

RENEWABLE BATTERY CONNECT PRE-LAUNCH INFO SESSION 2

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June 12, 2023

AGENDA

- 1. Renewable Battery Connect (RBC) Program Overview
- 2. Interconnection Application Process for RBC
- 3. Installer Responsibilities
- 4. Post-Application Process
- 5. Demand Management Events
- 6. Resources



RENEWABLE BATTERY CONNECT

Program Overview



Renewable Battery Connect: Overview

Get Rewarded For Using Renewable Energy And Supporting The Grid Of The Future

- Customers receive an upfront incentive and annual participation incentive for allowing Xcel Energy to automatically control their battery up to 60 times per year for 5-years with an event duration of up to 3-hours.
 - √ There will always be 40% remaining battery power after an event for customers to use as they would like
 - ✓ Xcel Energy will not schedule events ahead of forecasted sever weather

Eligibility

- ✓ Must interconnect new eligible battery equipment
- ✓ Battery must be 100% charged by an on-site solar system
- ✓ Must be an Xcel Energy Colorado electric residential or small business customer
- ✓ Must maintain a 24/7 internet connection
- ✓ Must own condo, home, townhome, or building where energy storage system is located.

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Program Summary

Renewable Battery Connect Program					
Programs	Renewable Battery Connect	Renewable Battery Connect Income Qualified/Disproportionately Impacted Communities (IQ/DIC)			
2023 Budget & Capacity Release	\$2.4 Million (4 MW)	\$0.8 Million (1 MW)			
Total 2022-2025 Budget	\$4.875 Million (8 MW)	\$1.625 Million (2 MW)			
Upfront Incentive	 \$500 per kW of Charge Rate (Max Continuous) Capped at 50% of actual battery cost 	 \$800 per kW of Charge Rate (Max Continuous) Capped at 75% of actual battery cost 			
Yearly Participation Incentive	\$100/year for 5 years				
Contract Term	Renewable Battery Connect Agreement; 5-Year Term				
Customer Types	Residential and Small Business Customers (C Rates)				

What will be released in 2024 & 2025?

The Program will release additional capacity bi-annually beginning 2024: 1 MW for General and 0.25 MW for IQ/DIC twice per year Unused capacity from previous periods will rollover.

Income Qualified Disproportionately Impacted Communities

Renewable Battery Connect IQ/DIC Program Attributes				
 Xcel Energy Colorado electric residential customer that is Income Qualified or in Disproportionately Impacted Community. Customer owns a condo, home, townhome, or building where BESS is located. 				
Customer Type	Residential and Small Business Customers that are Income Qualified or in a Disproportionately Impacted Community			
Contract and Terms	DER Interconnection Agreement and Renewable Battery Connect Agreement (5-year term)			
Required Timeline	 18 months from application deposit received date 6-month extension with forfeiture of deposit 			
Application Deposit • N/A				

Application Agents are required to upload proof of Income Qualified and/or Disproportionally Impacted Communities Verification

Income Qualified Disproportionately Impacted CommunitiesResidential Options

Proof for Income Qualification:

- A. Verification by Third Party Form
- B. Proof of participation in Xcel Energy income qualified program within last 24 months
 - Copy of Xcel Energy Statement that shows Energy Assistance payment
- C. Current participation in federal or state programs (SNAP, TANF, etc.)
 - Letter of acceptance or similar documentation

Disproportionately Impacted Communities:

Located within census block group with an EnviroScreen score percentile >= 80%

How to check - Use State of Colorado's **EnviroScreen Tool** - See Appendix for details

Income Qualified Disproportionately Impacted CommunitiesCommercial Options

Income Qualified Community Service Provider:

Customer must be a non-profit corporation, governmental entity, or multifamily affordable housing provider. Requires proof that the entity provides essential services primarily to income qualified recipients. Proof can include annual report, 501(c)(3) form, and mission statement.

Disproportionately Impacted Community Service Provider:

Located in and service Disproportionately Impacted Communities and are one more of the qualified entity types (See Appendix).

Exception process in Appendix.

Upfront Incentive Calculations

Example incentive calculations based on max continuous power (kW):

Standard: Upfront incentive not to exceed 50% of cost

Tesla Powerwall + = 5.0 kW (battery inverter) $\times 500 = $2,500$ SolarEdge Home Battery (with SolarEdge Home Hub Inverter) $= 5.0 \text{ kW} \times 500 = $2,500$

<u>Income Qualified/Disproportionately Impacted Communities</u>: Upfront incentive not to exceed 75% of cost

Tesla Powerwall 2.0 = 5.0 kW x \$800 = \$4,000

APPLICATION PROCESS

For Renewable Battery Connect Applications



Interconnection Basics

Please review the Colorado DER Interconnection Portal Guide for application basics

APPLICATION BASICS

Case Numbers, Statuses, and Actions

CASE NUMBER:

A CASE NUMBER IS A UNIQUE IDENTIFYING NUMBER SPECIFIC TO YOUR APPLICATION

STATUS/ STEP/ SUB-STEPS:

- EACH CASE WILL HAVE A "STATUS". "STEP", AND "SUB-STEP" IDENTIFYING THE STAGE IN THE PROCESS.
- APPLICATIONS WILL ALWAYS HAVE A STATUS/ STEP
- SUB-STEPS ARE ONLY APPLICABLE TO SOME STATUS/ STEPS

EACH "ACTION" WILL BE IN THE "OPEN", "DRAFT", OR "FINALIZED" STATUS.

OPEN:

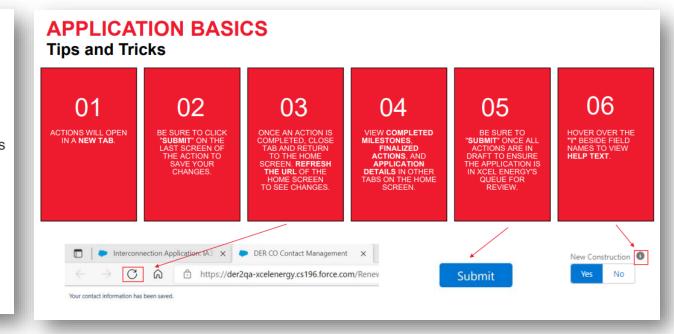
APPLICATION AGENT/INSTALLER'S RESPONSIBLY TO COMPLETE

DRAFT:

APPLICATION AGENT/INSTALLER HAS COMPLETED THE ACTION BUT NOT YET SUBMITTED

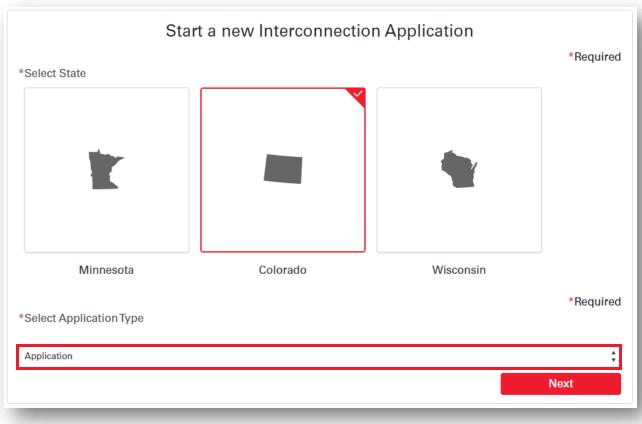
FINALIZED:

ACTION ITEM HAS BEEN COMPLETED AND SUBMITTED TO XCEL ENERGY FOR REVIEW



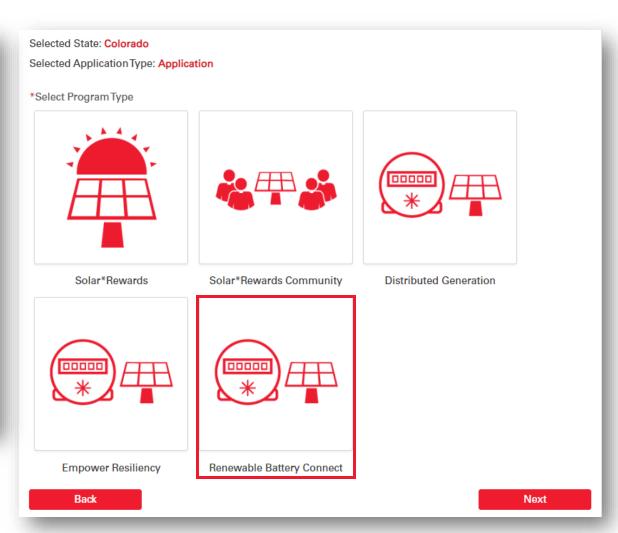
Renewable Battery Connect Program

Start a new Interconnection Application



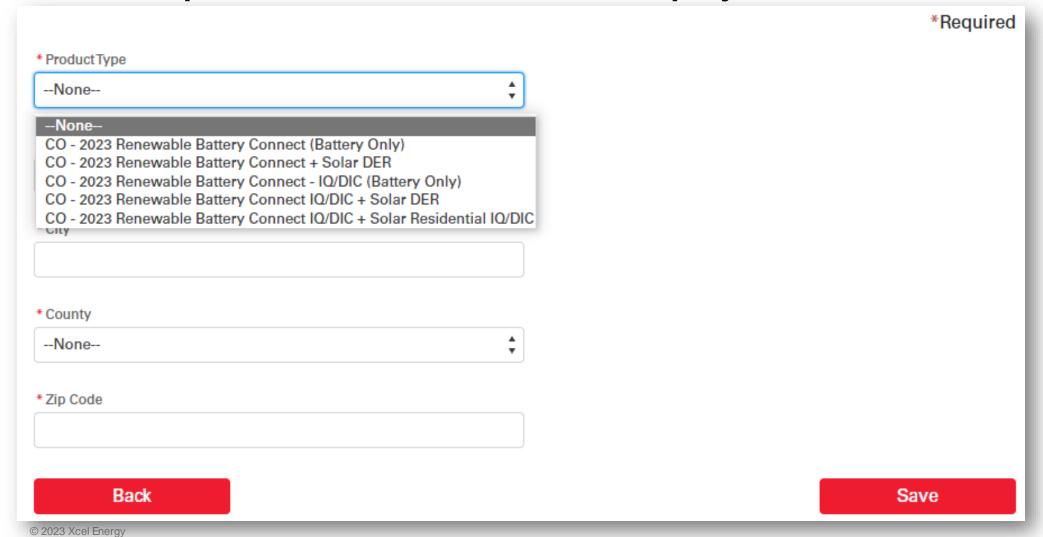
DER Interconnection Application Portal Login





Renewable Battery Connect Products

Choose a product based on the customer project



Renewable Battery Connect: Products

Select One Product from Dropdown:	Description:	Fees:	
1. CO - 2023 Renewable Battery Connect (Battery Only)	New battery with existing solar	Application Deposit: \$50/kW of Charge Rate (Max Continuous) Engineering fee: \$100	
2. CO – 2023 Renewable Battery Connect IQ/DIC (Battery Only)	New battery IQ/DIC with existing solar	Application Deposit: N/A Engineering fee: \$100	
3. CO - 2023 Renewable Battery Connect + Solar DER	New battery with new solar (no REC)	Application Deposit:\$50/kW of Charge Rate (Max Continuous) Engineering fee: solar kW AC size	
4. CO - 2023 Renewable Battery Connect IQ/DIC + Solar Residential IQ/DIC	New battery IQ/DIC with new solar IQ/DIC	Application Deposit: N/A Engineering fee: solar kW AC size	
5. CO - 2023 Renewable Battery Connect IQ/DIC + Solar DER	New battery IQ/DIC with new solar (no REC)	Application Deposit: N/A Engineering fee: solar kW AC size	

RBC Disclaimer Screen

Once a Renewable Battery
Connect product is selected,
a disclaimer screen appears
to ensure the Application
Agent enters approved
equipment.

Please enter these values when populating the fields in Battery Details

Interconnection Application Requests for the Renewable Battery Connect Program must include approved equipment from the table below. Applications will not be approved for alternative batteries and inverters.

Eligible equipment includes Tesla Powerwall's and Powerwall +, SolarEdge Home Battery with a SolarEdge Home Hub Inverter.

Renewable Battery Connect Eligible Battery Equipment:

Storage Manufacturer	Storage Model	Charge Rate, Max Continuous (kW)	Storage Guidance Configuration
SolarEdgeTechnologies Ltd. Home Battery	BAT-10K1P	5.0	DC, Net Metered, 100% Renewable Export 3B/3BM
Tesla Inc. (Powerwall +)	1850000-XX-Y	5.0 (battery inverter)	AC, Net Metered, Non-Export 2C
Tesla Inc. (AC Powerwall)	1092170-xx-y	5.0	Net Metered, Non-Export 2C
Tesla Inc. (AC Powerwall)	2012170-xx-y	5.0	Net Metered, Non-Export 2C
Tesla Inc. (Powerwall 3)	1707000-XX-Y	5.0	DC, Net Metered, 100% Renewable Export 3B/3BM

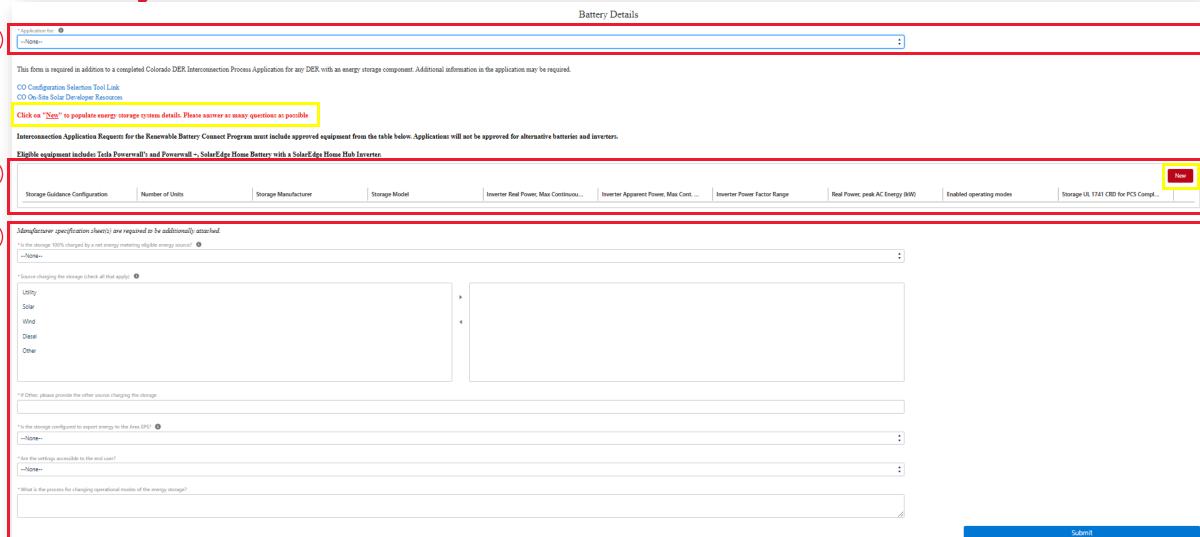
Compatible Inverters for Eligible Battery Equipment:

Inverter Manufacturer	Inverter Model
	SE3000H-US-XXXXXX
	SE3800H-US-XXXXXX
ColorEdor Todo do do do	SE6000H-US-XXXXXX
SolarEdgeTechnologies Ltd. Home Hub Inverter	SE7600H-US-XXXXXX
	SE10000H-US-XXXXXX
	SE11400H-US-XXXXXX
Tesla Inc. (Powerwall +)	1538000-xx-y [208V]

Click "NEXT" to start the Renewable Battery Connect Interconnection Application.

Back

Battery Details Action

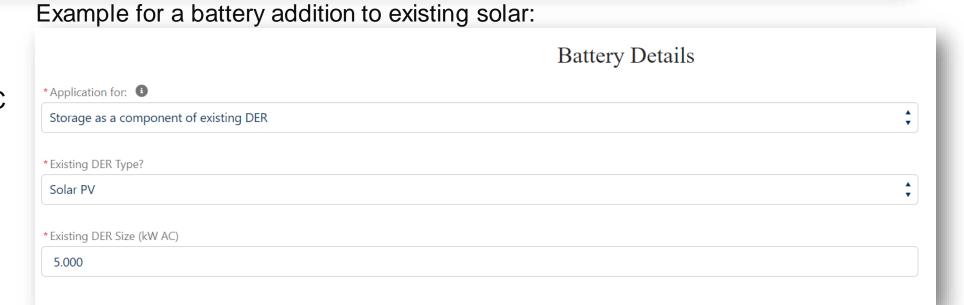


Battery Details

Application Type



Stand-alone
Storage as
DER is not an
option for RBC



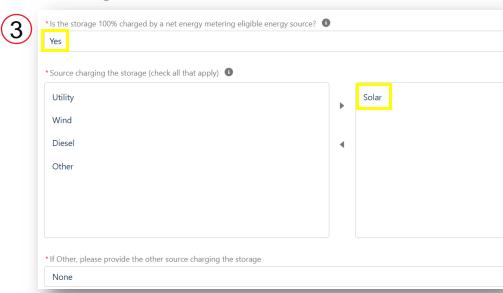
Battery Details Required Fields



										New
Storage Guidance C	Number of Units	Storage Manufacturer	Storage Model	Inverter Real Power,	Inverter Apparent P	Inverter Power Facto	Real Power, peak AC	Enabled operating	Storage UL 1741 CR	
		<u>'</u>	'				<u>'</u>			
New Storage Equipmen	t									
			An err	or occurred while trying	to update the record. Plea	se try again.				
Storage Guidance Configuration					_					
None					▼					
Please populate the required field	l: Storage Guidance Configuration									
Charge Rate, Max Continuous (kW	V)						Yellow high	lighted field	s are	
							included in	-		
You must enter a value: Enter kW	of a single battery.									
Battery Rated Capacity (kWh)					\neg		the Upfront	Incentive a	nd	
You must enter a value: Should be	s found on the namenlate or data	rheet					Application			
Number of Units	round on the numeriate or data.	siect					, ipplication	Dopoon (ii i	oquirou)	
Number of office					一 					
You must enter a value: Enter the	number of batteries being installe	ed								
Storage Manufacturer										
You must enter a value: Example: 1	Tesla, SolarEdge Technologies									
Storage Model					_					
You must enter a value: Example: 1	1850000-XX-Y									
Enabled operating modes										
Please populate the required field	Fnahled operating modes									
Available Operating Modes	a chaoca operating modes									
Available Operating Modes					\neg					
Please populate the required field	l: Available Operating Modes									

Battery Details

Additional fields that are required to be populated with specific answers for RBC



FIELD

HELP TEXT

Number of Units

Enabled operating modes

Available Operating Modes

Is the storage 100% charged by a net energy metering eligible energy source?

Source charging the storage

Are the settings accessible to the end user?

What is the process for changing operational modes of the energy storage?

Is the storage configured to export energy to the Area EPS?

Enter the number of batteries being installed

For example: backup, daily consumption, peak shaving, time-of-use, etc.

For example: backup, daily consumption, peak shaving, time-of-use, etc.

Is the storage 100% charged by a net energy metering eligible energy source? select **YES**

DROPDOWN: select **SOLAR**

Y/N

Free text field

For example: through the Tesla App

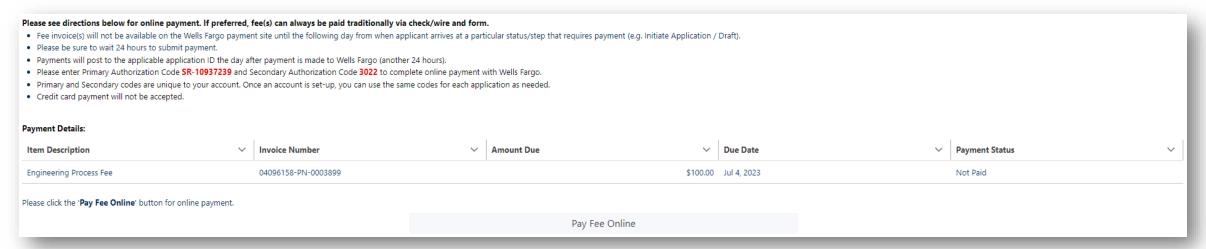
Y/N Will the storage system export stored energy to the grid?

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Fees

Battery only applications are a \$100 engineering fee Solar and battery engineering fee is based on solar kW AC size



Application deposits are **not** required for Income Qualified/Disproportionately Impacted Communities products

For all other RBC products, the application deposit will be refunded if the application reaches Permission to Operate within 18-months from the application deposit received date

Upload Proof of Income Qualified/ Disproportionally Impacted Communities Verification ① Upload Files Submit

Prepare Documents

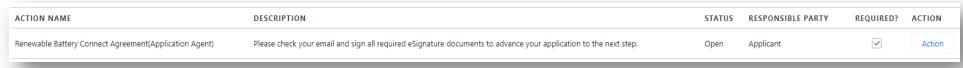
- Diagrams must show the battery configuration and set up along with the new or existing solar system
- IQ/DIC applications must upload proof of Income Qualified/Disproportionally Impacted Communities Verification

ACTION NAME	DESCRIPTION	STATUS	RESPONSIBLE PARTY	REQUIRED?	ACTION
One-Line Diagram	Show the installation of the DER system and associated equipment required within your interconnection application.	Open	Applicant	~	Action
Proof of Income Qualified/ Disproportionally Impacted Communities Verification	Please upload documentation validating the proposed system serves a customer that meets the Income Qualified/Disproportionally Impacted Communities requirements. Income Qualified eligibility requirements are available here: (link to come in future). Disproportionally Impacted Communities eligibility requirements are available here: (link to come)	Open	Applicant	✓	Action
Site Plan	Show the location plan identifying location of equipment noted on the one-line.	Open	Applicant	~	Action

Xcel Energy Agreements

System Owner will Sign Agreements

Renewable Battery Connect Agreement



CO DER Interconnection Agreement

If storage system is third-party owned, the Customer will sign a Host Acknowledgement form

Host Acknowledgement

Signing Process

- An email is sent to the Application Agent and/or the interconnection Customer with a link to e-sign documents (sertifi.net)
- Once all signatures have been collected, the status will be marked as "Draft" and the application will be able to advance to the next step

Final Installation Details

Design and Construction > Documents Pending



Final Battery Cost

Overall, Battery Energy Storage System (BESS) cost is the actual cost of the battery plus (if not integrated into or with the BESS) the inverter, (if not an integrated system) exclusive of tax and installation costs. Not to include other financial incentive, including state or federal program or tax credit.



Serial #/Unit IDs

Four fields available to type in the Serial # of each Powerwall or the Unit ID of each SolarEdge Home Battery



SR/DG Final Electrical Inspection

Upload inspection

Installer Responsibilities

Details Necessary for Renewable Battery Connect Applications

Application Product Select from one of five Renewable Battery Connect Products that match the Customer project	 CO - 2023 Renewable Battery Connect (Battery Only) CO - 2023 Renewable Battery Connect - IQ/DIC (Battery Only) CO - 2023 Renewable Battery Connect + Solar DER CO - 2023 Renewable Battery Connect IQ/DIC + Solar Residential IQ/DIC CO - 2023 Renewable Battery Connect IQ/DIC + Solar DER
System Details If Battery Only product: must enter "Existing System = YES"	 Renewable Battery Connect application will be "New DERs" If Battery Only product, must enter "Existing System = YES" and "Existing DG Size (kW AC)" If adding solar, enter Array and Inverter details Pro tip: Complete System Details action before Application Details action
Battery Details Input eligible equipment and details: Manufacturer, Model, Charge Rate, Max Continuous (kW) etc.	 Click on "New" to populate energy storage system details. Is the storage 100% charged by a net energy metering eligible energy source? = YES Source charging the storage (check all that apply) = SOLAR If Other, please provide the other source charging the storage = NONE
Site Plan & Line Diagram & Declaration Must show new or existing solar system set up and the battery configuration	 AC nameplate rating (kW) and dc system capacity (kW) system size matches application (can be in kW or watts) List Storage Guidance Configuration; AC Net Metered, Non-Export 2C or DC Net Metered, 100% Renewable Export 3B/3BM Upload Declaration
Final Information Populate Actual Battery Cost and Serial #/Unit IDs	Actual Battery Cost: Overall, Battery Energy Storage System (BESS) cost is the actual cost of the battery plus (if not integrated into or with the BESS) the inverter, (if not an integrated system) exclusive of tax and installation costs. Not to include other financial incentive, including state or federal program or tax credit.

POST-APPLICATION PROCESS

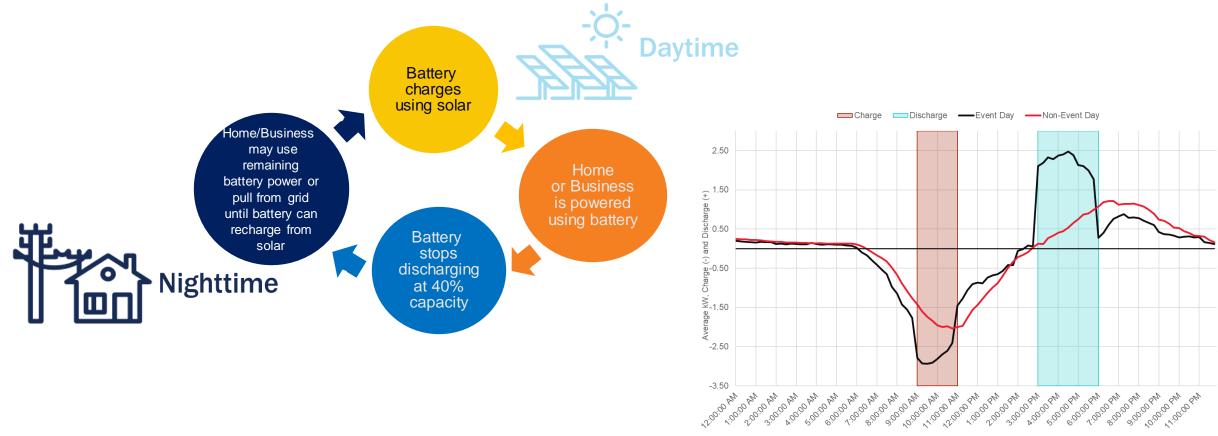
Vendor Set up for VPP experience



Renewable Battery Connect: Program Design

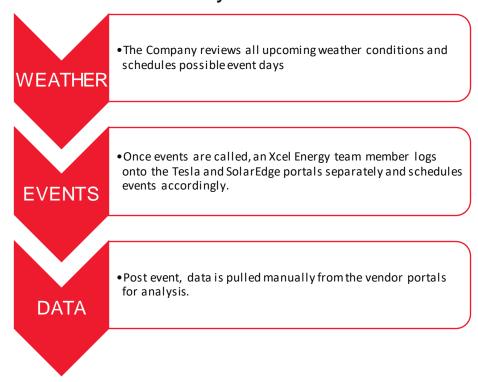
Renewable Battery Connect will continue to test how residential and small commercial batteries can integrate with the energy grid and leverage solar energy as Xcel Energy works toward being carbon-free by 2050.

The main objective of the program is to reduce grid usage via solar generation during periods of peak demand.



Renewable Battery Connect: Control Events

The Xcel Energy Demand Management team will create up to four separate dispatch customer groups. Groups are dispatched according to a staggered plan based on irradiance, temperature, and alert levels. Currently all Program events will be done manually.

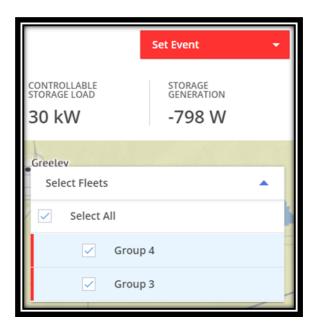


Severe Weather Events: The Company will refrain from calling any events at least 48 hours in advance of a projected severe weather event to minimize the chance of discharging prior to a storm where the customer may lose power. Tesla's Storm Watch mode follows National Weather Service alerts and RBC aligns with this.

Renewable Battery Connect: Demand Management Attributes

Solar Charging	Battery charged by 100% renewable energy (must be paired with solar)
Event Dispatch	Up to 60 events annually
Event Duration	Up to 3-hours per event (24-hour charging period)
Event Season	Year-round (24/7 excluding holidays and weather events)
BESS Connection	Cellular or Wi-Fi connection to Vendor software
Eligible Equipment	Tesla Powerwall (all models), SolarEdge Home Battery (with SolarEdge Home Hub Inverter) must be a new battery installation
BESS Energy	PSCO may use up to 60% of the nameplate storage capacity (in kWh) of the BESS

Tesla Set Up



Enrollment in Tesla App Experience

- Powerwall operating modes defaults: solar selfconsumption; time-based control; and backup.
- At least forty percent (40%) of the battery energy capacity must be reserved for System Owner use during control events.
- The battery will return to normal behavior upon completion of a control event.
- The Tesla platform will prepare sites for dispatch and execute the event, taking into account individual site constraints and storm watch event prioritization.
- In the Tesla App, customers will be able to see that they are participating in an Approved Aggregation Program. It may also show the cumulative response of the aggregation and their own contribution.

SolarEdge Set Up



Enrollment in SolarEdge Monitoring Site

- All participating sites must be created in SolarEdge Monitoring and the SolarEdge Monitoring Site ID to be supplied to Xcel Energy via the interconnection application.
- Once the interconnection process is completed, site information will be routed to SolarEdge by Xcel Energy and batteries will be enabled for event participation.
- Batteries configured to Backup Only, Maximize Self Consumption, or custom Installer/SolarEdge profiles are eligible to participate in the program.
- The 40% backup reserve minimum will be enforced during events, and sites will return to normal operation at the end of each event.

CONCLUSION AND RESOURCES



Successful Outreach Relies on Informed Solar/Battery Installers

It is vital that Xcel Energy connects with solar and battery installers to provide resources to discuss Renewable Battery Connect with our mutual customers

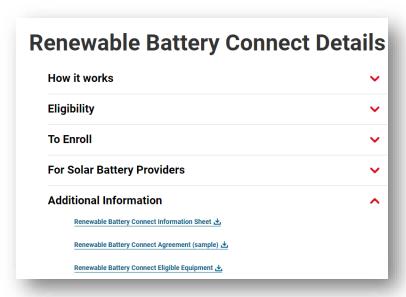
Xcel Energy coordinates closely with Tesla and SolarEdge to promote the program among their battery installer networks

Tesla and SolarEdge manage the equipment verification in their Virtual Power Plants and prepare sites for program participation

Renewable Battery Connect: Resouces

Program Webpage: <u>Battery Connect | Renewable Energy</u>

- ✓ Customer Information Sheet (PDF)
- ✓ Renewable Battery Connect Agreement (sample)
- ✓ Eligible Battery Equipment (PDF)



Installer Resources: On-site Solar | Renewable Developer Resources

- ✓ Pre-launch Info Session Presentations 1
 To listen to the recording of presentation 1 click HERE
- ✓ Pre-launch Info Session Presentations 2 Includes RBC portal process for Installers



Renewable Battery Connect: Customer Benefits



Receive a lucrative incentive for installing eligible battery equipment.



Add stability to the electric grid when using your solar charged battery to reduce energy use during periods of peak demand.



Help lead the clean energy transition by integrating your solar and storage system.

RENEWABLE BATTERY CONNECT

3ET REWARDED FOR USING RENEWABLE ENERGY AND SUPPORTING THE GRID OF THE FUTURE



Miser installing a solar system, a growing number of homeowners and small businesses the adding leading-edge battery systems for the financial benefits of storing solar power.

f you will be purchasing a battery model that qualifies for our Renewable Battery onnect program, you can make the most of your investment. Interconnecting your solar and battery system to our grid through our Renewable Battery Connect program provides

When you participate in Renewable Battery Connect, you will allow Xcel Energy to submatically manage your battery during periods of peak demand. Reducing demand suring the control events helps stabilize the electric grid by using your solar charged

- Your solar battery installer will work with us to establish interconnection to our grid through
- Total scratt passers with work were used to the Renewable Bettery Connect program. We schedule a demand response event based on high demand periods inormally the hottest days of the year during the afternoon and eveningl-which includes the charge and discharge of your battery. These events will be called year-round to have the
- After we discharge the battery, it will recharge at the earliest time possible from the
- During a control event, you'll be able to see how your battery is being used by logging You will always have 40% of the battery power reserved. You're able to choose how you will arways have ourse pattery power reserved. You to some to consider move to use the remaining 40% of your battery—either reserve for a power outage or save

Non-event periods make the entire amount of the battery available for your use. tewarding incentive for installing eligible battery equipment:

- * \$500 per kW of storage capacity (up to 50% of the equipment-only cost) \$800 per kW of storage capacity for income-qualified customers (up to 75% of the
- * \$100 annual participation incentive for participating in most control events sead the clean energy transition by integrating your solar and storage system

salosing to keep electric costs low for your community



What's next

Ensure your solar battery installed submits an interconnection application and is approved for nterconnection in the Renewable Battery Connect program

We will then confirm with Tesla or SolarEdge that your battery has been installed and is roady to participate in the program. Then we will issue you as the system owner a one-time incentive approximately 60 days after

If you have questions about Renewable Battery Connect. contact us at BatteryConnect® xcelenergy.com.

Battery Details Approved Equipment

RENEWABLE BATTERY CONNECT ELIGIBLE BATTERY EQUIPMENT						
Storage Manufacturer	Storage Model	Charge Rate, Max Continuous (kW)	Storage Guidance Configuration			
SolarEdge Technologies, Inc. Home Battery	BAT-10K1P	5.0	DC, Net Metered, 100% Renewable Export 3B/3BM			
Tesla Inc. (Powerwall+)	1850000-xx-y	5.0 (battery inverter)	AC, Net Metered, Non-Export 2C			
Tesla Inc. (AC Powerwall)	1092170-xx-y	5.0	AC, Net Metered, Non-Export 2C			
Tesla Inc. (AC Powerwall)	2012170-xx-y	5.0	AC, Net Metered, Non-Export 2C			
Tesla Inc. (AC Powerwall)	3012170-xx-y	5.0	AC, Net Metered, Non-Export 2C			
Tesla Inc. (Powerwall 3)	1707000-xx-y	11.5	DC, Net Metered, 100% Renewable Export 3B/3BM			

COMPATIBLE INVERTERS FOR ELIGIBLE BATTERY EQUIPMENT				
Inverter Manufacturer	Inverter Model			
SolarEdge Technologies, Inc. Home Hub Inverter	SE3800H-US-XXXXXX			
	SE6000H-US-XXXXXX			
	SE7600H-US-XXXXXX			
Tiome trus inverter	SE10000H-US-XXXXXX			
	SE11400H-US-XXXXXX			
Tesla Inc. (Powerwall+)	1538000-xx-y [208V]			

Please enter these values when populating the fields in Battery Details

Renewable Battery Connect Program Launch



Launch Tuesday, June 20th



Questions

APPENDIX

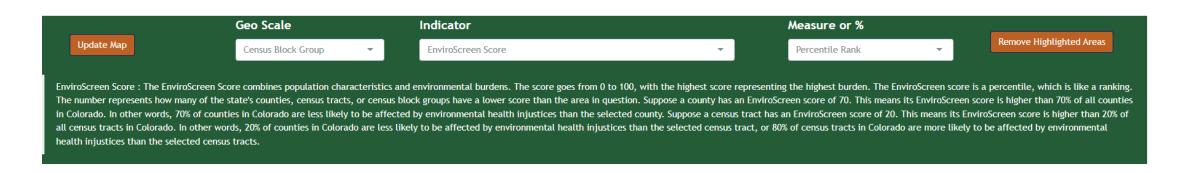


Disproportionately Impacted Communities EnviroScreen Tool

EnviroScreen Tool - See Appendix for details

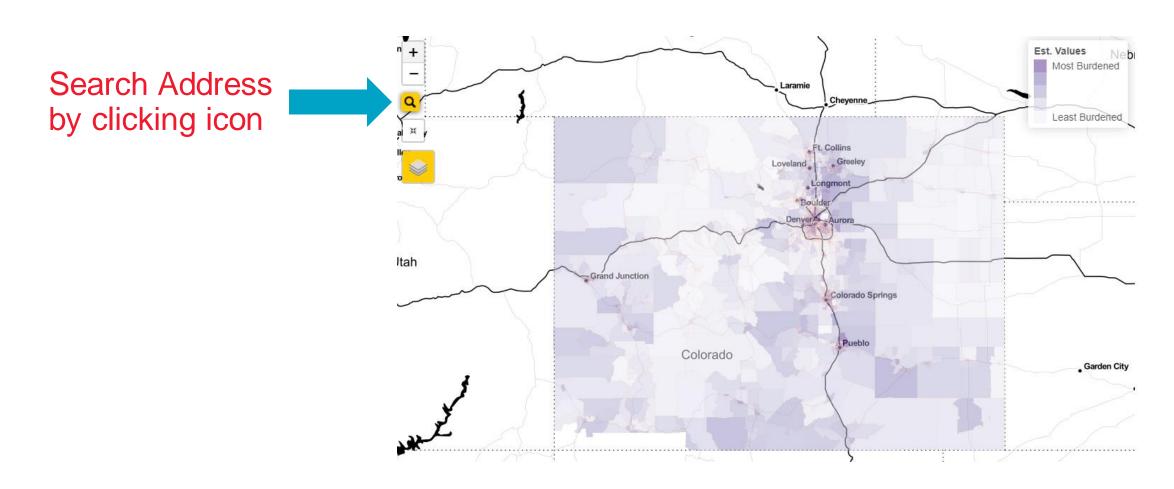
How to Use the tool:

Set Geo Scale to 'Census Block Group' and click 'Update Map'



Disproportionately Impacted Communities

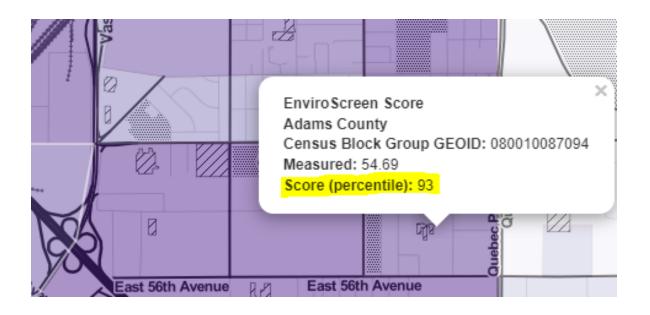
EnviroScreen Tool Continued



Disproportionately Impacted Communities

EnviroScreen Tool Continued

Customer is in qualifying area if 'Score (percentile) is at least 80.



Disproportionately Impacted Communities

Commercial Customers

Service Provider Entity Types

- Public libraries, community centers, public recreation centers, nonprofit organizations, licensed early childcare facilities providing services to or scholarships for IQ households, public pre-Kindergarten through grade 12 schools, governmental entities, places of worship, locally-owned¹ commercial businesses that are not a franchise², a franchise or chain with less than five locations in Colorado³, or a multifamily housing income-qualified eligible organization.
- Customers that are not a qualifying entity type may petition the Company for DI-Community incentive
 eligibility by providing a description, below, of their organization and explaining how they serve the DI
 community where they are located. The Company will approve such requests on a case-by-case basis.

¹A business is considered to be locally owned if the business receiving the incentive is located inside of a DI Community eligible area as defined above, and the primary business owner completes an attestation form confirming that they also are located inside of an eligible DI Community.

²Excluding marijuana and liquor sales, manufacturing, or distribution.

Xcel Energy®