



Energy Storage and Distributed Energy Resources (ESDER) Phase 2

Pre-Market Simulation Training Session
August 7, 2018

(Updated 8/13/18 with correction to slide 27)

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Agenda



- Purpose of ESDER 2 initiative
- Activity timeline
- Review changes to business processes
- Review changes to applications
- Review changes to meter data submission and settlements
- Market simulation activities
- Walk-through of creating and registering a location in DRRS

Purpose of Energy Storage and Distributed Energy Resources – Phase 2

- The central focus of the Energy Storage and Distributed Energy Resources (ESDER) initiative is to lower barriers and enhance the ability of transmission grid-connected energy storage and distribution-connected resources to participate in the market.
- The number and diversity of these resources is growing and represents an increasingly important part of the resource mix.
- Integrating these resources will help lower carbon emissions and add operational flexibility.

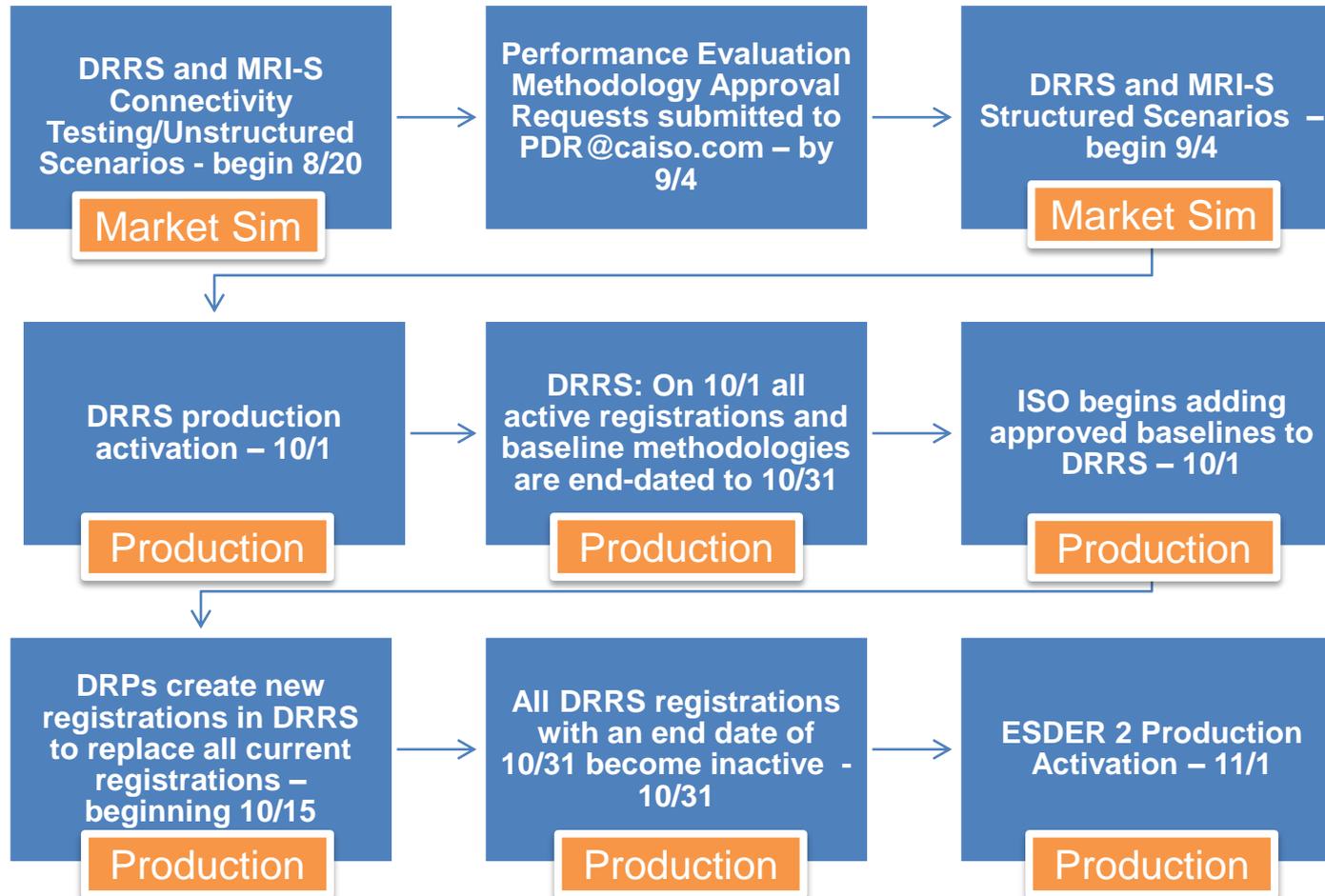
To be addressed in the future

Proposed changes under ESDER Phase 3

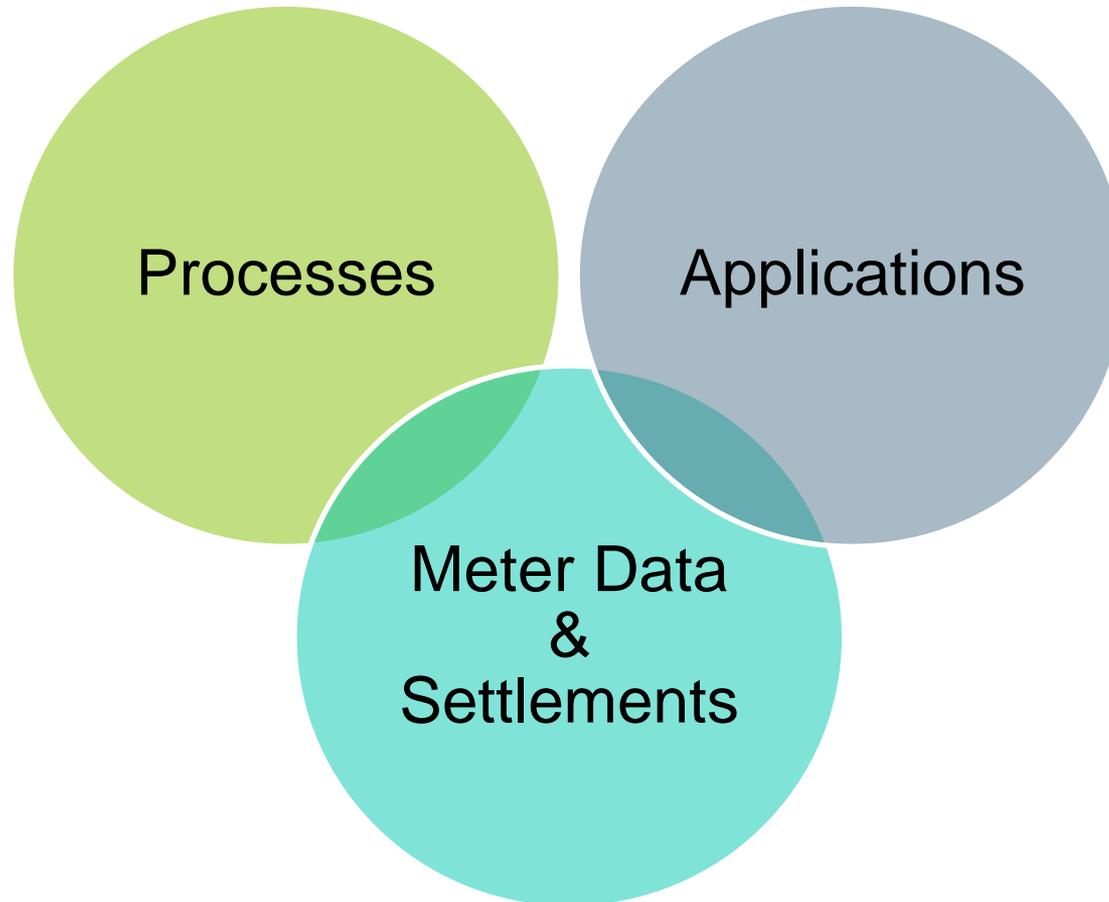
- New bidding and real-time dispatch options for demand response: hourly block and 15-minute dispatchable
- Removal of the single load serving entity (LSE) aggregation requirement and the need for application of a default load adjustment
- New load shift product for behind-the-meter storage
- Measurement of load curtailment by behind-the-meter electric vehicle supply equipment

* For more information, see the Reference Material section of this presentation

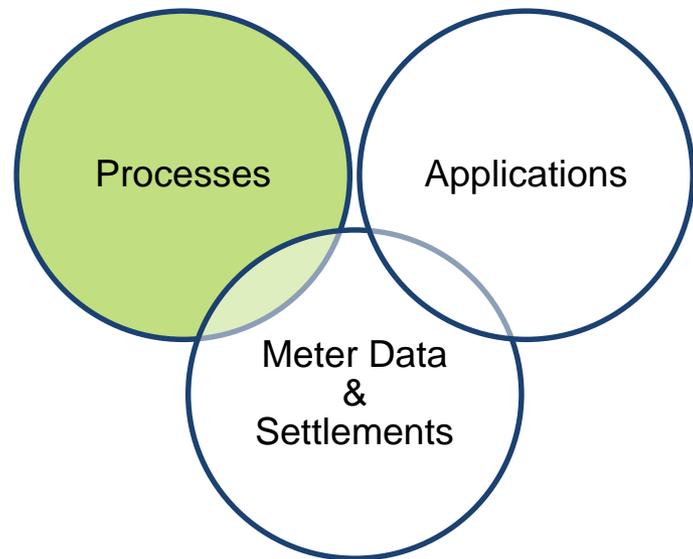
Activity timeline for activation of ESDER 2



What's changing?



Business Process Changes



Process Change: New performance evaluation methodologies

SCs and DRPs will be calculating baselines and performance based on the following Performance Evaluation Methodologies:

- Control Group
- Day Matching 5-in-10 (Residential Only)
- Day Matching 10-in-10 (Non-Residential Only)
- Day Matching Combined
- Meter Generation Output
- Meter Generation output with 10-in-10
- Weather Matching

New business process for approval of baseline methodology

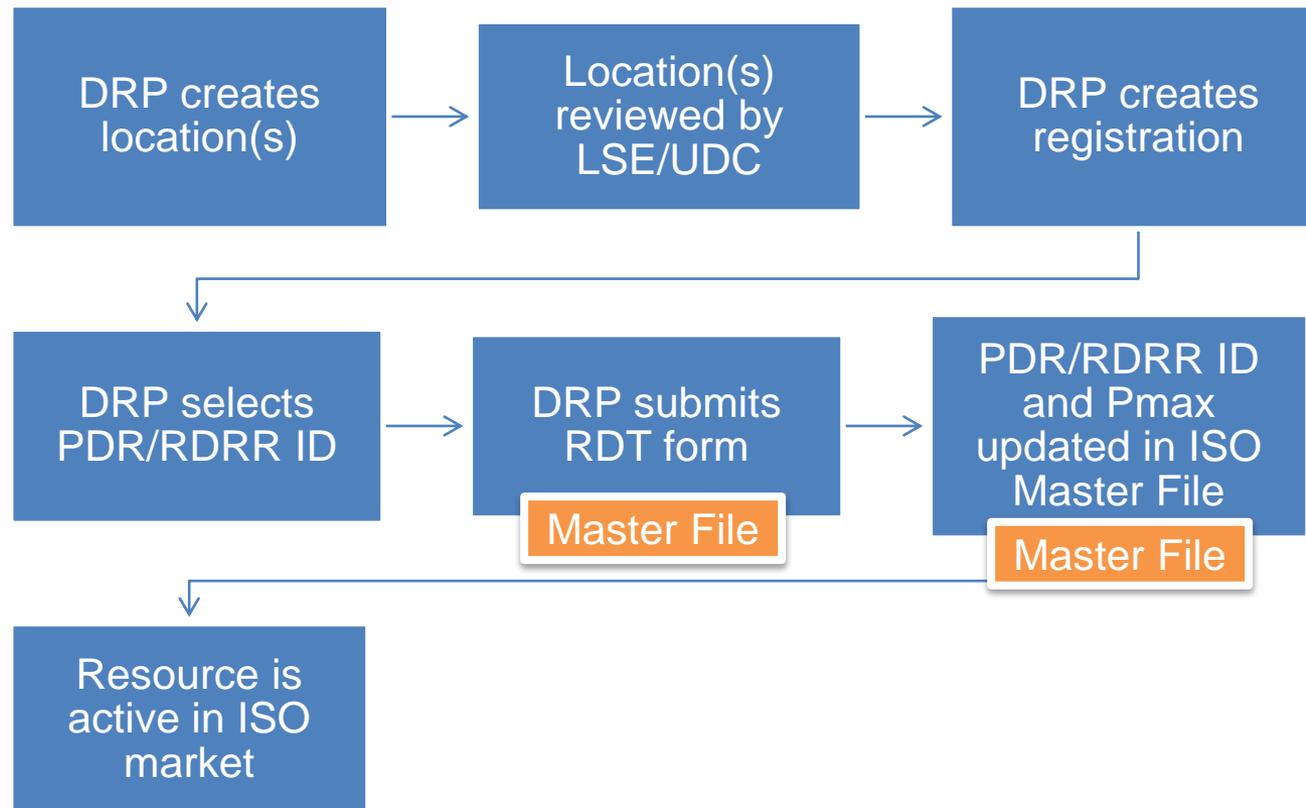
- DRP submits approval request forms to PDR@caiso.com for baseline approval
- The **Performance Evaluation Methodology Approval Request Form** satisfies the requirement for a Settlement Quality Meter Data (SQMD Plan) under CAISO Tariff Section 10.3.7.1



Allow 10 business days for this process!

Business process for creating and registering locations

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



Business Practice Manuals Updated

- Market Instruments
 - Net Benefits Testing
 - Changes will include addition of all gas price indices used in calculation
- Metering
 - Alternative Baselines (section 12):
 - Explain new baselines and changes to existing systems
 - Station Power (section 10):
 - Provide examples of wholesale/retail uses for generation and storage
 - Clarify permitted/prohibited netting rules

Business Practice Manuals Updated

- Settlements & Billing (Overall description):
 - Consume new data elements from MRI-S (meter values)
 - Use the Net Benefit Test Price based upon modified calculations
 - Zero out Performance Meter when Total Expected Energy is zero and submitted meter value is not zero
 - Zero out Default Load Adjustment when Total Expected Energy is zero and submitted meter value is not zero
 - Apply all other PDR/RDRR current settlement rules
 - Consume and apply new Net Benefit Price using current Settlement rules

Business Practice Manuals Updated

- Settlements & Billing (Actual BPM changes):
 - MSS Netting Pre-Calculation
 - Check for zero TEE, if so ignore performance meter data; else, take in meter data
 - Create a flag with value 1 when TEE is zero
 - RUC No Pay Quantity Pre-Calculation
 - When TEE is zero ignore performance meter; don't compute RUC no pay calculations
 - RT Energy Quantity Pre-Calculation
 - When TEE is zero, don't adjust PDR quantity at associated Load location

Settlements Changes/Updates

Three settlements pre-calculation configuration guides have been updated to address the implementation of ESDER 2:

- CG PC MSS Netting v5.8
- CG PC RUC No Pay Quantity v5.16
- CG PC Real Time Energy Quantity v5.18

These guides are available on caiso.com:

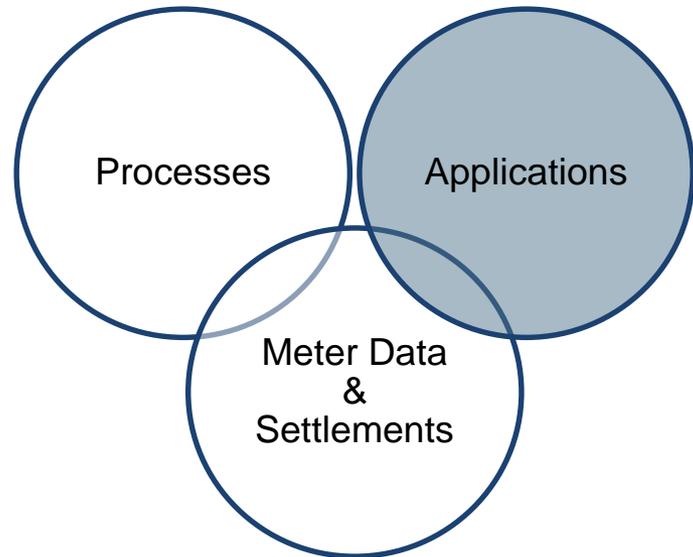
- Release Planning > Fall 2018 Release > Draft Settlements technical documentation

Applications Changes

DRS

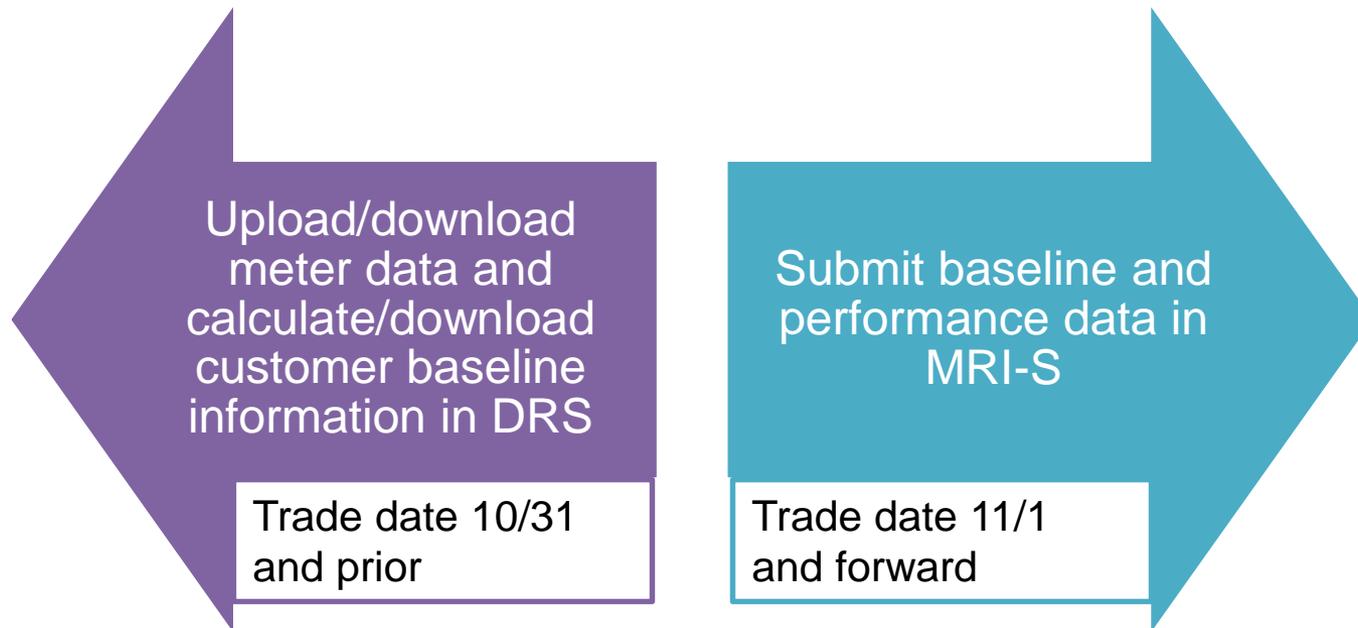
DRRS

MRI-S



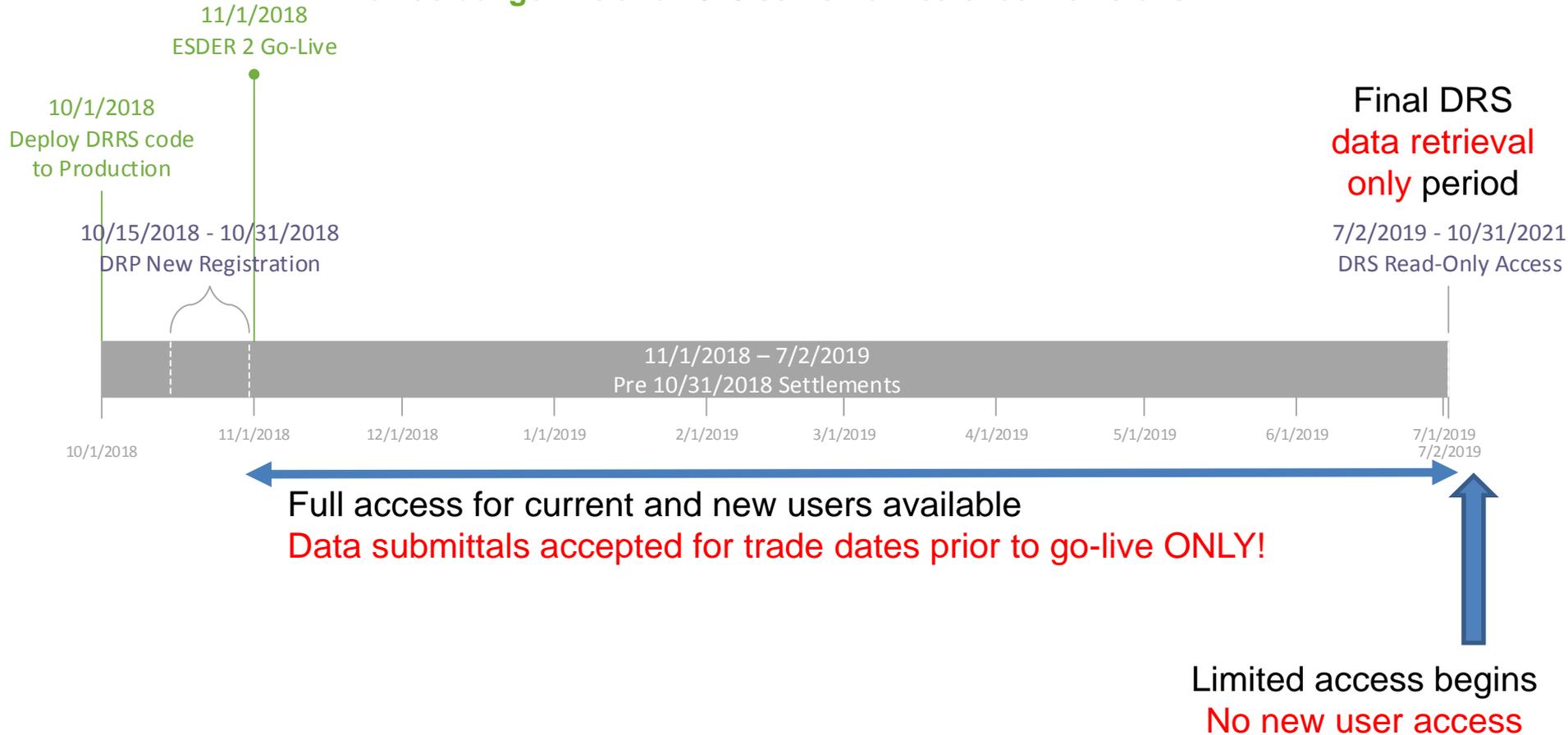
Wind-down of Demand Response System (DRS) functionality

- DRS will operate in parallel with MRI-S for data submission and baseline calculation for trade dates 10/31 and prior
- Data for trade date 11/1 and beyond must be submitted in MRI-S
- After the Settlements cycle is complete for trade date 10/31, DRS will become read-only



Timeline for wind-down of DRS

***These dates are estimated and subject to change based on actual go-live and 2019 settlement calendar revisions ***



Wind-down of DRS functionality

- DRS submit services will end for all trade dates 11/1 and forward
- During parallel operations, SCs and DRPs can continue to submit meter data for trade dates 10/31 and prior until the 172B cut off
- SCs and DRPs have the **option to not use the DRS** for trade dates prior to 10/31, by calculating the baseline (based on the baseline they are approved for) and submitting the DREM to MRI-S
- DRS will continue to be available in read-only mode for three years after the settlement cycle is complete for trade date 10/31/18

Application Changes – Demand Response Registration System (DRRS)

- New baseline methodology options added
 - Only approved baselines will be available in the drop-down
- Changes to DRRS registration process to identify control group and treatment group locations
 - The **control group** is used as a baseline data set that the **treatment group** is compared to in order to determine performance

Relationship between a control group and a treatment group

Control Group

A list of at least 150 locations with similar characteristics as those in the Treatment Group

DO NOT respond to CAISO dispatch

Can be from multiple sub-laps

Treatment Group

List of locations that share similar characteristics as those in the Control Group

DO respond to CAISO dispatch

May **ONLY** be from 1 sub-lap

Registration rules for control groups and treatment groups

When creating a registration, locations will be identified as being in the registration's **control group** or **treatment group**.

- A **control group** location can be used in multiple registrations as a control group, but cannot be a treatment group in any registration
- A **treatment group** can consist of one or more locations as long as they're in the same sub-lap

Application Changes – Market Results Interface – Settlements (MRI-S)

DREM and baseline data will be submitted in MRI-S. This data is submitting using a number of measurement types.

Measurement Type	Performance Energy Methodology							
	Meter Generator Output	Meter Generator Output ¹ 10 in 10	Control Group	Day Matching 5 in 10	Day Matching 10 in 10	Day Matching Combined	Weather Matching	Any Performance Energy Methodology Using Ancillary Service
GEN	X	X	X	X	X	X	X	X
LOAD								X
CBL		X	X	X	X	X	X	X
TMNT			X					
MBMA								X

1. The CBL applies to the portion of the performance measurement that uses the Day Matching performance Methodology.

MRI-S UI Change



Meter Data Batch Status

Date From: 07/26/2018 To: 07/26/2018 SCID/ACL Group: [ALL] Resource: [ALL] UOM: MWH Interval Length: 5 Apply Reset
Measurement Type: [ALL] Resource Type: [ALL] User Filter: [ALL] User Filter Resource: [ALL] UpdateSinceDateTime: []
Manage User Filter [ALL] GEN LOAD MBMA ←

Meter Data													Rows 25		
Trade Date	Interval End Time GMT	Interval End Time PPT	Interval Length	Interval ID	Resource ID	SCID	Measurement Type	Resource type	UOM	Value	Quality	Batch Id	Value	Quality	Batch Id
No Data found															

Settlement Data	
Trade Date Version	Value Quality

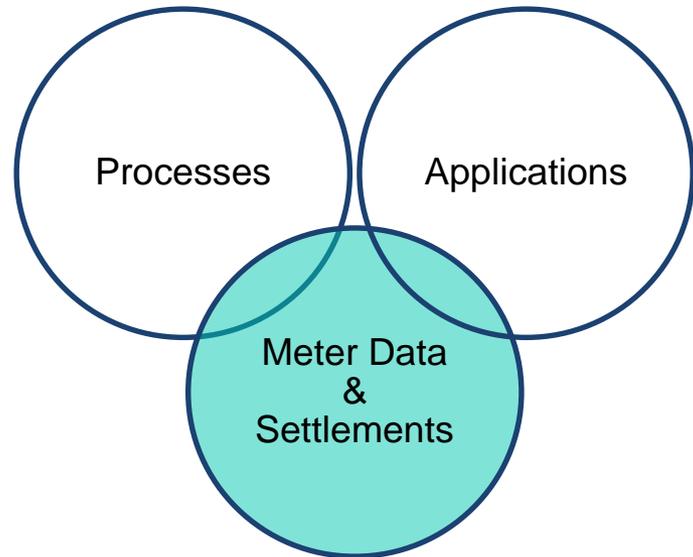
Note: Settlement data is populated only when meter interval length is specified as 5 minutes.

The new measurement type for Meter Before/Meter After (MBMA) has been added to MRI-S

Net Benefits Test Results - updated

The screenshot shows the California ISO website interface. At the top right, there are navigation links: Calendar, Today's Outlook, Recent Documents, News, Careers, and Contact Us. The main header features the California ISO logo and a 20th anniversary banner (1998-2018 | 20 YEARS). A search bar is located to the right of the header. Below the header is a navigation menu with categories: ABOUT US, PARTICIPATE, STAY INFORMED, PLANNING, MARKET & OPERATIONS (highlighted with an orange box), RULES, and ISO EN ESPAÑOL. On the left side, there is a green sidebar menu listing various sections: About Us, Participate, Stay Informed, Planning, Market & Operations (expanded to show sub-items like Market Processes, Congestion revenue rights, etc.), and Transmission Operations. The main content area shows a breadcrumb trail: Home > Market Operations > Report. The primary heading is 'Reports and bulletin', with a sub-heading 'Special reports and audits for markets and operations.' Below this, there are several report categories: 'Market reports' (with a sub-description), 'Daily renewables watch, monthly' (with a sub-description), 'Market performance reports' (with a plus icon), 'Capacity procurement mechanism' (with a plus icon), and 'Demand response net benefits test results' (with a minus icon and highlighted by an orange box). Under the 'Demand response net benefits test results' section, there are two sub-items: 'Demand response net benefits test results 2018' and 'Demand response net benefits test results 2017', both with plus icons. A right-hand sidebar contains a 'OUR' section with links to 'Contingency' and 'reports'.

Meter Data & Settlements Changes



Data Submission for Analysis and Monitoring

- DRP shall submit **hourly** data by Resource ID and Registration ID for analysis and monitoring
 - Customer Load Baseline (CBL)
 - Treatment Group Load Data (TMNT)
- This baseline data is used for monitoring purposes and will not flow to Settlements
- Although MRI-S is used to collect baseline data, it is not considered “meter data,” which means that it cannot be displayed or retrieved using MRI-S

Performance Data for Settlements

- Demand Response Energy Measurement (DREM) is to be submitted for all demand response events
- This settlements data must be submitted in **5 minute** granularity
 - DREM is submitted in the following measurement types:
 - GEN
 - LOAD
 - MBMA

Ancillary Services Data for Settlements

- A new measurement type of **Meter Before/Meter After (MBMA)** was created for the DRP/SC to submit load data for resources that are AS certified. This will be mapped to data used for existing AS no-pay settlement calculation to not pay any “undelivered” AS.
- The DRP/SC shall submit load data for the period of any AS award as LOAD measurement type (**5 minute granularity**)
- The DRP/SC shall submit MBMA load data for one interval prior to the DR event and one interval after the event as MBMA measurement (**5 minute granularity**)



California ISO

Market Simulation Activities

Market Simulation Activities

- The purpose of market simulation is to provide customers with the ability to preview and test the following items:
 - Net Benefits Test report
 - DRRS approval of baselines
 - Validation of measurement types for baselines
- There is a link to the market sim structured scenarios document in the reference section
- Users must be provisioned for access in order to participate in market simulation

Access to applications in market sim environment

No new roles are being implemented as part of ESDER 2

- If user(s) already have access, no change is needed

Work with your user access administrator (UAA) to obtain access to DRRS and MRI-S

- Access to DRRS and MRI-S is managed using the Access and Identity Management (AIM) application
- Submit requests for access to DRRS and MRI-S in market simulation and production environments

Application access



California ISO

Market Applications

[Market Participant Portal](#)

[CAISO.com](#)

MAP-STAGE

Application Access



AIM

Access and Identity Management

Inquiries & Disputes



CIDI

Customer Inquiry Dispute and Information

Market & Operations



CMRI

Customer Market Results Interface



CRR

Congestion Revenue Rights



SIBR

Scheduling Infrastructure & Business Rules



SIBR Reports

Scheduling Infrastructure & Business Rules Reports

Metering



OMAR

Operational Meter Analysis & Reporting

OASIS



OASIS

Open Access Same-Time Information System

Outage Coordination



WebOMS

Outage Management System

Reliability Requirements



CIRA

Customer Interface for Resource Adequacy



RAAM

Resource Adequacy Availability Management

Renewables & Demand Response



DRS

Demand Response System



DRRS

Demand Response Registration System



PIRP

Participating Intermittent Resource Program

Settlements



MRI-S

Market Results Interface - Settlements

Systems & Resource Modeling



TR

Transmission Registry



Master File



RIMS

Resource Interconnection Management System



RIMSG

Resource Interconnection Management System - Generation



California ISO

Walk-through of steps to create and register a location

Walk through process of creating location and registration



System notifications

Each time the status of a location changes, an email notification is sent to the DRP, UDC, and LSE.

Notifications are sent based on the role assigned to the DRRS user in AIM.

Create new location

- Functionality for DRP only



DRP VIEW | UDC VIEW | LSE VIEW

Locations
Registrations

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

[ALL] ▾ | [ALL] ▾



DRP VIEW | UDC VIEW | LSE VIEW

DRP VIEW | Locations

LOC ID LOC Name SAN DRP [ALL] ▾ UDC [ALL] ▾ LSE [ALL] ▾ | SUBLAP [ALL] ▾

Create | Copy | Delete | Defend | Withdraw | Edit | End Date | Register

Locations

Click **Create**

Create new location



California ISO

Demand Response Registration System

DRP VIEW | UDC VIEW | LSE VIEW

DRP VIEW Create New Locations

Create New Location

Name*	<input type="text"/>	Address 1*	<input type="text"/>
SAN*	<input type="text"/>	Address 2	<input type="text"/>
Start Date*	<input type="text" value="31"/>	City*	<input type="text"/>
End Date*	<input type="text" value="31"/>	State*	California <input type="button" value="v"/>
DRP*	<input type="text" value="v"/>	Zip*	<input type="text"/>
UDC*	<input type="text" value="v"/>	Address Type	<input type="text"/>
LSE*	<input type="text" value="v"/>		
SUBLAP*	<input type="text" value="v"/>		
PNODE	<input type="text" value="v"/>		

- Required fields are marked with an asterisk
- Choices in **SUBLAP** field are determined by **Start Date/End Date**
- **PNODE** is required if creating a registration for a custom resource
- **Save** will save in draft mode
- **Submit** will send to UDC/LSE for review

Create new location: Save button

- Status will be set to **New** when location is saved

LOC ID LOC Name SAN DRP [ALL] UDC [ALL] LSE [ALL] SUBLAP [ALL] Apply Reset

Create Copy Delete Defend Withdraw Edit End Date Register

Select Loc Id	Name	SAN	DRP	UDC	LSE	SUBLAP	PNODE	Start Date	End Date	Status
<input type="checkbox"/> 541406	Example for training - rkm	123456	DABC	UABC	LABC	SLAP_ABCD		07/01/2016	06/30/2017	New

Create new location: Submit button

- Status will be set to **Pending** when location is submitted
- Notification will be sent to UDC and LSE

The screenshot displays the California ISO Demand Response Registration System interface. At the top, the California ISO logo and the system name are visible. Below the navigation tabs (DRP VIEW, UDC VIEW, LSE VIEW), the 'DRP VIEW' tab is active, showing a 'Locations' section. A search bar contains filters for LOC ID, LOC Name, SAN, and dropdown menus for DRP, UDC, LSE, and SUBLAP, with 'Apply' and 'Reset' buttons. Below the search bar are buttons for 'Create', 'Copy', 'Delete', 'Defend', 'Withdraw', 'Edit', 'End Date', and 'Register'. The 'Locations' table below shows a single entry with the status 'Pending' circled in red.

Select Loc Id	Name	SAN	DRP	UDC	LSE	SUBLAP	PNODE	Start Date	End Date	Status
<input type="checkbox"/> 541406	Example for training - rkm	123456	DABC	UABC	LABC	SLAP_ABCD		07/01/2016	06/30/2017	Pending

Location review by UDC

DRP VIEW | UDC VIEW | LSE VIEW

UDC VIEW Locations

LOC ID LOC Name SAN DRP [ALL] UDC [ALL] LSE [ALL] SUBLAP [ALL] Apply Reset

Review **Click Review**

Locations

1 - 10 of 97

Select Loc Id	Name	SAN	DRP	UDC	LSE	SUBLAP	PNODE	Start Date	End Date	Review Start	Review End	Status	UDC Reviewed Name	Reviewer Contact
<input checked="" type="checkbox"/>	541406	Example for training - rikm	123456	DABC	UABC	LABC	SLAP_ABCD	07/01/2016	06/30/2017	06/23/2016	06/24/2016	Pending		

Location Address

Address 1	Address 2	City	State	Zip	Type
250 Outcropping Way		Folsom	CA	95630	

- Location created by DRP is selected using check box
- Note the review start and review end dates and the status of the location
- Click Review

Location review by UDC



California ISO

Demand Response Registration System

DRP VIEW | UDC VIEW | LSE VIEW

UDC VIEW Confirm Review Locations

Locations To Be Reviewed

1 - 1 of 1

ID	Name	SAN	DRP	UDC	LSE	SUBLAP	PNODE	Start Date	End Date	Location Status
541406	Example for training - rkm	123456	DABC	UABC	LABC	SLAP_ABCD		07/01/2016	06/30/2017	Pending

Valid Location

Reviewer Name*

Phone* (Format: xxx-xxx-xxxx)

Review Comment

- **Reviewer Name** and **Phone** are required fields
- **Review Comment** is required if **Valid Location** box is not checked

Are you sure you want to Submit the Review for above Locations?

Cancel

Continue

Location review by UDC

Review

Locations

1 - 10 of 97

Select Loc Id	Name	SAN	DRP	UDC	LSE	SUBLAP	PNODE	Start Date	End Date	Review Start	Review End	Status	UDC Reviewed	Reviewer Name	Reviewer Contact
<input type="checkbox"/> 541406	Example for training - rkm	123456	DABC	UABC	LABC	SLAP_ABCD		07/01/2016	06/30/2017	06/23/2016	06/24/2016	Pending	Y	UDC Reviewer	916-351-4400

Location Address

Address 1	Address 2	City	State	Zip	Type
250 Outcropping Way		Folsom	CA	95630	

- Status is still pending because LSE needs to review, but you can see that UDC Reviewed is set to Yes and the name & contact number are filled out

Location review by LSE

California ISO Demand Response Registration System

DRP VIEW | UDC VIEW | LSE VIEW

LSE VIEW Locations

LOC ID: [] LOC Name: [] SAN: [] DRP: [ALL] UDC: [ALL] LSE: [ALL] SUBLAP: [ALL] Apply Reset

Review Click Review

Select	Loc Id	Name	SAN	DRP	UDC	LSE	SUBLAP	PNODE	Start Date	End Date	Review Start	Review End	Status	LSE Reviewed	Reviewer Name	Reviewer Contact
<input checked="" type="checkbox"/>	541406	Example for training - rkm	123456	DABC	UABC	LABC	SLAP_ABCD		07/01/2016	06/30/2017	06/23/2016	06/24/2016	Pending			

Location Address

Address 1	Address 2	City	State	Zip	Type
250 Outcropping Way		Folsom	CA	95630	

- Location created by DRP is selected, you see the address info in the bottom section
- Click Review

Location review by LSE



California ISO

Demand Response Registration System

DRP VIEW | UDC VIEW | LSE VIEW

LSE VIEW Confirm Review Locations

Locations To Be Reviewed

1 - 1 of 1

ID	Name	SAN	DRP	UDC	LSE	SUBLAP	PNODE	Start Date	End Date	Location Status
541406	Example for training - rkm	123456	DABC	UABC	LABC	SLAP_ABCD		07/01/2016	06/30/2017	Pending

Valid Location

Reviewer Name*

Phone* (Format: xxx-xxx-xxxx)

Review Comment

Are you sure you want to Submit the Review for above Locations?

Cancel

Continue

- **Reviewer Name** and **Phone** are required fields
- **Review Comment** is required if **Valid Location** box is not checked

Location review completed

The screenshot displays the California ISO Demand Response Registration System interface. At the top, the navigation bar includes 'California ISO' and 'Demand Response Registration System'. Below this, there are tabs for 'DRP VIEW', 'UDC VIEW', and 'LSE VIEW', with 'LSE VIEW' selected. Under 'LSE VIEW', there is a sub-tab for 'Locations'. A search bar at the top contains fields for 'LOC ID', 'LOC Name', 'SAN', 'DRP', 'UDC', 'LSE', and 'SUBLAP', with dropdown menus set to 'ALL'. A 'Review' button is visible. The main table, titled 'Locations', shows a list of entries. The first entry is selected and highlighted in blue. The 'Status' column for this entry is 'Inactive', which is circled in orange. Below the table, there is a 'Location Address' section with fields for 'Address 1', 'Address 2', 'City', 'State', 'Zip', and 'Type'.

Select Loc Id	Name	SAN	DRP	UDC	LSE	SUBLAP	PNODE	Start Date	End Date	Review Start	Review End	Status	LSE Reviewed	Reviewer Name	Reviewer Contact
<input checked="" type="checkbox"/>	541406	Example for training - rkm	123456	DABC	UABC	LABC	SLAP_ABCD	07/01/2016	08/30/2017	06/23/2016	06/24/2016	Inactive	Y	LSE Reviewer	916-351-4400

Address 1	Address 2	City	State	Zip	Type
250 Outcropping Way		Folsom	CA	95630	

- Once the location has successfully completed the LSE and UDC review, the status is set to Inactive
- The DRP can now add the location to a registration

Create new registration



California ISO | Demand Response Registration System

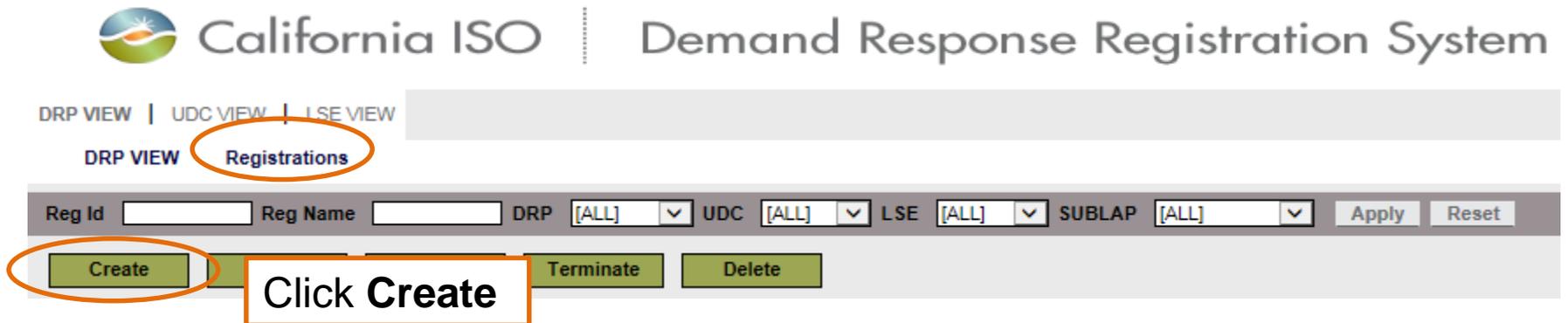
DRP VIEW | UDC VIEW | LSE VIEW

Locations Registrations

Registrations

Select **Registrations** from the **DRP VIEW** Tab

Apply Reset



California ISO | Demand Response Registration System

DRP VIEW | UDC VIEW | LSE VIEW

DRP VIEW Registrations

Reg Id Reg Name DRP [ALL] UDC [ALL] LSE [ALL] SUBLAP [ALL] Apply Reset

Create Terminate Delete

Click **Create**

Create new registration

Registration

Reg Id

Name*

Start Date*

End Date*

DRP*

UDC*

LSE*

Baseline Method*

SUBLAP

Choices in these fields will filter results shown in Available Locations

DLAP*

DRP SCID*

Program*

Resource Type*

Resource

PMax

Status

Refresh Available Locs

Show/Refresh Available Locations

Available Locations

ID	Name	SAN	Start Date	End Date	PNODE

Selected Locations

ID	NAME	SAN	Start Date	End Date	PNODE	Control Group	Treatment Group

Distribution Factor

PNODE

Cancel Save Submit

DRP

Create new registration: Select baseline method



California ISO

Demand Response Registration System

DRP VIEW | UDC VIEW | LSE VIEW

DRP VIEW Registration

Registration

Reg Id

Name*

Start Date* 31

End Date* 31

DRP* ▼

UDC* ▼

LSE* ▼

Baseline Method* ---EMPTY--- ▼

SUBLAP ▼

- Select the baseline method that will be used to determine the performance of your resource

Note: Baseline method will be empty until DRP has received approval from ISO for specific baseline methods

Create new registration: Select baseline method



California ISO

Demand Response Registration System

DRP VIEW | UDC VIEW | LSE VIEW

DRP VIEW Registration

Registration

Reg Id

Name*

Start Date* 31

End Date* 31

DRP*

UDC*

LSE*

Baseline Method* **---EMPTY---**

SUBLAP

- Available baseline methods:
 - **Control Group**
 - **Day Matching 10/10**
 - **Day Matching 5/10 (Residential Only)**
 - **Day Matching Combined**
 - Meter Generation Output
 - Meter Generation Output with 10 in 10
 - **Weather Matching**

* Items in bold are the new baseline methods

Create new registration: retired baseline methods

- Baseline methods that will not be available after ESDER2 implementation
 - Hourly Gen
 - 10 in 10 with SMA

Create new registration

Available Locations will also be filtered based on Resource Type

Registration

Reg Id

Name*

Start Date* 31

End Date* 31

DRP*

UDC*

LSE*

Baseline Method* ...EMPTY...

SUBLAP

DLAP*

DRP SCID*

Program*

Resource Type*

Resource ...EMPTY...

PMax

Status New

Refresh Available Locs

Show/Refresh Available Locations

Available Locations

0 - 0 of 0

Rows 25

ID	Name	SAN	Start Date	End Date	PNODE

>

Selected Locations

0 - 0 of 0

Rows 25

ID	NAME	SAN	Start Date	End Date	PNODE	Control Group	Treatment Group

>>

Distribution Factor

0 - 0 of 0

Rows 25

Distribution Factor (2 decimal places allowed)

PNODE

Cancel Save Submit

DRP

Create new registration

Registration

Registration form fields:

- Reg Id:
- Name*:
- Start Date*:
- End Date*:
- DRP*:
- UDC*:
- LSE*:
- Baseline Method*:
- SUBLAP:
- DLAP*:
- DRP SCID*:
- Program*:
- Resource Type*:
- Resource:
- PMax:
- Status:

Refresh Available Locs

Show/Refresh Available Locations

Available Locations

ID	Name	SAN	Start Date	End Date	PNODE

Available Locations are displayed here



Selected Locations

ID	NAME	SAN	Start Date	End Date	PNODE	Control Group	Treatment Group

Use the arrow buttons to add to Selected Locations

Distribution Factor

PNODE	Distribution Factor (2 decimal places allowed)

Cancel Save Submit

DRP

Create new registration: Control Group/Treatment Group

- When using the **Control Group** baseline method, you must assign at least 150 locations to a control group and at least one location to the **Treatment Group**

Refresh Available Locs

Show/Refresh Available Locations

Available Locations

ID	Name	SAN	Start Date	End Date	PNODE
----	------	-----	------------	----------	-------

Rows 25

Selected Locations

ID	NAME	SAN	Start Date	End Date	PNODE	Control Group	Treatment Group
556775000149	LL_LOCATION_149	LL_LOCATION_149	08/01/2018	12/30/2019			
556775000148	LL_LOCATION_148	LL_LOCATION_148	08/01/2018	12/30/2019			
556775000147	LL_LOCATION_147	LL_LOCATION_147	08/01/2018	12/30/2019			
556775000146	LL_LOCATION_146	LL_LOCATION_146	08/01/2018	12/30/2019			
556775000145	LL_LOCATION_145	LL_LOCATION_145	08/01/2018	12/30/2019			
556775000144	LL_LOCATION_144	LL_LOCATION_144	08/01/2018	12/30/2019			

Rows 200

Use the pencil buttons to assign locations to control group or treatment group

Create new registration

DLAP*

DRP SCID*

Program*

Resource Type*

Resource

PMax

Status

Selected Locations

0 - 0 of 0

ID	NAME	SAN	Start Date	End Date	PNODE	Control Group	Treatment Group

Distribution Factor

0 - 0 of 0

PNODE	Distribution Factor (2 decimal places allowed)

- Custom
 - only locations with PNODE information can be selected
 - Distribution Factor must be included and must equal 1

Create new registration

DLAP*

DRP SCID*

Program*

Resource Type*

Resource

PMax

Status

Selected Locations

0 - 0 of 0

Rows 25

ID	NAME	SAN	Start Date	End Date	PNODE	Control Group	Treatment Group

Distribution Factors

PNODE

- Pre-Defined
 - Resource field will display available resources that can be selected based on Registration information provided, including:
 - Resource IDs previously assigned to the DRP
 - Unassigned Pre Defined resource IDs for the identified SUBLAP

Create new registration

Registration

Reg Id

Name*

Start Date*

End Date*

DRP*

UDC*

LSE*

Baseline Method*

SUBLAP

DLAP*

DRP SCID*

Program*

Resource Type*

Resource

PMax

Status

Refresh Available Locs

Show/Refresh Available Locations

ID	Name	SAN	Start Date	End Date	PNODE

ID	NAME	SAN	Start Date	End Date	PN

Save

- Creates a new registration
- Assigns registration ID

Submit

- Creates a new registration
- Assigns registration ID
- Proceeds with resource management processing

Cancel Save Submit

DRP

Create new registration (from Locations tab)

LOC ID LOC Name SAN DRP [ALL] UDC [ALL] LSE [ALL] SUBLAP [ALL]

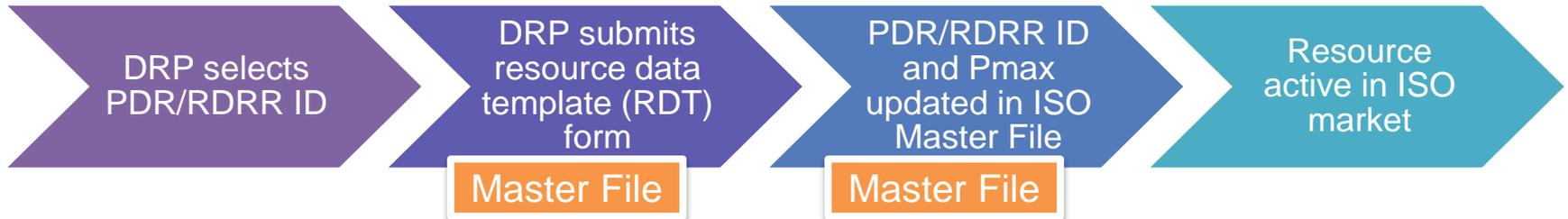
Locations

1 - 30 of 320

Select Loc ID	Name	SAN	DRP	UDC	LSE	SUBLAP	PNODE	Start Date	End Date	Status
<input checked="" type="checkbox"/>	543175000001 New Test Location A	01237596	DABC	UABC	LABC	SLAP_ABCD		02/01/2018	02/05/2018	Inactive
<input type="checkbox"/>	543170000004 New Test Location B	01237588	DABC	UABC	LABC	SLAP_ABCD		02/01/2018	02/05/2018	Pending
<input type="checkbox"/>	543170000003 New Test Location C	01237590	DABC	UABC	LABC	SLAP_ABCD		02/01/2018	02/25/2018	Pending
<input type="checkbox"/>	542963000001 New Test Location D	01237600	DABC	UABC	LABC	SLAP_ABCD		01/01/2018	01/31/2018	Active
<input checked="" type="checkbox"/>	542959000001 New Test Location E	01237808	DABC	UABC	LABC	SLAP_ABCD		08/15/2016	12/31/2020	Inactive
<input type="checkbox"/>	542922000004 New Test Location F	01237444	DABC	UABC	LABC	SLAP_ABCD		01/01/2018	01/05/2018	Active
<input type="checkbox"/>	542922000003 New Test Location G	012511087	DABC	UABC	LABC	SLAP_ABCD		01/01/2018	01/25/2018	Pending

- A registration can also be created from the Location tab
- Use check box to select location(s) and click Register

Next steps for DRP



- The registration in DRRS for the Resource ID need to be in a “Confirmed” status prior to submitting the RDT form to RDT@caiso.com.
- The Master File team will provide an effective date subject to the Full Network Model Implementation and Master File Data Freeze timeline.

Next steps for the SC or DRP



* Follow all settlements meter data timelines

SC/DRP

Helpful tip

- Send an email to PDR@caiso.com to be added to the DRRS email notifications
- this is helpful when it comes to the defend process and when the registrations are approaching their end-date



Questions?

Questions?

- Support during market simulation:
 - Contact the ISO service desk at (888) 889-0450 or servicedesk@caiso.com
 - Submit a CIDI ticket (select the appropriate market sim environment)
- Support after production release:
 - Contact the ISO service desk at (888) 889-0450 or servicedesk@caiso.com
 - Submit a ticket in CIDI (select the Production environment)



California ISO

Reference Material

Links to documentation

Terms and acronyms

Screen layouts

Control group walkthrough

Sample notifications

Reference Material

- Market Simulation Structured Scenarios:
 - <http://www.caiso.com/Documents/StructuredScenarios-EnergyStorageandDistributedEnergyResourcesPhase2.pdf>
- Business Requirements Specification for Energy Storage and Distributed Energy Resources Phase 2:
 - http://www.caiso.com/Documents/BusinessRequirementsSpecification-EnergyStorage_DistributedEnergyResourcesPhase2.pdf
- Technical Specifications:
 - <http://www.caiso.com/Pages/documentsbygroup.aspx?GroupID=A725D892-01DA-4BCB-905B-91786873A1AB>
- Draft Settlements technical documentation:
 - <http://www.caiso.com/Pages/documentsbygroup.aspx?GroupID=89927D64-5FA3-42D0-8A37-AB6755D2D733>

Reference Material (ESDER Phase 3)

- ESDER Phase 3 Web Conference (7/16/2018) Full Recording:
 - <https://www.youtube.com/watch?v=Jl3zHAPr7qE&feature=youtu.be>
- ESDER Phase 3 Web Conference (7/16/2018) Slides:
 - <http://www.caiso.com/Documents/Agenda-Presentation-EnergyStorage-DistributedEnergyResourcesPhase3-Jul162018.pdf>
- ESDER Phase 3 Draft Final Proposal:
 - <http://www.caiso.com/Documents/DraftFinalProposal-EnergyStorage-DistributedEnergyResourcesPhase3.pdf>

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 address, etc.
- Uniquely identified by service account number and UDC
- Submitted for review by LSE and UDC

Terms and acronyms

PDR/RDR Resource ID

- Select from available list of IDs during registration
- 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

Registration

- May be comprised of a single location or many locations

Service Account Number (SAN)

- Unique number assigned to a location by the UDC

Acronyms

Acronym	Description
AARF	Application Access Request Form
AIM	Access and Identity Management
API	Application Programming Interface
CBL	(stands for baseline load data)
CIDI	Customer Inquiry, Dispute and Information
DREM	Demand Response Energy Measurement
DRP	Demand Response Provider
DRRS	Demand Response Registration System
DRS	Demand Response System
ESDER	Energy Storage and Distributed Energy Resources
LSE	Load Serving Entity
MBMA	Meter Before/Meter After
MRI-S	Market Results Interface – Settlements
MSS	Metered Subsystem

Acronyms

Acronym	Description
PDR	Proxy Demand Response Resource
PNODE	Pricing Node
RDRR	Reliability Demand Response Resource
RDT	Resource Data Template
RT	Real-Time
RUC	Residual Unit Commitment
SAN	Service Account Number
SC	Scheduling Coordinator
SQMD	Settlement Quality Meter Data
TEE	Total Expected Energy
TMNT	Treatment Group Load Data
UAA	User Access Administrator
UDC	Utility Distribution Company



California ISO

Screen Layouts

DRRS

Role-based tabs

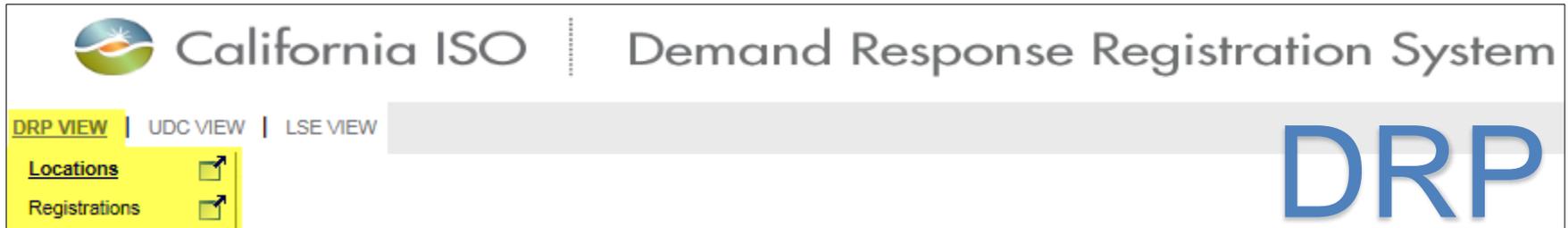
Users will see one or more tabs based on their role(s)

- DRP VIEW (create locations and registrations)
- UDC VIEW (review locations and view registrations)
- LSE VIEW (review locations and view registrations)

Each tab has two items

- Locations
- Registrations

Role-based tabs

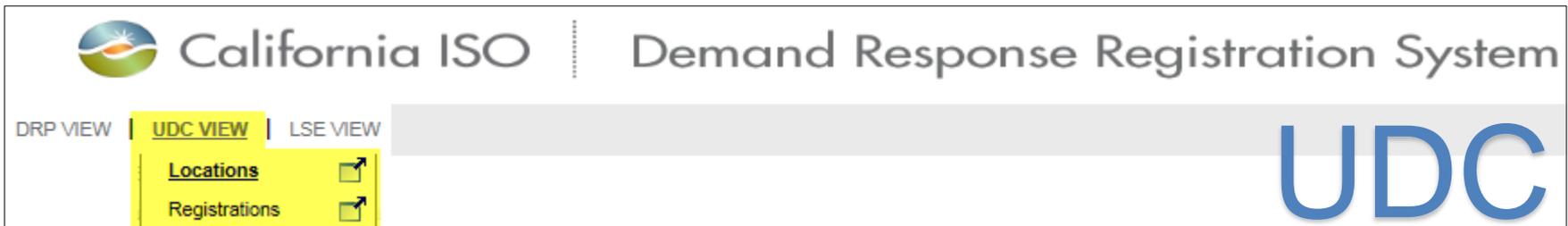


California ISO | Demand Response Registration System

DRP VIEW | UDC VIEW | LSE VIEW

Locations 
Registrations 

DRP



California ISO | Demand Response Registration System

DRP VIEW | **UDC VIEW** | LSE VIEW

Locations 
Registrations 

UDC



California ISO | Demand Response Registration System

DRP VIEW | UDC VIEW | **LSE VIEW**

Locations 
Registrations 

LSE

Role-based tabs

Users with multiple roles should select the tab that corresponds with the function they are performing at that moment

For example, select UDC VIEW to see all locations that are assigned to you as the UDC

Layout of Locations screen (DRP view)

DRP VIEW | UDC VIEW | LSE VIEW

DRP VIEW Locations

LOC ID [] LOC Name [] SAN [] DRP [ALL] UDC [ALL] LSE [ALL] SUBLAP [ALL] Apply Reset

Create Copy Delete Defend Withdraw Edit End Date Register

Locations

Select Loc Id	Name	SAN	DRP	UDC	LSE	SUBLAP	PNODE	Start Date	End Date	Status
<input checked="" type="checkbox"/>	541361							06/23/2016	07/31/2018	Pending
<input type="checkbox"/>	541322							06/27/2016	07/30/2018	Pending
<input type="checkbox"/>	541282							07/16/2018	09/16/2018	Pending
<input type="checkbox"/>	541221							06/20/2016	06/20/2016	Withdrawn
<input type="checkbox"/>	541203							06/20/2016	06/23/2016	End Dated
<input type="checkbox"/>	541202							06/21/2016	06/30/2017	Disputed
<input type="checkbox"/>	541163							07/16/2017	09/16/2017	Active
<input type="checkbox"/>	541162							07/16/2017	09/16/2017	Active
<input type="checkbox"/>	541161							07/16/2017	09/16/2017	Inactive
<input type="checkbox"/>	541123							06/16/2016	06/16/2017	Inactive
<input type="checkbox"/>	541122							05/31/2016	05/31/2016	Withdrawn
<input type="checkbox"/>	541081							05/23/2016	05/31/2017	Active

- All locations are shown here
- Use check box to select an individual location and more information will display in the other sections

Registrations

Reg Id	Reg Name	Start Date	End Date	Status

Location Address

Address 1	Address 2	City	State	Zip	Type
Outcropping Way		Folsom	CA	95630	

Location Review Details

LSE Approved	LSE Comments	LSE Reviewer	LSE Contact Info	UDC Approved	UDC Comments	UDC Reviewer	UDC Contact Info

Location Defend Details - Incumbent

Name	Contact Info	Comments

Location Defend Details - Prospective

Name	Contact Info	Comments

Locations screen: Buttons available to DRP



California ISO

Demand Response Registration System

DRP VIEW | UDC VIEW | LSE VIEW

DRP VIEW Locations

LOC ID LOC Name SAN DRP [ALL] UDC [ALL] LSE [ALL] SUBLAP [ALL]

Create

Copy

Delete

Defend

Withdraw

Edit

End Date

Register

- Create: Used when a location is being created for the first time
- Copy: Ability to copy a previously created location
- Delete: Actionable for certain location statuses
- Defend: Use this button when a location is determined to be a duplicate (i.e. SAN is being used by another DRP)
- Withdraw: Use when a location has been submitted for review but not completed the review process
- Edit: Make changes to a location (editable fields will depend on the status of the location)
- End date: Actionable for certain location statuses
 - Use this button if today is the end date
 - Use Edit button to end date a location for a date other than today
- Register: Select location(s) from the list and click register to create registration

Layout of Locations screen (UDC and LSE view)

LOC ID: LOC Name: SAN: DRP: [ALL] UDC: [ALL] LSE: [ALL] SUBLAP: [ALL] Apply Reset

Review

Locations

Select Loc Id	Name	SAN	DRP	UDC	LSE	SUBLAP	PNODE	Start Date	End Date	Review Start	Review End	Status	UDC Reviewed	Reviewer Name	Reviewer Contact
<input checked="" type="checkbox"/>	541351									6/23/2016	06/24/2016	Pending			
<input type="checkbox"/>	541322									6/23/2016	06/24/2016	Pending			
<input type="checkbox"/>	541292									6/23/2016	06/23/2016	Pending			
<input type="checkbox"/>	541222									6/17/2016	07/01/2016	Pending			
<input type="checkbox"/>	541221									6/17/2016	07/01/2016	Withdrawn			
<input type="checkbox"/>	541203									6/17/2016	07/01/2016	End Dated	Y		
<input type="checkbox"/>	541202									6/17/2016	07/01/2016	Disputed	N	SS	9163512319

- All locations are shown here
- Use check box to select an individual location and more information will display in the other sections

Registrations

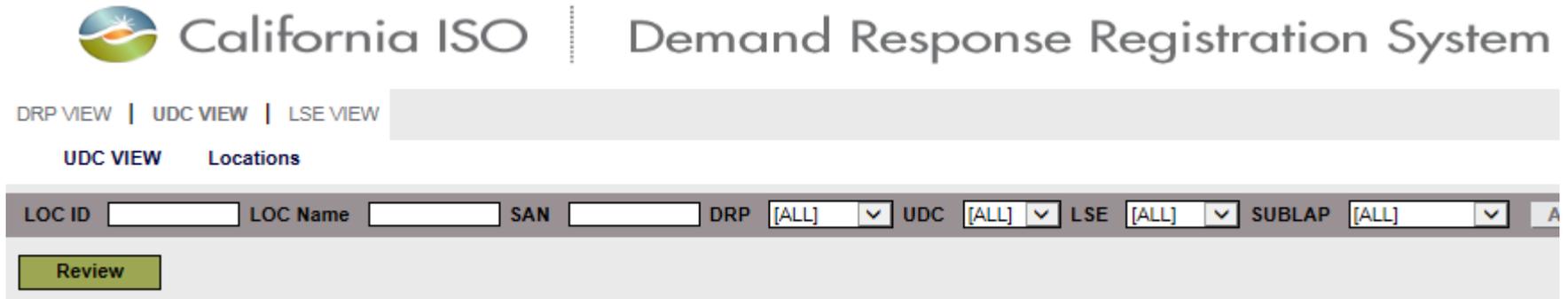
Reg Id	Reg Name	Start Date	End Date	Status

Location Address

Address 1	Address 2	City	State	Zip	Type
Outcropping Way		Folsom	CA	95620	

UDC & LSE

Locations screen: Buttons available to UDC and LSE



California ISO | Demand Response Registration System

DRP VIEW | UDC VIEW | LSE VIEW

UDC VIEW Locations

LOC ID LOC Name SAN DRP [ALL] ▼ UDC [ALL] ▼ LSE [ALL] ▼ SUBLAP [ALL] ▼

Review

- Review button allows UDC and LSE to review locations submitted by the DRP

Layout of Registrations screen (DRP view)

California ISO Demand Response Registration System

DRP VIEW | UDC VIEW | LSE VIEW | ADMINISTRATION

DRP VIEW Registrations

Reg ID Reg Name DRP [ALL] UDC [ALL] LSE [ALL] SUBLAP [ALL] Apply Reset

Create Edit Copy Terminate Delete

Registrations

1 - 10 of 122

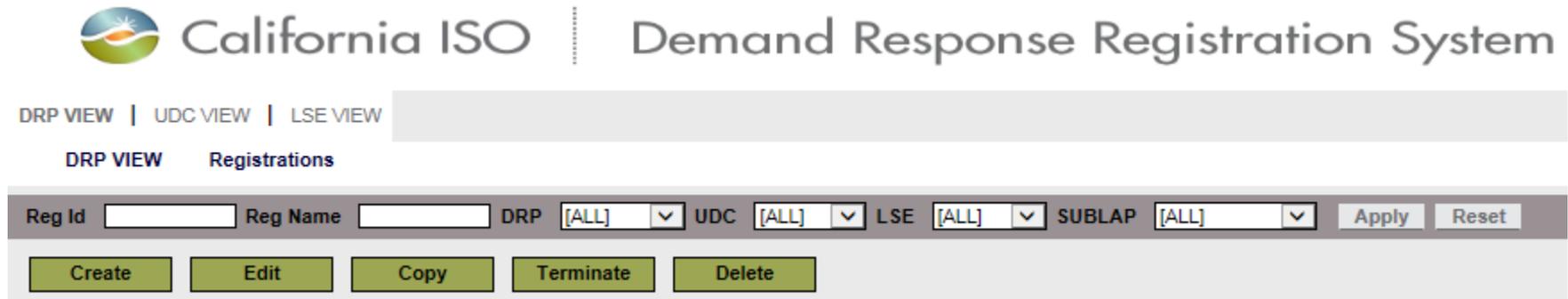
Select	Reg ID	Name	DRP	UDC	LSE	SUBLAP	DLAP	DRP SC	Resource ID	Resource Type	Program	Baseline Method	Start Date	End Date	Status
<input checked="" type="checkbox"/>	542945									Pre Defined	Proxy DR	10 In 10 with SMA	01/01/2018	01/02/2018	New
<input type="checkbox"/>	542946									Pre Defined	Reliability DR	10 In 10 with SMA	01/01/2018	01/02/2018	New
<input type="checkbox"/>	542923									Custom	Proxy DR	10 In 10 with SMA	04/01/2017	08/10/2017	Confirmed
<input type="checkbox"/>	542909									Pre Defined	Reliability DR	10 In 10 with SMA	01/01/2018	01/02/2018	Confirmed
<input type="checkbox"/>	542890									Pre Defined	Reliability DR	10 In 10 with SMA	01/02/2018	01/04/2018	Terminated
<input type="checkbox"/>	542888									Pre Defined	Proxy DR	10 In 10 with SMA	01/01/2018	01/05/2018	Terminated
<input type="checkbox"/>	542884									Pre Defined	Reliability DR	10 In 10 with SMA	01/01/2018	01/05/2018	Terminated
<input type="checkbox"/>	542882									Pre Defined	Reliability DR	10 In 10 with SMA	01/01/2018	01/05/2018	Terminated
<input type="checkbox"/>	542866									Custom	Proxy DR	10 In 10 with SMA	08/09/2016	08/12/2016	Confirmed
<input type="checkbox"/>	542862									Pre Defined	Reliability DR	10 In 10 with SMA	01/01/2018	01/05/2018	Terminated

- All registrations are shown here
- Use check box to select an individual registration and the associated location(s) will display in the section below

Locations

Loc ID	SAN	Resource ID	Start date	End date	Distribution Factor	
542748000001	Test_API_RD_23		01/01/2018	01/05/2018	0	View Location

Registrations screen: Buttons available to DRP



The screenshot shows the California ISO Demand Response Registration System interface. At the top left is the California ISO logo. To its right is the text "California ISO" followed by a vertical line and "Demand Response Registration System". Below this is a navigation bar with "DRP VIEW | UDC VIEW | LSE VIEW" and a search bar. Underneath, "DRP VIEW" is selected, and "Registrations" is the active page. A filter bar contains fields for "Reg Id", "Reg Name", "DRP" (dropdown menu set to "[ALL]"), "UDC" (dropdown menu set to "[ALL]"), "LSE" (dropdown menu set to "[ALL]"), and "SUBLAP" (dropdown menu set to "[ALL]"). There are "Apply" and "Reset" buttons to the right of the filter bar. Below the filter bar are five green action buttons: "Create", "Edit", "Copy", "Terminate", and "Delete".

- Create: Used when a registration is being created for the first time
- Edit: Make changes to a registration (editable fields will depend on the status of the registration)
- Copy: Ability to copy a previously created registration
- Terminate: Allows the DRP to delete a registration
- Delete: Allows the DRP to delete a registration that has a status of **New**

Layout of Registrations screen (UDC and LSE view)

Reg Id Reg Name DRP [ALL] UDC [ALL] LSE [ALL] SUBLAP [ALL] Apply Reset

Registrations

1 - 10 of 141

Reg ID	Name	DRP	UDC	LSE	SUBLAP	DLAP	DRP SC	Resource ID	Resource Type	Program	Baseline Method	Start Date	End Date	Status
543081									Pre Defined	Proxy DR	10 in 10 with SMA	01/21/2018	01/25/2018	Terminated
543067									Pre Defined	Proxy DR	10 in 10 with SMA	01/16/2018	01/20/2018	Confirmed
543085									Pre Defined	Proxy DR	10 in 10 with SMA	01/11/2018	01/15/2018	Terminated
543083									Pre Defined	Proxy DR	10 in 10 with SMA	01/08/2018	01/10/2018	Confirmed
543043									Pre Defined	Proxy DR	10 in 10 with SMA	01/01/2018	01/02/2018	Confirmed
543041									Pre Defined	Proxy DR	10 in 10 with SMA	01/01/2018	01/02/2018	Terminated
543027									Pre Defined	Proxy DR	10 in 10 with SMA	08/12/2016	08/28/2016	Confirmed
543025									Custom	Proxy DR	10 in 10 with SMA	08/12/2016	08/14/2016	Terminated
543023									Custom	Proxy DR	10 in 10 with SMA	08/30/2016	08/30/2016	Terminated
543021									Custom	Proxy DR	10 in 10 with SMA	08/15/2016	08/18/2016	Confirmed

- All registrations are shown here
- Click on a registration and the location information will be shown below, along with a View Location button

Locations

Loc ID	SAN	Resource ID	Start date	End date	Distribution Factor	View Location
542914000002	Test_API_RD_35	12345680880	01/01/2018	01/25/2018	1	View Location

- Note: There are no top level buttons available to the UDC or LSE
- Registration section is view-only for these roles

UDC & LSE



California ISO

Control Group Walkthrough

Approach 1

DRP View > Locations

- Begin on the Locations screen
- The **Rows** drop-down will let you view 200 rows per page
- Select the required locations

California ISO | Demand Response Registration System

DRP VIEW | LOC VIEW | LSE VIEW | ADMINISTRATION

DRP VIEW > Locations

LOC ID: [] LOC Name: [] SAN: [] DRP: [ALL] GDC: [ALL] LSE: [ALL] SUBLAP: [ALL] Defense Active: [ALL] Apply [] Reset []

Create Copy Delete Defend Withdraw Edit End Date Register

Locations

Select	Loc ID	Name	SAN	DRP	GDC	LSE	SUBLAP	PNODE	Start Date	End Date	Status	Defense Active?
<input checked="" type="checkbox"/>	5 0087000150	ST_LOC_NAL1_TEST150	SAN_NC150						07/06/2018	12/00/2018	Inactive	
<input checked="" type="checkbox"/>	5 0087000149	ST_LOC_NAL1_TEST149	SAN_NC149						07/06/2018	12/00/2018	Inactive	
<input checked="" type="checkbox"/>	5 0087000148	ST_LOC_NAL1_TEST148	SAN_NC148						07/06/2018	12/00/2018	Inactive	
<input checked="" type="checkbox"/>	5 0087000147	ST_LOC_NAL1_TEST147	SAN_NC147						07/06/2018	12/00/2018	Inactive	
<input checked="" type="checkbox"/>	5 0087000146	ST_LOC_NAL1_TEST146	SAN_NC146						07/06/2018	12/00/2018	Inactive	
<input checked="" type="checkbox"/>	5 0087000145	ST_LOC_NAL1_TEST145	SAN_NC145						07/06/2018	12/00/2018	Inactive	
<input checked="" type="checkbox"/>	5 0087000144	ST_LOC_NAL1_TEST144	SAN_NC144						07/06/2018	12/00/2018	Inactive	
<input checked="" type="checkbox"/>	5 0087000143	ST_LOC_NAL1_TEST143	SAN_NC143						07/06/2018	12/00/2018	Inactive	
<input checked="" type="checkbox"/>	5 0087000142	ST_LOC_NAL1_TEST142	SAN_NC142						07/06/2018	12/00/2018	Inactive	
<input checked="" type="checkbox"/>	5 0087000141	ST_LOC_NAL1_TEST141	SAN_NC141						07/06/2018	12/00/2018	Inactive	
<input checked="" type="checkbox"/>	5 0087000140	ST_LOC_NAL1_TEST140	SAN_NC140						07/06/2018	12/00/2018	Inactive	
<input checked="" type="checkbox"/>	5 0087000139	ST_LOC_NAL1_TEST139	SAN_NC139						07/06/2018	12/00/2018	Inactive	
<input checked="" type="checkbox"/>	5 0087000138	ST_LOC_NAL1_TEST138	SAN_NC138						07/06/2018	12/00/2018	Inactive	
<input checked="" type="checkbox"/>	5 0087000137	ST_LOC_NAL1_TEST137	SAN_NC137						07/06/2018	12/00/2018	Inactive	
<input checked="" type="checkbox"/>	5 0087000136	ST_LOC_NAL1_TEST136	SAN_NC136						07/06/2018	12/00/2018	Inactive	
<input checked="" type="checkbox"/>	5 0087000135	ST_LOC_NAL1_TEST135	SAN_NC135						07/06/2018	12/00/2018	Inactive	
<input checked="" type="checkbox"/>	5 0087000134	ST_LOC_NAL1_TEST134	SAN_NC134						07/06/2018	12/00/2018	Inactive	
<input checked="" type="checkbox"/>	5 0087000133	ST_LOC_NAL1_TEST133	SAN_NC133						07/06/2018	12/00/2018	Inactive	
<input checked="" type="checkbox"/>	5 0087000132	ST_LOC_NAL1_TEST132	SAN_NC132						07/06/2018	12/00/2018	Inactive	
<input checked="" type="checkbox"/>	5 0087000131	ST_LOC_NAL1_TEST131	SAN_NC131						07/06/2018	12/00/2018	Inactive	
<input checked="" type="checkbox"/>	5 0087000130	ST_LOC_NAL1_TEST130	SAN_NC130						07/06/2018	12/00/2018	Inactive	
<input checked="" type="checkbox"/>	5 0087000129	ST_LOC_NAL1_TEST129	SAN_NC129						07/06/2018	12/00/2018	Inactive	
<input checked="" type="checkbox"/>	5 0087000128	ST_LOC_NAL1_TEST128	SAN_NC128						07/06/2018	12/00/2018	Inactive	
<input checked="" type="checkbox"/>	5 0087000127	ST_LOC_NAL1_TEST127	SAN_NC127						07/06/2018	12/00/2018	Inactive	
<input checked="" type="checkbox"/>	5 0087000126	ST_LOC_NAL1_TEST126	SAN_NC126						07/06/2018	12/00/2018	Inactive	
<input checked="" type="checkbox"/>	5 0087000125	ST_LOC_NAL1_TEST125	SAN_NC125						07/06/2018	12/00/2018	Inactive	
<input checked="" type="checkbox"/>	5 0087000124	ST_LOC_NAL1_TEST124	SAN_NC124						07/06/2018	12/00/2018	Inactive	
<input checked="" type="checkbox"/>	5 0087000123	ST_LOC_NAL1_TEST123	SAN_NC123						07/06/2018	12/00/2018	Inactive	
<input checked="" type="checkbox"/>	5 0087000122	ST_LOC_NAL1_TEST122	SAN_NC122						07/06/2018	12/00/2018	Inactive	
<input checked="" type="checkbox"/>	5 0087000121	ST_LOC_NAL1_TEST121	SAN_NC121						07/06/2018	12/00/2018	Inactive	
<input checked="" type="checkbox"/>	5 0087000120	ST_LOC_NAL1_TEST120	SAN_NC120						07/06/2018	12/00/2018	Inactive	
<input type="checkbox"/>	5 0087000119	ST_LOC_NAL1_TEST119	SAN_NC119						07/06/2018	12/00/2018	Inactive	

Registrations

Reg ID	Reg Name	Start Date	End Date	Status
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Rows [200]



California ISO

Control Group Walkthrough

Approach 2

DRP View > Registrations > Create

- Begin on the Registrations page and click **Create**

California ISO | Demand Response Registration System

DRP VIEW | LOC VIEW | LSE VIEW | ADMINISTRATION

DRP VIEW Registrations

Reg Name: [] DRP: [ALL] UDC: [ALL] LSE: [ALL] SUBLAP: [ALL] Apply Reset

Create Edit Copy Terminate Delete

Registrations

Select	Reg ID	Name	DRP	UDC	LSE	SUBLAP	DLAP	DRP SC	Resource ID	Resource Type	Program	Baseline Method	Start Date	End Date	Status
<input type="checkbox"/>	1001000	Stem S001 Z								Pre Defined	Proxy DR	10 in 10 with SMA	04/30/2017	12/31/2017	Terminated
<input type="checkbox"/>	053069	TEST_NC_ISO								Pre Defined	Proxy DR	Meter Generation Output with 10 in 10	07/26/2018	07/26/2018	Confirmed
<input type="checkbox"/>	053065	TEST_NC_ISO1								Pre Defined	Proxy DR	Day Matching 10/10	07/26/2018	07/30/2018	Confirmed
<input type="checkbox"/>	053077	LL_REG_BM_DAYMATCH_10/10								Pre Defined	Proxy DR	Day Matching 10/10	07/26/2018	07/24/2019	Confirmed
<input type="checkbox"/>	053075	TEST_REG2								Pre Defined	Reliability DR	Meter Generation Output with 10 in 10	07/25/2018	07/31/2018	Confirmed
<input type="checkbox"/>	053072	TEST_REG								Pre Defined	Reliability DR	Weather Matching	08/01/2018	08/31/2018	Confirmed
<input type="checkbox"/>	053069	NC_NK_ISO								Pre Defined	Proxy DR	Meter Generation Output with 10 in 10	09/01/2018	09/30/2018	Confirmed
<input type="checkbox"/>	053043	ST_REG_DM5-10_TEST								Pre Defined	Proxy DR	Day Matching Combined	07/24/2018	09/29/2018	Confirmed
<input type="checkbox"/>	053040	ST_REG_DM5-10_TEST								Pre Defined	Proxy DR	Day Matching 5/10 (Residential Only)	07/24/2018	09/29/2018	Confirmed
<input type="checkbox"/>	053037	ST_REG_MGO_TEST_10/10								Pre Defined	Proxy DR	Meter Generation Output with 10 in 10	07/24/2018	09/29/2018	Confirmed
<input type="checkbox"/>	053030	ST_REG_WM_TEST_10/10								Pre Defined	Proxy DR	Meter Generation Output with 10 in 10	07/24/2018	09/29/2018	Confirmed
<input type="checkbox"/>	053019	ST_REG_WM_TEST_NU								Pre Defined	Proxy DR	Weather Matching	07/24/2018	10/31/2018	Confirmed
<input type="checkbox"/>	053015	LL-ESDR-001								Pre Defined	Proxy DR	Day Matching 10/10	07/23/2018	08/31/2018	Confirmed
<input type="checkbox"/>	053006	ST_REG_DMC_TEST7_NEW								Pre Defined	Proxy DR	Day Matching Combined	07/24/2018	11/29/2018	Confirmed
<input type="checkbox"/>	052981	ST_REG_DMC_TEST7								Pre Defined	Proxy DR	Day Matching Combined	07/23/2018	11/30/2018	Confirmed
<input type="checkbox"/>	052975	ST_REG_WM_TEST10 Update								Pre Defined	Proxy DR	Weather Matching	07/20/2018	08/30/2018	Confirmed
<input type="checkbox"/>	052964	ST_REG_MGO_TEST1 Update								Pre Defined	Proxy DR	Meter Generation Output	07/19/2018	07/19/2018	Terminated
<input type="checkbox"/>	052951	ST_REG_WM_TEST1								Pre Defined	Proxy DR	Weather Matching	07/19/2018	08/30/2018	Confirmed
<input type="checkbox"/>	052948	ST_REG_WM_TEST1								Pre Defined	Proxy DR	Weather Matching	07/19/2018	08/30/2018	Confirmed
<input type="checkbox"/>	052925	ST_REG_Day_Matching_Combined								Pre Defined	Reliability DR	Day Matching Combined	10/01/2018	10/31/2018	Confirmed
<input type="checkbox"/>	052922	ST_REG_Day Combined								Pre Defined	Reliability DR	Day Matching Combined	10/01/2018	10/30/2018	Confirmed
<input type="checkbox"/>	052919	ST_REG_Day Matching 5-10								Pre Defined	Proxy DR	Day Matching 5/10 (Residential Only)	10/01/2018	10/31/2018	Confirmed
<input type="checkbox"/>	052915	ST_REG_Day Matching 10-10								Pre Defined	Proxy DR	Day Matching 10/10	10/01/2018	10/31/2018	Confirmed
<input type="checkbox"/>	052903	L-ESDR_REG_TESTING2								Pre Defined	Proxy DR	Weather Matching	12/01/2018	12/30/2018	Confirmed
<input type="checkbox"/>	052823	test_reg								Pre Defined	Proxy DR	Meter Generation Output	09/01/2018	09/30/2018	New

Locations

Loc ID	SAN	Resource ID	Start date	End date	Distribution Factor	Control Group?	Treatment Group?
822928000002			04/01/2017	12/31/2017			View Location
052928000003			04/01/2017	12/31/2017			View Location
780796000001			04/01/2017	12/31/2017			View Location
780796000002			04/01/2017	12/31/2017			View Location

Show/Refresh Available Locations

- Click the **Show/Refresh Available Locations** button

The screenshot displays a web application interface with three main panels. The top-left panel, titled 'Available Locations', contains a table with columns for ID, Name, SAN, Start Date, and End Date. A button labeled 'Show/Refresh Available Locations' is highlighted with an orange box. The top-right panel, titled 'Selected Locations', is currently empty. The bottom-right panel, titled 'Distribution Factor', is also empty. The interface includes navigation controls and a 'Rows' dropdown menu in each panel.

ID	Name	SAN	Start Date	End Date
553087000136	ST_LOC_NAL1_TEST136	SAN_NC136	07/26/2018	12/31/2018
553087000149	ST_LOC_NAL1_TEST149	SAN_NC149	07/26/2018	12/31/2018
553087000148	ST_LOC_NAL1_TEST148	SAN_NC148	07/26/2018	12/31/2018
553087000147	ST_LOC_NAL1_TEST147	SAN_NC147	07/26/2018	12/31/2018
553087000146	ST_LOC_NAL1_TEST146	SAN_NC146	07/26/2018	12/31/2018
553087000145	ST_LOC_NAL1_TEST145	SAN_NC145	07/26/2018	12/31/2018
553087000144	ST_LOC_NAL1_TEST144	SAN_NC144	07/26/2018	12/31/2018
553087000143	ST_LOC_NAL1_TEST143	SAN_NC143	07/26/2018	12/31/2018
553087000142	ST_LOC_NAL1_TEST142	SAN_NC142	07/26/2018	12/31/2018
553087000141	ST_LOC_NAL1_TEST141	SAN_NC141	07/26/2018	12/31/2018
553087000140	ST_LOC_NAL1_TEST140	SAN_NC140	07/26/2018	12/31/2018
553087000139	ST_LOC_NAL1_TEST139	SAN_NC139	07/26/2018	12/31/2018
553087000138	ST_LOC_NAL1_TEST138	SAN_NC138	07/26/2018	12/31/2018
553087000137	ST_LOC_NAL1_TEST137	SAN_NC137	07/26/2018	12/31/2018
553087000136	ST_LOC_NAL1_TEST136	SAN_NC136	07/26/2018	12/31/2018
553087000135	ST_LOC_NAL1_TEST135	SAN_NC135	07/26/2018	12/31/2018
553087000134	ST_LOC_NAL1_TEST134	SAN_NC134	07/26/2018	12/31/2018
553087000133	ST_LOC_NAL1_TEST133	SAN_NC133	07/26/2018	12/31/2018
553087000132	ST_LOC_NAL1_TEST132	SAN_NC132	07/26/2018	12/31/2018
553087000131	ST_LOC_NAL1_TEST131	SAN_NC131	07/26/2018	12/31/2018
553087000130	ST_LOC_NAL1_TEST130	SAN_NC130	07/26/2018	12/31/2018
553087000129	ST_LOC_NAL1_TEST129	SAN_NC129	07/26/2018	12/31/2018
553087000128	ST_LOC_NAL1_TEST128	SAN_NC128	07/26/2018	12/31/2018

Add locations to the registration

- Use buttons to populate **Selected Locations** section

Show/Refresh Available Locations

Available Locations

ID	Name	SAN	Start Date	End Date	PNODE
553087000125	ST_LOC_NAL1_TEST125	SAN_NC125	07/26/2018	12/31/2018	
553087000124	ST_LOC_NAL1_TEST124	SAN_NC124	07/26/2018	12/31/2018	
553087000123	ST_LOC_NAL1_TEST123	SAN_NC123	07/26/2018	12/31/2018	
553087000122	ST_LOC_NAL1_TEST122	SAN_NC122	07/26/2018	12/31/2018	
553087000121	ST_LOC_NAL1_TEST121	SAN_NC121	07/26/2018	12/31/2018	
553087000120	ST_LOC_NAL1_TEST120	SAN_NC120	07/26/2018	12/31/2018	
553087000119	ST_LOC_NAL1_TEST119	SAN_NC119	07/26/2018	12/31/2018	
553087000118	ST_LOC_NAL1_TEST118	SAN_NC118	07/26/2018	12/31/2018	
553087000117	ST_LOC_NAL1_TEST117	SAN_NC117	07/26/2018	12/31/2018	
553087000116	ST_LOC_NAL1_TEST116	SAN_NC116	07/26/2018	12/31/2018	
553087000115	ST_LOC_NAL1_TEST115	SAN_NC115	07/26/2018	12/31/2018	
553087000114	ST_LOC_NAL1_TEST114	SAN_NC114	07/26/2018	12/31/2018	
553087000113	ST_LOC_NAL1_TEST113	SAN_NC113	07/26/2018	12/31/2018	
553087000112	ST_LOC_NAL1_TEST112	SAN_NC112	07/26/2018	12/31/2018	
553087000111	ST_LOC_NAL1_TEST111	SAN_NC111	07/26/2018	12/31/2018	
553087000110	ST_LOC_NAL1_TEST110	SAN_NC110	07/26/2018	12/31/2018	
553087000109	ST_LOC_NAL1_TEST109	SAN_NC109	07/26/2018	12/31/2018	
553087000108	ST_LOC_NAL1_TEST108	SAN_NC108	07/26/2018	12/31/2018	
553087000107	ST_LOC_NAL1_TEST107	SAN_NC107	07/26/2018	12/31/2018	
553087000106	ST_LOC_NAL1_TEST106	SAN_NC106	07/26/2018	12/31/2018	
553087000105	ST_LOC_NAL1_TEST105	SAN_NC105	07/26/2018	12/31/2018	
553087000104	ST_LOC_NAL1_TEST104	SAN_NC104	07/26/2018	12/31/2018	
553087000103	ST_LOC_NAL1_TEST103	SAN_NC103	07/26/2018	12/31/2018	
553087000102	ST_LOC_NAL1_TEST102	SAN_NC102	07/26/2018	12/31/2018	
553087000101	ST_LOC_NAL1_TEST101	SAN_NC101	07/26/2018	12/31/2018	

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Selected Locations

ID	NAME	SAN	Start Date	End Date	PNODE	Control Group	Treatment Group
553087000150	ST_LOC_NAL1_TEST150	SAN_NC150	07/26/2018	12/30/2018			
553087000149	ST_LOC_NAL1_TEST149	SAN_NC149	07/26/2018	12/30/2018			
553087000148	ST_LOC_NAL1_TEST148	SAN_NC148	07/26/2018	12/30/2018			
553087000147	ST_LOC_NAL1_TEST147	SAN_NC147	07/26/2018	12/30/2018			
553087000146	ST_LOC_NAL1_TEST146	SAN_NC146	07/26/2018	12/30/2018			
553087000145	ST_LOC_NAL1_TEST145	SAN_NC145	07/26/2018	12/30/2018			
553087000144	ST_LOC_NAL1_TEST144	SAN_NC144	07/26/2018	12/30/2018			
553087000143	ST_LOC_NAL1_TEST143	SAN_NC143	07/26/2018	12/30/2018			
553087000142	ST_LOC_NAL1_TEST142	SAN_NC142	07/26/2018	12/30/2018			
553087000141	ST_LOC_NAL1_TEST141	SAN_NC141	07/26/2018	12/30/2018			
553087000140	ST_LOC_NAL1_TEST140	SAN_NC140	07/26/2018	12/30/2018			
553087000139	ST_LOC_NAL1_TEST139	SAN_NC139	07/26/2018	12/30/2018			
553087000138	ST_LOC_NAL1_TEST138	SAN_NC138	07/26/2018	12/30/2018			
553087000137	ST_LOC_NAL1_TEST137	SAN_NC137	07/26/2018	12/30/2018			
553087000136	ST_LOC_NAL1_TEST136	SAN_NC136	07/26/2018	12/30/2018			
553087000135	ST_LOC_NAL1_TEST135	SAN_NC135	07/26/2018	12/30/2018			
553087000134	ST_LOC_NAL1_TEST134	SAN_NC134	07/26/2018	12/30/2018			
553087000133	ST_LOC_NAL1_TEST133	SAN_NC133	07/26/2018	12/30/2018			
553087000132	ST_LOC_NAL1_TEST132	SAN_NC132	07/26/2018	12/30/2018			
553087000131	ST_LOC_NAL1_TEST131	SAN_NC131	07/26/2018	12/30/2018			
553087000130	ST_LOC_NAL1_TEST130	SAN_NC130	07/26/2018	12/30/2018			
553087000129	ST_LOC_NAL1_TEST129	SAN_NC129	07/26/2018	12/30/2018			
553087000128	ST_LOC_NAL1_TEST128	SAN_NC128	07/26/2018	12/30/2018			
553087000127	ST_LOC_NAL1_TEST127	SAN_NC127	07/26/2018	12/30/2018			
553087000126	ST_LOC_NAL1_TEST126	SAN_NC126	07/26/2018	12/30/2018			

Cancel Save Submit

Add locations to the registration

- Assign locations to **Control Group** or **Treatment Group**
- Remember the **Ctrl + Down Arrow** hotkey
- Click **Save/Submit** when finished

Available Locations

ID	Name	SAN	Start Date	End Date	PNODE
553087000125	ST_LOC_NAL1_TEST125	SAN_NC125	07/26/2018	12/31/2018	
553087000124	ST_LOC_NAL1_TEST124	SAN_NC124	07/26/2018	12/31/2018	
553087000123	ST_LOC_NAL1_TEST123	SAN_NC123	07/26/2018	12/31/2018	
553087000122	ST_LOC_NAL1_TEST122	SAN_NC122	07/26/2018	12/31/2018	
553087000121	ST_LOC_NAL1_TEST121	SAN_NC121	07/26/2018	12/31/2018	
553087000120	ST_LOC_NAL1_TEST120	SAN_NC120	07/26/2018	12/31/2018	
553087000119	ST_LOC_NAL1_TEST119	SAN_NC119	07/26/2018	12/31/2018	
553087000118	ST_LOC_NAL1_TEST118	SAN_NC118	07/26/2018	12/31/2018	
553087000117	ST_LOC_NAL1_TEST117	SAN_NC117	07/26/2018	12/31/2018	
553087000116	ST_LOC_NAL1_TEST116	SAN_NC116	07/26/2018	12/31/2018	
553087000115	ST_LOC_NAL1_TEST115	SAN_NC115	07/26/2018	12/31/2018	
553087000114	ST_LOC_NAL1_TEST114	SAN_NC114	07/26/2018	12/31/2018	
553087000113	ST_LOC_NAL1_TEST113	SAN_NC113	07/26/2018	12/31/2018	
553087000112	ST_LOC_NAL1_TEST112	SAN_NC112	07/26/2018	12/31/2018	
553087000111	ST_LOC_NAL1_TEST111	SAN_NC111	07/26/2018	12/31/2018	
553087000110	ST_LOC_NAL1_TEST110	SAN_NC110	07/26/2018	12/31/2018	
553087000109	ST_LOC_NAL1_TEST109	SAN_NC109	07/26/2018	12/31/2018	
553087000108	ST_LOC_NAL1_TEST108	SAN_NC108	07/26/2018	12/31/2018	
553087000107	ST_LOC_NAL1_TEST107	SAN_NC107	07/26/2018	12/31/2018	
553087000106	ST_LOC_NAL1_TEST106	SAN_NC106	07/26/2018	12/31/2018	
553087000105	ST_LOC_NAL1_TEST105	SAN_NC105	07/26/2018	12/31/2018	
553087000104	ST_LOC_NAL1_TEST104	SAN_NC104	07/26/2018	12/31/2018	
553087000103	ST_LOC_NAL1_TEST103	SAN_NC103	07/26/2018	12/31/2018	
553087000102	ST_LOC_NAL1_TEST102	SAN_NC102	07/26/2018	12/31/2018	
553087000101	ST_LOC_NAL1_TEST101	SAN_NC101	07/26/2018	12/31/2018	

Selected Locations

ID	NAME	SAN	Start Date	End Date	PNODE	Control Group	Treatment Group
553087000150	ST_LOC_NAL1_TEST150	SAN_NC150	07/26/2018	12/30/2018		<input type="checkbox"/>	<input type="checkbox"/>
553087000149	ST_LOC_NAL1_TEST149	SAN_NC149	07/26/2018	12/30/2018		<input type="checkbox"/>	<input type="checkbox"/>
553087000148	ST_LOC_NAL1_TEST148	SAN_NC148	07/26/2018	12/30/2018		<input type="checkbox"/>	<input type="checkbox"/>
553087000147	ST_LOC_NAL1_TEST147	SAN_NC147	07/26/2018	12/30/2018		<input checked="" type="checkbox"/>	<input type="checkbox"/>
553087000146	ST_LOC_NAL1_TEST146	SAN_NC146	07/26/2018	12/30/2018		<input type="checkbox"/>	<input checked="" type="checkbox"/>
553087000145	ST_LOC_NAL1_TEST145	SAN_NC145	07/26/2018	12/30/2018		<input checked="" type="checkbox"/>	<input type="checkbox"/>
553087000144	ST_LOC_NAL1_TEST144	SAN_NC144	07/26/2018	12/30/2018		<input checked="" type="checkbox"/>	<input type="checkbox"/>
553087000143	ST_LOC_NAL1_TEST143	SAN_NC143	07/26/2018	12/30/2018		<input checked="" type="checkbox"/>	<input type="checkbox"/>
553087000142	ST_LOC_NAL1_TEST142	SAN_NC142	07/26/2018	12/30/2018		<input checked="" type="checkbox"/>	<input type="checkbox"/>
553087000141	ST_LOC_NAL1_TEST141	SAN_NC141	07/26/2018	12/30/2018		<input type="checkbox"/>	<input type="checkbox"/>
553087000140	ST_LOC_NAL1_TEST140	SAN_NC140	07/26/2018	12/30/2018		<input type="checkbox"/>	<input type="checkbox"/>
553087000139	ST_LOC_NAL1_TEST139	SAN_NC139	07/26/2018	12/30/2018		<input type="checkbox"/>	<input type="checkbox"/>
553087000138	ST_LOC_NAL1_TEST138	SAN_NC138	07/26/2018	12/30/2018		<input type="checkbox"/>	<input type="checkbox"/>
553087000137	ST_LOC_NAL1_TEST137	SAN_NC137	07/26/2018	12/30/2018		<input type="checkbox"/>	<input type="checkbox"/>
553087000136	ST_LOC_NAL1_TEST136	SAN_NC136	07/26/2018	12/30/2018		<input type="checkbox"/>	<input type="checkbox"/>
553087000135	ST_LOC_NAL1_TEST135	SAN_NC135	07/26/2018	12/30/2018		<input type="checkbox"/>	<input type="checkbox"/>
553087000134	ST_LOC_NAL1_TEST134	SAN_NC134	07/26/2018	12/30/2018		<input type="checkbox"/>	<input type="checkbox"/>
553087000133	ST_LOC_NAL1_TEST133	SAN_NC133	07/26/2018	12/30/2018		<input type="checkbox"/>	<input type="checkbox"/>
553087000132	ST_LOC_NAL1_TEST132	SAN_NC132	07/26/2018	12/30/2018		<input type="checkbox"/>	<input type="checkbox"/>
553087000131	ST_LOC_NAL1_TEST131	SAN_NC131	07/26/2018	12/30/2018		<input type="checkbox"/>	<input type="checkbox"/>
553087000130	ST_LOC_NAL1_TEST130	SAN_NC130	07/26/2018	12/30/2018		<input type="checkbox"/>	<input type="checkbox"/>
553087000129	ST_LOC_NAL1_TEST129	SAN_NC129	07/26/2018	12/30/2018		<input type="checkbox"/>	<input type="checkbox"/>
553087000128	ST_LOC_NAL1_TEST128	SAN_NC128	07/26/2018	12/30/2018		<input type="checkbox"/>	<input type="checkbox"/>
553087000127	ST_LOC_NAL1_TEST127	SAN_NC127	07/26/2018	12/30/2018		<input type="checkbox"/>	<input type="checkbox"/>
553087000126	ST_LOC_NAL1_TEST126	SAN_NC126	07/26/2018	12/30/2018		<input type="checkbox"/>	<input type="checkbox"/>

Buttons: Cancel, Save, Submit



California ISO

Sample Notifications

Examples of e-mail notifications

Example: Location has been submitted

Subject: Location Submitted

The following location has been submitted for the review process.

Location Id: 541406
Location Name: Example for training - rkm
SAN: 123456
DRP: DABC
UDC: UABC
LSE: LABC
SUBLAP: SLAP_ABCD
START DATE: 2016-07-01 00:00:00.0
END DATE: 2017-06-30 00:00:00.0
STATUS: Pending

Example: Location has been reviewed by the UDC

Subject: Location reviewed by UDC

The following location has been reviewed by UDC

Location Id: 541406
Location Name: Example for training - rkm
SAN: 123456
DRP: DABC
UDC: UABC
LSE: LABC
SUBLAP: SLAP_ABCD
START DATE: 2016-07-01 00:00:00.0
END DATE: 2017-06-30 00:00:00.0
STATUS: Pending
REVIEWER NAME: UDC Reviewer
REVIEWER PHONE: 916-351-4400
COMMENT: IS APPROVED: true with comments: (Note: Comments are required if Valid Location field is not checked)

Example: Location has been reviewed by the LSE

Subject: Location reviewed by LSE

The following location has been reviewed by LSE

Location Id: 541406
Location Name: Example for training - rkm
SAN: 123456
DRP: DABC
UDC: UABC
LSE: LABC
SUBLAP: SLAP_ABCD
START DATE: 2016-07-01 00:00:00.0
END DATE: 2017-06-30 00:00:00.0
STATUS: Active
REVIEWER NAME: LSE Reviewer
REVIEWER PHONE: 916-351-4400
COMMENT: IS APPROVED: true with comments: (Note: Comments are required if Valid Location field is not checked)

Example: Registration has been submitted

Subject: Registration Submitted

The following registration has been submitted

Registration Id: 541407
Registration Name: RKM example for training
DRP: DABC
UDC: UABC
LSE: LABC
SUBLAP: SLAP_ABCD
START DATE: 2016-07-01 00:00:00.0
END DATE: 2017-06-30 00:00:00.0
STATUS: CONFIRMED