

# Schedule Dispatch Handbook

## Verification

Committed Capacity is expected to be delivered consistently throughout the year. Variations in delivery for short term weather patterns will be accounted for when assessing verification and Failure to Perform. At a minimum, the PV Screenshot of an identifier, to identify owner to system. Do not show customers location, name, account number, or any other compromising information be sized to be at least the half the Committed Capacity of the battery, so if a 5kw PV system were installed, the battery can be 10kWh or less.

The Company prefers a single submission for all Verification Evidence.

Point of metering should be the AC output of the inverter for AC or DC coupled systems.

Items verified

1. Committed Capacity using 7-Days Operational Data as specified in agreement and Scheduled Discharge occurs at specified start and end time
2. W-9 Received

### Verification Item #1 - 7-Days Operational Data Verification Evidence











To pass verification of operational data test, the data must demonstrate battery discharge is in compliance with Committed Capacity. Please zip files into one file.

- (1) Evidence of start time and 2hr block
- (2) Evidence of Committed Capacity programmed into inverter
- (3) Evidence provided in spreadsheet
- (4) [Excel](#) spreadsheet with passing data-kW in 5 (or 15) minute interval average over the interval. Discharge data should be shown as “-” and charge data should be “+”

Below is an example on how to provide evidence and extract data for excel spreadsheet. Each inverter will provide a unique user interface.

#### (1) Evidence of start time

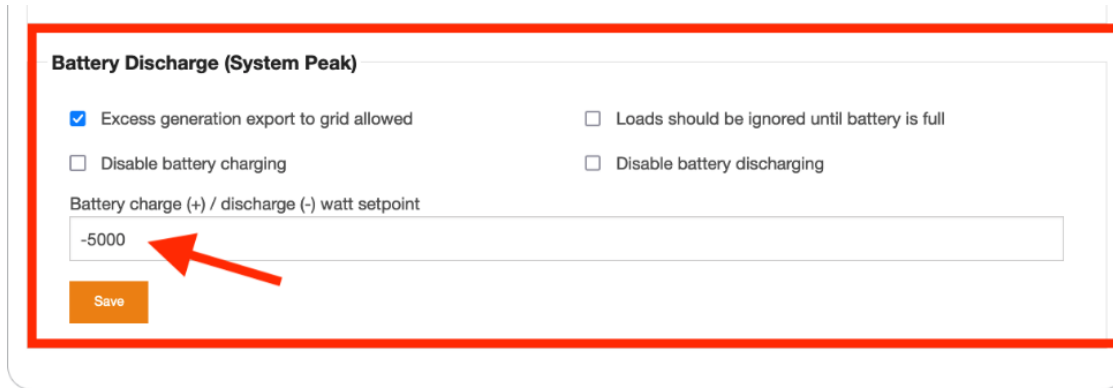
Screenshot the start time from inverter user interface, and name file A-SDP-YR-[meter#]\_[data]\_starttime.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
00:00 - 09:59 Battery Hold (Idle)  										10:00 - 15:59 Battery Priority Charge (Solar Peak)  						16:00 - 18:00 Battery Secondary Charge (Solar Shoulder)  		18:01 - 20:01 Battery Discharge (System Peak)  		20:02 - 23:59 Battery Hold (Idle)  			

Last Edit: 10/14/2021

*(2) Evidence of Committed Capacity programmed into inverter*

Screenshot the Committed Capacity from inverter user interface, and name file A-SDP-YR--[meter#]\_[data]\_CC.



*(3) Evidence provided in spreadsheet*

Screenshot the graph or table from inverter user interface, and name file A-SDP-YR--[meter#]\_[data]\_excevidence.



*(4) Excel Spreadsheet with Passing Data*

Step 1) Download 5min or 15min data into spreadsheet

Last Edit: 10/14/2021

The screenshot shows a web interface with several tabs: Information, Configuration, Status, Install Photos, Notes, EMC Status, Battery Status, Production, Export Events, Logs, Power, Energy, and Downloads. The 'Downloads' tab is active, showing a 'New Download' form and a 'Submitted Downloads' table.

**New Download Form:**

- Report Type: Generation & Battery Power Summary
- File Name: Duck SDP Validation .csv
- Start Time: 2021-09-30 00:00
- End Time: 2021-10-06 23:55
- Interval: Five Minute
- Buttons: Create

**Submitted Downloads Table:**

File Name	Start Time	End Time	Actions
Duck SDP Validation.csv	September 30, 2021 12:00am HST	October 6, 2021 11:55pm HST	Download, Delete

Step 2) Read instructions in excel.

	A	B	C	D	E	F	G	H
1	Date Time	Battery Discharge (kW)	Performance	Dispatch Window				
2			--	0		Committed Capacity	0	kW
3			--	0		Time Zone	HST	
4			--	0		Dispatch Start Time (24 hr format)	18:00	HST
5			--	0		Dispatch End Time	20:00	HST
6			--	0		Interval Length (min)	0.05	
7			--	0		Beginning or End of the Interval	Beginning	
8			--	0		<b>VERIFICATION</b>		
9			--	0		Data Start Date	1/0/00	0:00
10			--	0		Data End Date	1/0/00	0:00
11			--	0		Data Dispatch Start Time	18:00	HST
12			--	0		Data Dispatch End Time	20:00	HST
13			--	0		Verification Interval Start Time	18:05	HST
14			--	0		Verification Interval End Time	19:55	HST
15			--	0		<b>Data Check</b>	<b>Data</b>	<b>Check</b>
16			--	0		Total Days	0.0	7
17			--	0		Total Intervals	0	2016
18			--	0		Total Intervals/Day	#DIV/0!	288
19			--	0		Interval Length (min)	#DIV/0!	5
20			--	0		No. of Complete Dispatch Intervals	0	161
21			--	0		No. of Complete Dispatch Intervals/Day	#DIV/0!	23

Step 3) Copy in downloaded data (as value), update Committed Capacity, time zone, Dispatch Start time, Interval Length, and Beginning or End of the Interval. See the Instructions tab in the excel file for information on these fields.

	A	B	C	D	E	F	G	H
1	Date Time	Battery Discharge (kW)	Performance	Dispatch Window				
2	9/28/21 0:00	-0.010	--	0		Committed Capacity	5	kW
3	9/28/21 0:05	-0.010	--	0		Time Zone	HST	
4	9/28/21 0:10	-0.010	--	0		Dispatch Start Time (24 hr format)	18:01	HST
5	9/28/21 0:15	-0.010	--	0		Dispatch End Time	20:01	HST
6	9/28/21 0:20	-0.010	--	0		Interval Length (min)	0.05	
7	9/28/21 0:25	-0.010	--	0		Beginning or End of the Interval	Beginning	
8	9/28/21 0:30	-0.010	--	0		<b>VERIFICATION</b>		
9	9/28/21 0:35	-0.010	--	0		Data Start Date	9/28/21	0:00
10	9/28/21 0:40	-0.010	--	0		Data End Date	10/4/21	23:55
11	9/28/21 0:45	-0.010	--	0		Data Dispatch Start Time	18:01	HST
12	9/28/21 0:50	-0.010	--	0		Data Dispatch End Time	20:01	HST
13	9/28/21 0:55	-0.010	--	0		Verification Interval Start Time	18:05	HST
14	9/28/21 1:00	-0.010	--	0		Verification Interval End Time	19:55	HST
15	9/28/21 1:05	-0.010	--	0		<b>Data Check</b>	<b>Data</b>	<b>Check</b>
16	9/28/21 1:10	-0.010	--	0		Total Days	7.0	7
17	9/28/21 1:15	-0.010	--	0		Total Intervals	2016	2016
18	9/28/21 1:20	-0.010	--	0		Total Intervals/Day	288	288
19	9/28/21 1:25	-0.010	--	0		Interval Length (min)	5.00	5
20	9/28/21 1:30	-0.010	--	0		No. of Complete Dispatch Intervals	161	161
21	9/28/21 1:35	-0.010	--	0		No. of Complete Dispatch Intervals/Day	23	23
22	9/28/21 1:40	-0.010	--	0				
23	9/28/21 1:45	-0.010	--	0				
24	9/28/21 1:50	-0.010	--	0				
25	9/28/21 1:55	-0.010	--	0				
26	9/28/21 2:00	-0.010	--	0				

Step 4) Verify that you have provided the appropriate data. The information in the Data column should match or be close to the values in the Check column.

- a) In the Performance Count table, the count for 85% to 100% performance must be greater than the count in the Check column (137 or 42, depending on interval length) to pass the verification review.

VERIFICATION		
Data Start Date	9/28/21 0:00	
Data End Date	10/4/21 23:55	
Data Dispatch Start Time	18:01 HST	
Data Dispatch End Time	20:01 HST	
Verification Interval Start Time	18:05 HST	
Verification Interval End Time	19:55 HST	
Data Check	Data	Check
Total Days	7.0	7
Total Intervals	2016	2016
Total Intervals/Day	288	288
Interval Length (min)	5.00	5
No. of Complete Dispatch Intervals	161	161
No. of Complete Dispatch Intervals/Day	23	23
Performance	Data	Check
Average	100%	100%
Max	100%	100%
Min	96%	100%
Performance Count	Count	Check
85% - 100%	161	137
75% - 84%	0	0
50% - 74%	0	0
0% - 49%	0	0
Total	161	161

(5) Name excel file A-SDP-YR-[meter#]\_[data]\_7days, and email all 4 items to [connect@hawaiianelectric.com](mailto:connect@hawaiianelectric.com)

**Email Requirements**

All verification data shall be emailed to [connect@hawaiianelectric.com](mailto:connect@hawaiianelectric.com) until SDP is available in CIT at which time verification data shall be attached to project. If data being sent is confidential, such as the customers name is shown, a SFTP site can be created for files to be sent.

Email subject line shall include the Meter Number and content of the email, e.g. MPXxxxxxxx – Verification Evidence. All email attachments in a single email may not exceed 18MBs.

**File Name Requirements**

Committed Capacity evidence files shall be named and numbered, e.g. “A-SDP-YR-XXXXXX\_currentdate\_fileX, where YR is last two digits of the year, XXXXXX is the meter number, currentdate is date of file, and filex is VER1 or VER2, etc for multiple documents. For example, the file “A-SDP-21-543765\_08022021\_VER1” is for a verification file sent for meter number MPX543765.

Scheduled Discharge (start time) evidence files shall be named and numbered, e.g. “A-SDP-YR-XXXXXX\_currentdate\_Sched”.

**Verification Item #3 - W-9 Received**

Before a check is sent to owner, a signed W-9 must mailed to Hawaiian Electric, P. O. Box 2750, Honolulu, HI 96840, Attn: AT10-SG. DO NOT EMAIL w-9 to Hawaiian Electric.

## Additional Guidance

### Equipment after Termination of Contract

If customer terminates SDP contract, the resource added for the intent of SDP must either be removed or transferred to available DER tariff at the time of the installation. (i.e. customer can't keep generation on NEM if they leave SDP, they would have to migrate system to NEM+, etc)

### Remote dispatch

Remote dispatch is activation of an event through remote communications to the battery inverters instead of scheduling the program events within the software at the location of the battery. If customer uses remote dispatch instead of scheduled daily dispatch, we recommend the inverters can be communicated to through OpenADR and IEEE2030.5 but not able to enforce it at this time.

### Failure to Perform Cure Period

The tariff stats that customer that is not performing will be given 30 day's to correct the failure, and if not corrected, will be charged \$100.00 per month. Exceptions to the 30 day cure window may be granted on a conditional basis provided that substantial proof can be submitted that there are extenuating circumstances preventing the system from exporting its committed capacity. Examples of extenuating circumstances, including, but not limited to:

- Out-of-stock replacement components that Hawaiian Electric can verify
- Installing contractor is no longer in business and a new contractor must be hired

Exceptions will be granted only 30 days at a time, at which point a new request for an exception with valid evidence may be submitted for Hawaiian Electric review and approval.