menu

Action

Submit

Save

Reset Cancel Registrations

Name	Sample ALOC for Training - rkm	Program	Reliability (1/1/09-5/31/20)
Registration Id	R3541	Season	Summer 2015
DRP	DSCE	Start Date	06/01/2015
Status	Pending	End Date	09/30/2015
Discrete Dispatch	<input type="checkbox"/>		

Locations Performance Comments Process History Data History

UDC USCE LSE LSCE SubLAP SLAP_SCEN PDR_ID Assign Pre-defined PDR DLAP

DRP SCID

Add Location

Location	Bus PNode	Load Reduction(kW)
Sample ALOC for Training - rkm - CISO00002527 ALOC - No Address Line1, ALOC - No City, California, 99999		2000.0
Total/Avg		2,000

DRS Application: Registration in Pending Status

Registration Search

Page Size 20

RegId	Customer	SubLAP	Status	Start Date	End Date	PDR Resource	DLAP Resource	DRP	UDC	LSE	Season
R3541	Sample ALOC for Training - rkm	SLAP_SCEN	Pending	06/01/2015	09/30/2015	Assign Pre-defined PDR	DLAP_SCE_RCMU	DSCE	USCE	LSCE	Summer 2015

• Registration is now **Pending**

Note: DRRS/DRS ID Numbers

DRP VIEW | UDC VIEW | LSE VIEW

ALOC NAME ALOC ID SAN DRP [ALL] UDC [ALL]

Create New ALOC

Aggregate Locations

1 - 10 of 1000

ALOC ID ALOC NAME

Edit 2527 Sample ALOC for Training - rkm

- ALOC ID from DRRS matches the Loc ID and UDC Account # in DRS
- Service Account Number (SAN) is only visible in DRRS

Home

My Tasks Locations Registrations Events Compliance Performance Resource Meter Data Tools

Location Search

Loc ID	Name	UDC Account#
2527	Sample ALOC for Training - rkm	CISO00002527

DRRS Application: Status Changes

- A registration is active if the registration status is either Confirmed or Pending in DRS

California ISO
Shaping a Renewed Future

Demand Response Registration System

DRP VIEW | UDC VIEW | LSE VIEW

ALOC NAME [] ALOC ID 2527 SAN [] DRP [ALL] UDC [ALL] LSE [ALL] SUBLAP [ALL] REG ID [] [Apply] [Reset]

Create New ALOC

Aggregate Locations

ALOC ID	ALOC NAME	DRP	UDC	SUBLAP	LSE	LRCV	Status	Reg ID
2527	Sample ALOC for Training - rkm	DSCE	USCE	SLAP_SCEN	LSCF	2000	Active	3541

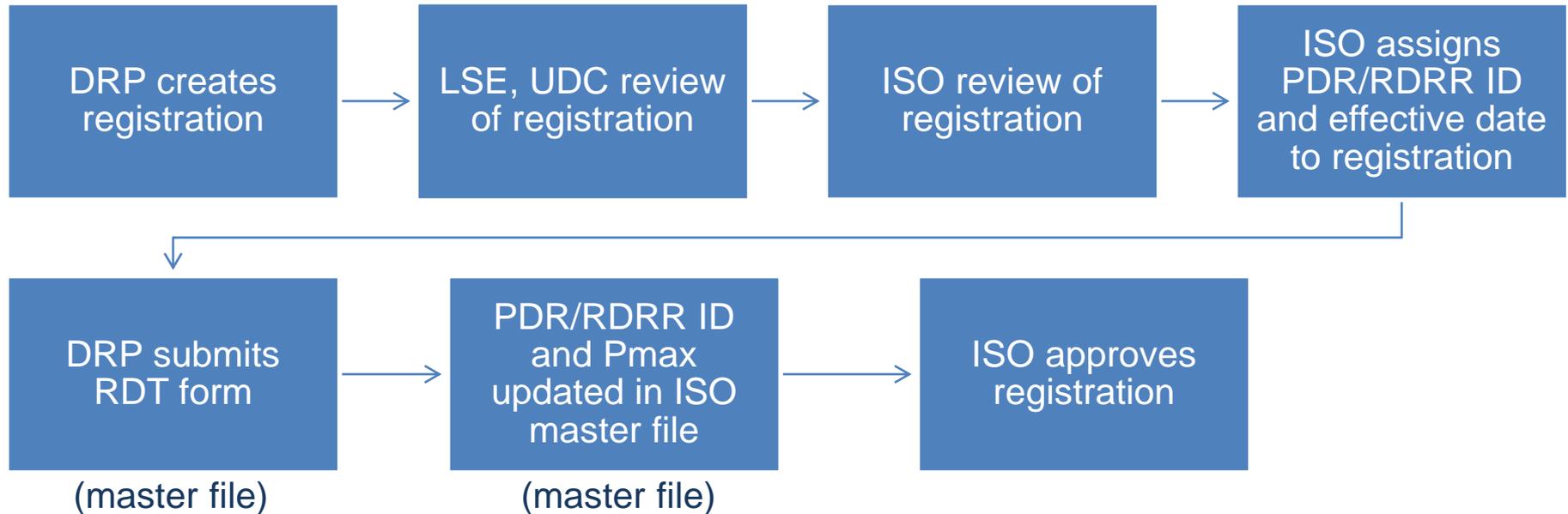
Locations: Sample ALOC for Training - rkm

LOC ID	SAN	Start Date	End Date	Status
2528	11223345667	03/01/2015	12/31/2015	Participating Active
2520	123456789	03/01/2015	12/31/2015	Participating Active

- ALOC is set to **Active**

- Location(s) set to **Participating Active**

DRS Application Functionality



- The remaining functions have not changed
- Step-by-step instructions are provided in the demand response user guide

Registration Management

Registration Management

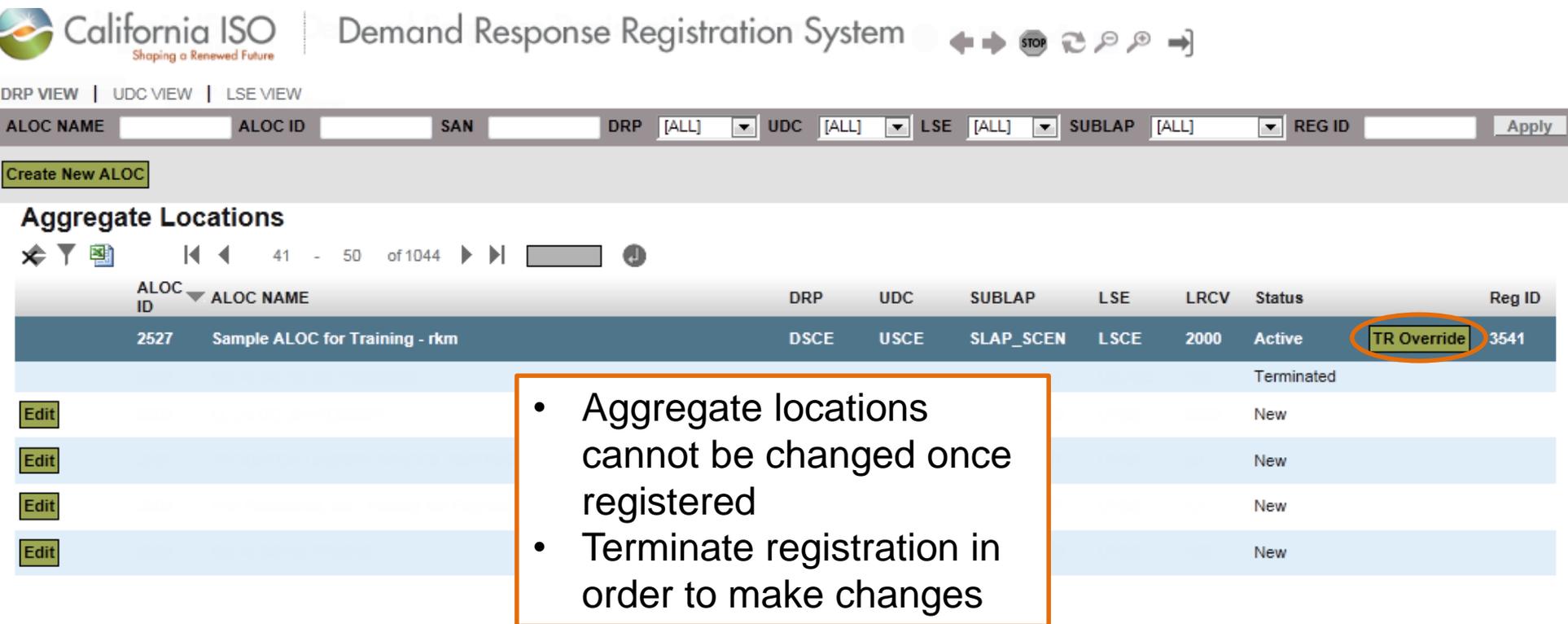
DRRS Application: TR Override Function

Registration Management

- Registration cannot be modified once the DRP has submitted it
- Locations cannot be added to or removed from a registration once confirmed
- If a change is necessary, terminate the registration and create a new one to replace it
- Note: copy registration function has been removed from DRS

DRRS Application: TR Override

- The **TR Override** button immediately terminates the registration in DRS



The screenshot displays the California ISO Demand Response Registration System interface. At the top, the California ISO logo is on the left, and the system name is in the center. Below the header, there are navigation tabs for 'DRP VIEW', 'UDC VIEW', and 'LSE VIEW'. A search bar contains fields for 'ALOC NAME', 'ALOC ID', 'SAN', 'DRP', 'UDC', 'LSE', 'SUBLAP', and 'REG ID', with an 'Apply' button. A 'Create New ALOC' button is also visible.

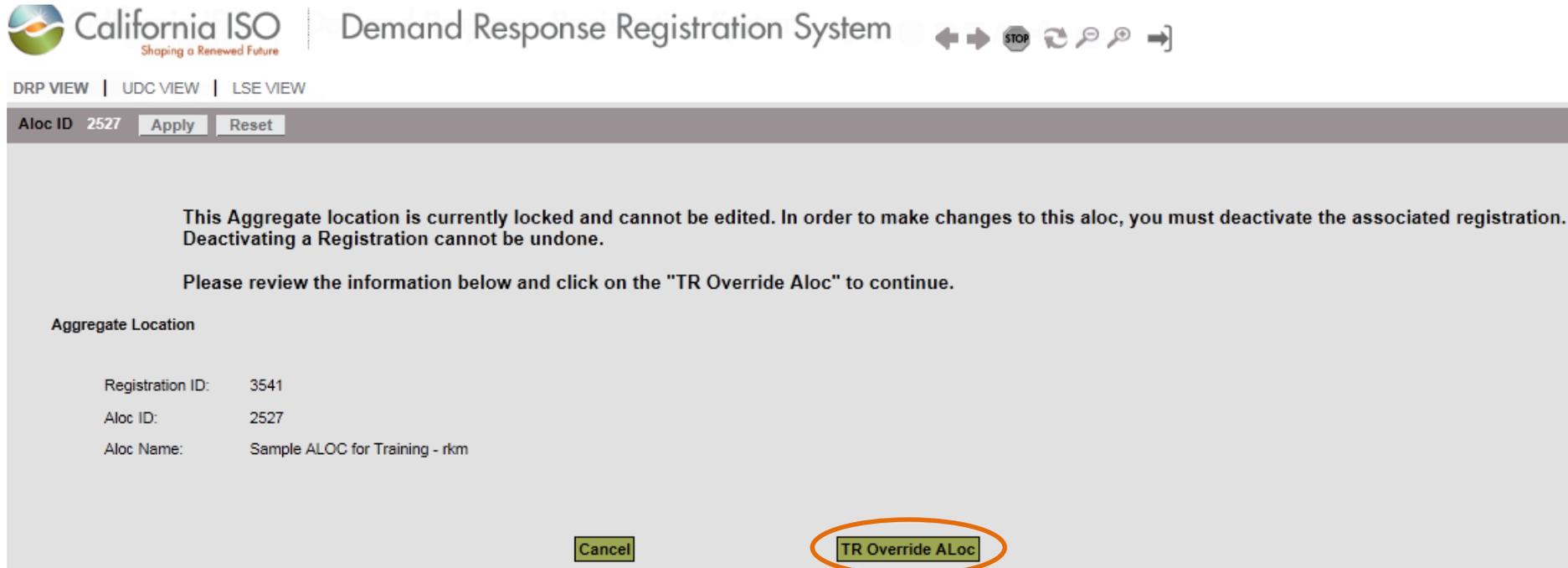
The main section is titled 'Aggregate Locations' and features a table with the following columns: ALOC ID, ALOC NAME, DRP, UDC, SUBLAP, LSE, LRCV, Status, and Reg ID. The first row in the table is highlighted in blue and contains the following data: ALOC ID: 2527, ALOC NAME: Sample ALOC for Training - rkm, DRP: DSCE, UDC: USCE, SUBLAP: SLAP_SCEN, LSE: LSCE, LRCV: 2000, Status: Active, and Reg ID: 3541. A 'TR Override' button is located in the Status column of this row, circled in orange. Below the table, there are four 'Edit' buttons, one for each row.

A text box with an orange border is overlaid on the table, containing the following text:

- Aggregate locations cannot be changed once registered
- Terminate registration in order to make changes

DRRS Application: TR Override

- Reminder message that the override process is immediate and cannot be undone



The screenshot displays the California ISO Demand Response Registration System interface. At the top left is the California ISO logo with the tagline "Shaping a Renewed Future". To its right is the text "Demand Response Registration System" followed by navigation icons. Below this is a navigation bar with "DRP VIEW | UDC VIEW | LSE VIEW". A header bar shows "Aloc ID 2527" and "Apply" and "Reset" buttons. The main content area contains a warning message: "This Aggregate location is currently locked and cannot be edited. In order to make changes to this aloc, you must deactivate the associated registration. Deactivating a Registration cannot be undone." Below the warning is the instruction: "Please review the information below and click on the 'TR Override Aloc' to continue." Underneath, the "Aggregate Location" details are listed: "Registration ID: 3541", "Aloc ID: 2527", and "Aloc Name: Sample ALOC for Training - rkm". At the bottom of the interface are two buttons: "Cancel" and "TR Override ALoc", with the latter button circled in orange.

California ISO | Demand Response Registration System

DRP VIEW | UDC VIEW | LSE VIEW

Aloc ID 2527 Apply Reset

This Aggregate location is currently locked and cannot be edited. In order to make changes to this aloc, you must deactivate the associated registration. Deactivating a Registration cannot be undone.

Please review the information below and click on the "TR Override Aloc" to continue.

Aggregate Location

Registration ID: 3541
Aloc ID: 2527
Aloc Name: Sample ALOC for Training - rkm

Cancel TR Override ALoc

DRRS Application: TR Override > Edit ALOC

- When the registration and ALOC are terminated, DRRS makes a copy of the ALOC so changes can be made
- This screen is displayed after termination is completed

DRP VIEW | UDC VIEW | LSE VIEW

ALoc ID 2914

Edit ALOC

ALoc ID 2914 ALoc Name Sample ALOC for Training - NEW DRP * DSCE UDC * USCE LSE * LSCE SUBLAP * SLAP_SCEN LRCV (in kW) * 2000

• Change ALOC details if desired and click Update ALOC Attributes

Edit ALOC Association

Available Locations

LOC ID	SAN	LOC NAME	STATUS
2520	123456789	Sample Location for Training - rkm	Participating Inactive
2528	11223345667	Another Sample Location for Training - rkm	Participating Inactive
			Non-Participating
2915	1082083084	This location is new and needs a home - rkm	Non-Participating

Selected Locations

LOC ID	SAN	LOC NAME	STATUS
No Data found			

DRRS Application: TR Override > Edit ALOC

- Select multiple locations using Shift + Down Arrow or Ctrl + Click and click **Add**

California ISO | Demand Response Registration System

DRP VIEW | UDC VIEW | LSE VIEW

ALoc ID 2914 Apply Reset

Edit ALOC

ALoc ID 2914 ALoc Name Sample ALOC for Training - NEW DRP * DSCE UDC * USCE LSE * LSCE SUBLAP * SLAP_SCEN LRCV (in kW) * 2000

Update ALOC Attributes Return to ALOC List

Edit ALOC Association

Available Locations

LOC ID	SAN	LOC NAME	STATUS
2520	123456789	Sample Location for Training - rkm	Participating Inactive
2528	11223345667	Another Sample Location for Training - rkm	Participating Inactive
			Non-Participating
2915	1082083084	This location is new and needs a home - rkm	Non-Participating

Selected Locations

LOC ID	SAN	LOC NAME	STATUS
No Data found			

Confirm ALOC Association Cancel

DRRS Application: TR Override > Edit ALOC

- Click Confirm ALOC Association to create the new aggregate location
- From here, the ALOC is copied to DRS as a Location and is ready for registration

The screenshot shows the California ISO Demand Response Registration System interface. At the top, there's a navigation bar with 'California ISO' logo and 'Demand Response Registration System' text. Below that, there are tabs for 'DRP VIEW', 'UDC VIEW', and 'LSE VIEW'. The main content area is titled 'Edit ALOC' and shows a form for editing an ALOC with ID 2914. The form includes fields for 'ALoc Name' (Sample ALOC for Training - NEW), 'DRP *' (DSCE), 'UDC *' (USCE), 'LSE *' (LSCE), 'SUBLAP *' (SLAP_SCEN), and 'LRCV (in kW) *' (2000). There are buttons for 'Update ALOC Attributes' and 'Return to ALOC List'. Below the form is the 'Edit ALOC Association' section, which contains two tables: 'Available Locations' and 'Selected Locations'. The 'Available Locations' table has columns for 'LOC ID', 'SAN', 'LOC NAME', and 'STATUS', and contains four rows of non-participating locations. The 'Selected Locations' table has the same columns and contains three rows, including one participating location and one non-participating location. At the bottom of the 'Edit ALOC Association' section, there are buttons for 'Confirm ALOC Association' (circled in orange) and 'Cancel'.

DRP VIEW | UDC VIEW | LSE VIEW

ALoc ID 2914 Apply Reset

Edit ALOC

ALoc ID 2914 ALoc Name Sample ALOC for Training - NEW DRP * DSCE UDC * USCE LSE * LSCE SUBLAP * SLAP_SCEN LRCV (in kW) * 2000

Update ALOC Attributes Return to ALOC List

Edit ALOC Association

Available Locations

LOC ID	SAN	LOC NAME	STATUS
			Non-Participating

Selected Locations

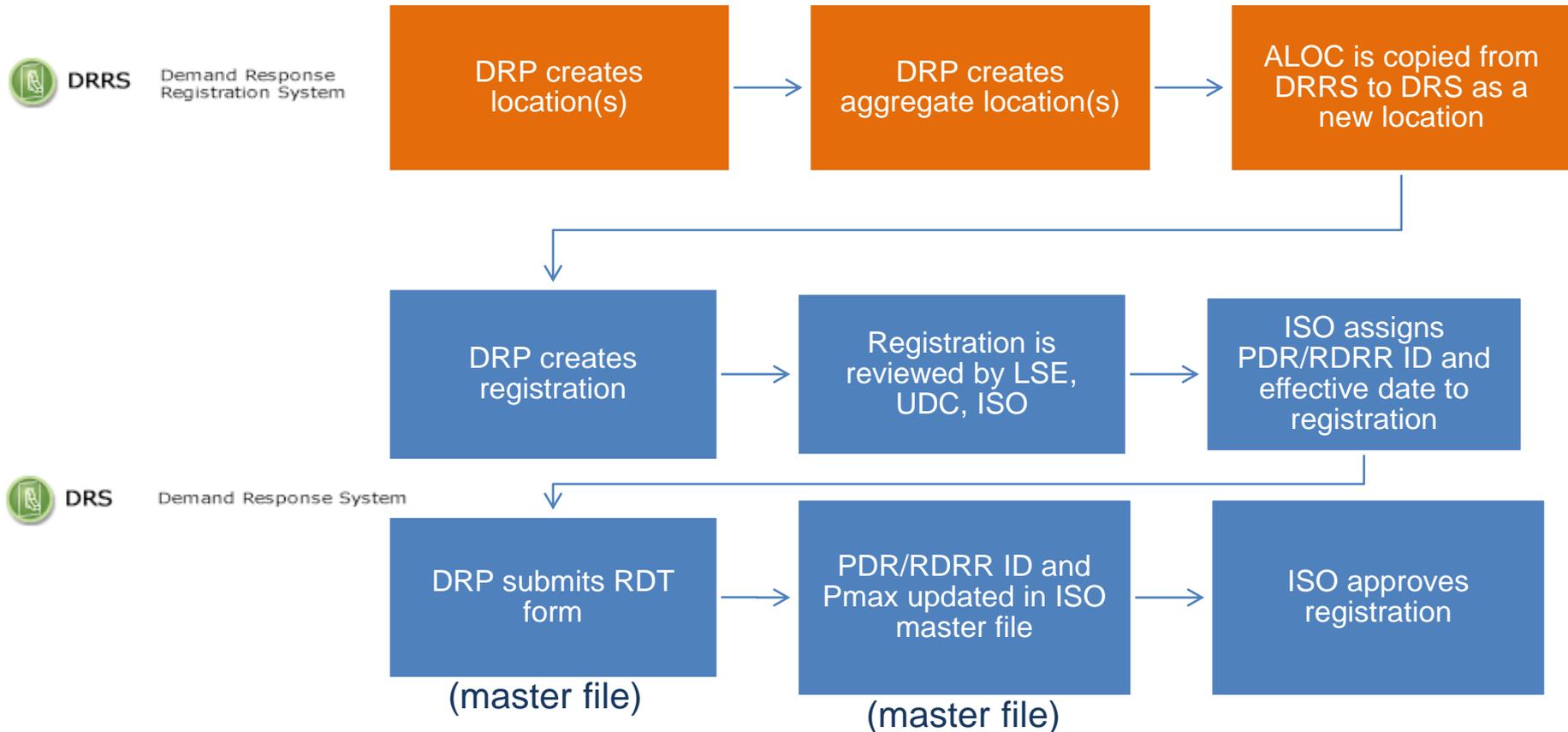
LOC ID	SAN	LOC NAME	STATUS
2520	123456789	Sample Location for Training - rkm	Participating Inactive
2528	11223345667	Another Sample Location for Training - rkm	Participating Inactive
2915	1082083084	This location is new and needs a home - rkm	Non-Participating

Confirm ALOC Association Cancel

Review Demand Response Location Registration

Demand Response Location Registration

- Locations and aggregate locations are created in the Demand Response Registration System (DRRS) via user interface or API



- Locations are registered, reviewed, verified, and approved in the Demand Response System (DRS) via user interface

Questions?

- Registration questions:
 - Email the PDR Coordinator (pdr@caiso.com)
- Support during market simulation:
 - Contact the ISO Help Desk at (888) 889-0450 or helpdesk@caiso.com
 - Submit a CIDI ticket (select the market sim environment)
- Support after production release:
 - Contact the ISO Help Desk at (888) 889-0450 or helpdesk@caiso.com
 - Submit a ticket in CIDI (select the Production environment)

Reference Material

Features of User Interface

Reference Material (documentation)

Acronyms

Features of User Interface: Application Toolbar

- The application toolbar contains the application or browser-based functions

	
	Goes to the previous display in browsing history
	Goes to the next display in browsing history
	Stops loading the current display
	Refreshes the display in the current window
	Zoom out
	Zoom in
	Log out

Features of User Interface: Locations Tab

- The filter toolbar contains the filtering options for locations

LOC ID <input type="text"/> SAN <input type="text"/> DRP [ALL] ▼ UDC [ALL] ▼ LSE [ALL] ▼ SUBLAP [ALL] ▼ ALOC NAME <input type="text"/> REG ID <input type="text"/> <input type="button" value="Apply"/> <input type="button" value="Reset"/>	
<input type="button" value="Apply"/>	Refreshes location data with the filters
<input type="button" value="Reset"/>	Restores filters to default settings
Note re: wildcard search	There is no need to use an asterisk (*) wildcard symbol to search for information. The filter functionality has been pre-set to include an implied wildcard. (e.g. Enter 1234 in the SAN field and click the Apply button to display a list of all locations that contain that string of numbers in the SAN)

Features of User Interface: Aggregate Locations Tab

- The filter toolbar contains the filtering options for aggregate locations

ALOC NAME <input type="text"/> ALOC ID <input type="text"/> SAN <input type="text"/> DRP [ALL] <input type="button" value="v"/> UDC [ALL] <input type="button" value="v"/> LSE [ALL] <input type="button" value="v"/> SUBLAP [ALL] <input type="button" value="v"/> REG ID <input type="text"/> <input type="button" value="Apply"/> <input type="button" value="Reset"/>	
<input type="button" value="Apply"/>	Refreshes aggregate location data with the filters
<input type="button" value="Reset"/>	Restores filters to default settings
Note re: wildcard search	There is no need to use an asterisk (*) wildcard symbol to search for information. The filter functionality has been pre-set to include an implied wildcard. (e.g. Enter lake in the ALOC Name field and click the Apply button to display a list of all aggregate location names that contain that string of letters)

Features of User Interface: Multiple Column Sorting

- Clicking on a column in the results window enables sorting in ascending or descending order

How to use multiple column sorting:

- Click a column header. The data is sorted in ascending order and the following icon appears in the column header: . This indicates the first level sorting.
- Click another column. The data is sorted in ascending order. The icon in the first column changes to: . The following icon appears in the second column: . This indicates the second level sorting.
- Click another column. The data is sorted in ascending order and the following icon appears in the column header: .
- Click the same column again. The data is sorted in descending order. The icon in the column header is changed to: .
- Continue to click column headers to deselect and then reprioritize the sorting order.

Features of User Interface: Multiple Column Sorting

- This image shows the example explained on the previous slide

The screenshot displays the California ISO Demand Response Registration System interface. At the top left is the California ISO logo with the tagline "Shaping a Renewed Future". The main title is "Demand Response Registration System". Below the title are navigation icons: a double-headed arrow, a "STOP" button, a refresh icon, a search icon, and a right-pointing arrow.

Below the navigation icons are tabs for "DRP VIEW", "UDC VIEW", and "LSE VIEW". A search bar contains fields for "ALOC NAME", "ALOC ID", "SAN", "DRP", "UDC", "LSE", "SUBLAP", and "REG". Each field has a dropdown menu set to "[ALL]". A "Create New ALOC" button is located below the search bar.

The main section is titled "Aggregate Locations". It features a table with the following columns: "ALOC ID", "ALOC NAME", "DRP", "UDC", "SUBLAP", "LSE", "LRCV", "Status", and "Reg ID". The "DRP", "UDC", and "LSE" columns have sorting arrows (up and down) next to them, which are circled in orange. The "LSE" column also has a "3" next to the down arrow, indicating it is the current sort order. The table contains three rows of data, each with an "Edit" button to its left. The first row has a "TR Override" button to its right. The status of the rows is "Terminated", "New", and "Inactive".

ALOC ID	ALOC NAME	DRP	UDC	SUBLAP	LSE	LRCV	Status	Reg ID
							Terminated	
							New	
							Inactive	
							Inactive	

Features of User Interface: Results Window

- The results window provides inline filtering and export functionality

	
	Restore sort to default setting (removes user-created multiple column sorting)
	The Inline Filter works as a toggle. Click the icon to filter data based on the content of a particular column. Press Enter after inputting the filter criteria. (Note: Wildcard symbols can be used in this column, but they are not necessary. For example, searching for *lake* or lake will provide the same results.)
	Exporting (to Excel, Word, CSV)

Features of User Interface: Export Menu

- The export menu allows the user to customize the data export

Export All
Export Page
Export Wizard

Export All	All data points will be exported to Excel
Export Page	The current page will be exported to Excel
Export Wizard	The user can customize the data export

Features of User Interface: Results Window

- The results window provides data in multiple pages

	
	Navigate to the first page of data
	Navigate to the previous page of data
	Navigate to the next page of data
	Navigate to the last page of data
	Go to specific line item entered in search box

Reference Material

- External Business Requirements Specification for Demand Response Location Registration Enhancement:
 - <http://www.caiso.com/Documents/ExternalBusinessRequirementSpecification-DemandResponseLocationRegistrationEnhancement.pdf>
 - Appendix A – Demand Response Locations, Aggregate Locations, Registrations and Resource IDs
 - http://www.caiso.com/Documents/AppendixA-DemandResponseLocations_AggregateLocations_Registrations_ResourceIDs.pdf
 - Appendix B – Demand Response High-Level As-Is and To-Be Use Cases
 - http://www.caiso.com/Documents/AppendixB-DemandResponseHigh-LevelAs-Is_To-Be_UseCases.pdf

Reference Material

- Draft Demand Response User Guide:
 - Accessible under the Independent 2015 release section titled Enabling demand response - Implementation:
<http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx>
 - Use Cases:
 - <http://www.caiso.com/Documents/DemandResponseLocationRegistrationEnhancement-UseCasesv11.xlsx>
- Web Service Data Requirements:
 - http://www.caiso.com/Documents/Demandresponselocationregistrationenhancement-requestlocationdata_v10.xlsx
 - http://www.caiso.com/Documents/DemandResponseLocationRegistrationEnhancement-CombinedAggregationLocationAndLocation-v1_1.xlsx

Acronyms

Acronym	Description
ALOC	Aggregate Location
API	Application Programming Interface
DRP	Demand Response Provider
DRRS	Demand Response Registration System
DRS	Demand Response System
LRCV	Load Reduction Capacity Value
LSE	Load Serving Entity
PDR	Proxy Demand Response Resource
RDT	Resource Data Template
SAN	Service Account Number (in DRS this is the UDC Account Number)
UDC	Utility Distribution Company