RIOO Interconnection Services
IE User Guide

Version 11.11.19

ERCOT RIOO IS Release Information

November 11, 2019

ERCOT recently refreshed Resource Integration and Ongoing Operations Interconnection Services (RIOO IS) as a minor maintenance release to fix some detected issues.

Through the RIOO IS website, companies interested in proposing a new generation resource at a new or existing generation site authorize their Interconnecting Entity (IE) to submit an online generation interconnection request (INR) for the generation resource to be interconnected to the Texas power grid. The Transmission Service Provider/Transmission Distribution Service Provider (TSP/TDSP) who owns the power lines in the area of the proposed resource studies analyzes and studies the INR to determine the economic feasibility of the project and the effect the resource may have on the grid.

For the best user experience, ERCOT recommends using Google Chrome as the web browser for RIOO. Using Microsoft Internet Explorer may cause some issues to occur, including page loading issues requiring multiple page refreshes; getting stuck on the login page unless the ERCOT Interconnection Services site and the authentication apps used are listed as trusted sites; and slow page loading.

Updates in this User Guide

The instructions to help avoid processing delays if your bank account has an automatic debit block in place for electronic transaction amounts have been added on page 8.

Accessing the RIOO Interconnection Services Website

You can access the RIOO Interconnection Services website from the *Resource Entities* page on the ERCOT website (**ercot.com > Services > Registration and Qualification > Resource entities**) using the blue Launch button (*refer to page 1 of this guide*).

The *ERCOT RIOO Interconnection Services IE Sign-Up Reference* that provides instructions for signing up online to create an IE user account can also be accessed from the *Resource Entities* page on the ERCOT website.

About this RIOO IS Interconnecting Entity Guide

This **RIOO IS Interconnecting Entity Guide** provides information about performing tasks in RIOO IS where you, as the Interconnecting Entity (IE) representative for a company, can create and submit an online interconnection request (INR) proposing a new generation resource to interconnect to the Texas power grid at a new or existing generation site.

If you have already been working with ERCOT in the manual Interconnection Request process, this new system may replace many of the paper forms that you are used to working with (such as the General Entity Information form). In addition, your existing INRs have been migrated into RIOO IS.

For the best user experience, ERCOT recommends using Google Chrome as your web browser for ERCOT Interconnection Services. If you use Microsoft Internet Explorer, some issues may occur, including page loading issues that will require you to refresh your page from time to time and being stuck on the login page if you do not add Auth0 Guardian or Google Authenticator as a trusted site. If the “Whoops something went wrong” error message displays, check to be sure the RIOO Interconnection Services website is listed as a trusted site.

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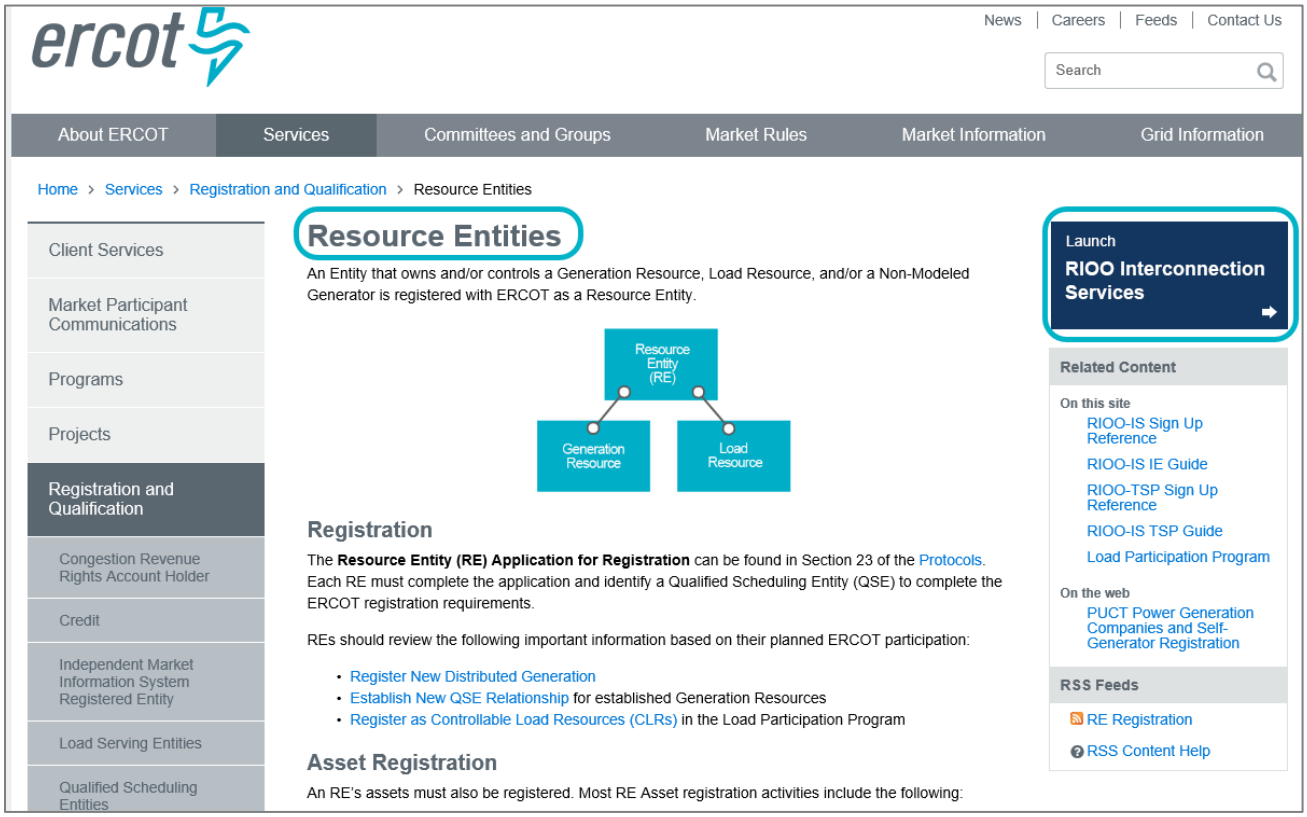
RIOO Interconnection Services Overview

RIOO Interconnection Services is an online app for creating and submitting interconnection requests that propose new generation resources that will interconnect to the Texas power grid at new or existing sites. As an Interconnection Entity (IE), you can create and submit your interconnection request (INR) online with the appropriate payment of the fees associated with the request.

Before you can create an online INR, you must first sign up for an account on the ERCOT on the Interconnection Services website.



Interconnection Services Account Sign Up

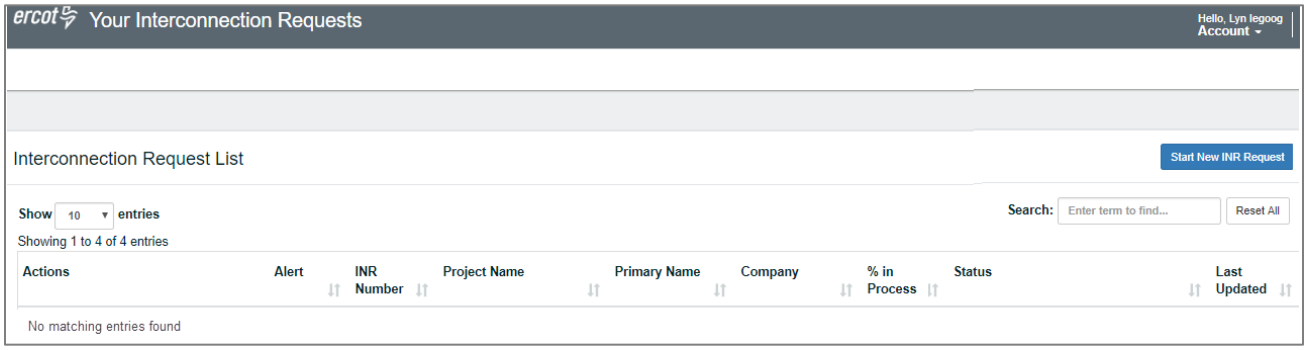
As described in the *RIOO Interconnection Services IE Sign Up Reference* available on the Resource Entities page on the ercot.com website, you provide your full name and an email address that will be used as the user name to log into the account, and then you create a password.

The email address must be unique to ERCOT Interconnection Services (that is, you cannot use the same email address if you have multiple roles within the system).

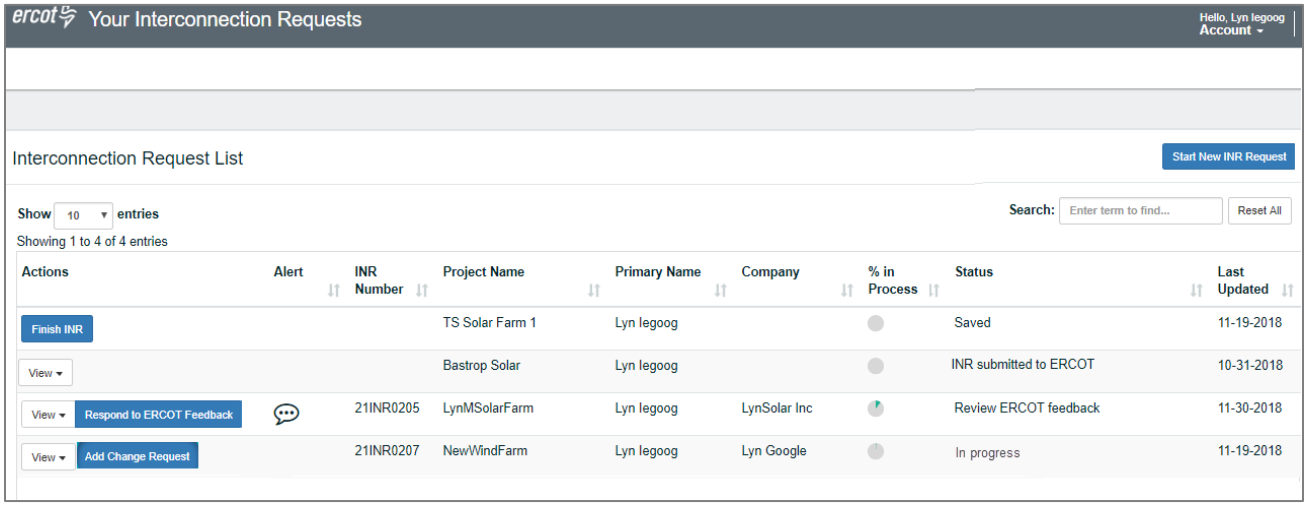
You must also provide your smartphone number to associate with a third-party multifactor authentication (MFA) app, such as Auth0 Guardian or Google Authenticator. The MFA app is used to verify your identity during your login request. If you do not have a smartphone, you can use an SMS text-message enabled mobile phone number.

You can manage your account to modify your name or email address, and change your password. To change your MFA app, you must submit a Help Desk ticket to have your account MFA reset.

After you have signed up and logged in, the Interconnection Requests List page displays. If you are new to this process, the list will be blank.



If you have been working with ERCOT on INRs, the INRs have been migrated over and should display in the Interconnection Requests List.



You can determine the status of each INR by the buttons displayed in the Actions column and messages displayed in the Status column.

The Interconnection Request (INR)

Creating your INR requires you to fill out several web pages about the resource project. You will name the project, identify where the resource will be located, when you anticipate it will be completed (referred to as the Commercial Operation Date, or COD), and who will be working on the project with you.

When you finish each page, clicking the **Continue** button saves the information you have entered and displays the next page. If you do not finish all of the pages, the information is saved from the pages where you have clicked the **Continue** button and you can finish your INR later.

After you have supplied the required information, a review page displays to show the pages where you have completed information requirements or if you need to edit pages to add or revise information.

Then you electronically sign the Generation Entity Information page agreeing to provide ERCOT with the most current data as well as comply with all regulations.

If you selected to have the Full Interconnection Study (FIS) performed at the same time as the Screening Study, you must also select the appropriate Department of Defense (DoD) review option of your proposed resource and electronically sign the DOD Notification.

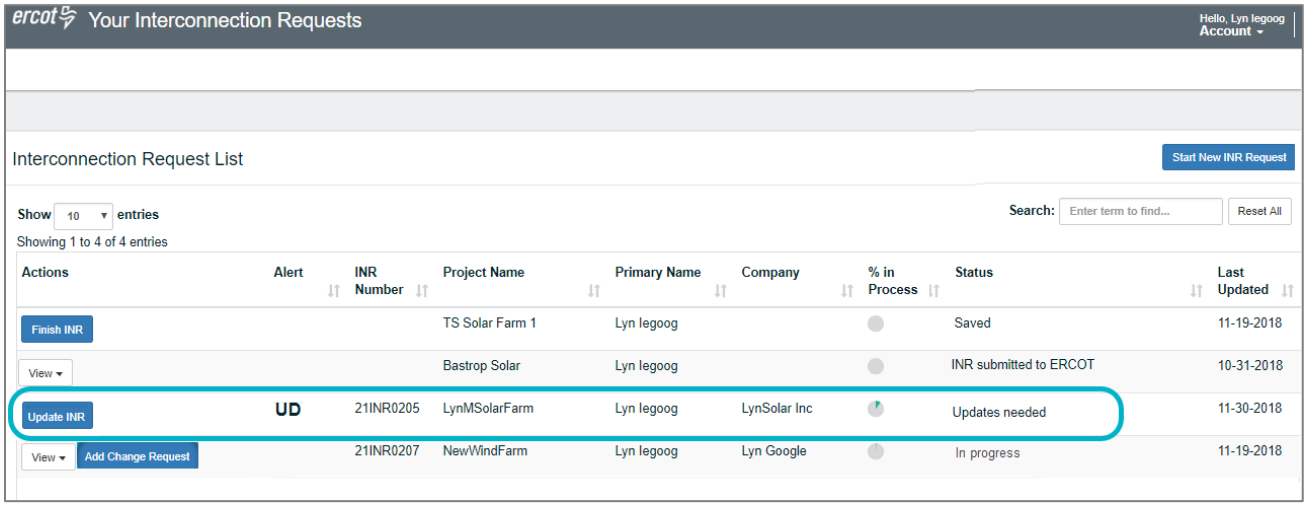
After you have completed these tasks, you will be presented with an online invoice to show the payment required for the initial INR (the fees for the Screening Study that must be performed on the resource).

You can pay online with your credit card or electronic check (ACH) from your personal or business bank accounts and when payment is received, the INR will be submitted to ERCOT.

It is important to note that some businesses have an automatic debit block for ACH transaction amounts on their bank account. You may need to contact your financial institution to determine if your account is blocked. If you have such a block, follow the instructions on page 8:

Project Development and Studies

After your INR is submitted, ERCOT will review your request and work with you to be sure all of the initial information for the new resource is complete. If ERCOT has a question or comment that you need to address, the system sends you an email requesting more information and, in your Interconnection Request List, displays the blue Update INR button in the Actions column, UD (update) in the Alert column, and Updates needed in the Status column of the INR record.



After the updates are made, ERCOT assigns a Resource Integration (RI) Engineer to perform the Screening Study that evaluates the proposed resource's effect on the system.

After the Screening Study is completed, you have 180 days to submit your notice to proceed and request a Full Interconnection Study (FIS). ERCOT may ask you to provide more or update resource details.

The Request for a Full Interconnection Study

If you are ready to go forward with your proposed project, you must submit a change request to your INR that specifically asks for the FIS. After receiving the FIS change request and payment, ERCOT assigns a TSP who owns power lines in the vicinity of your proposed resource to conduct the FIS studies.

The FIS is a combination of a:

- **Steady-State Analysis**, which analyzes the transmission capacity in the area to determine if the resource could have a limiting impact on resource output. It is created from the most recently approved Steady State Working Group (SSWG) power flow base case for the interconnection year. The study also determines if the new resource meets ERCOT Planning and Operating Guides and NERC transmission criteria. The TSP also documents any constraints that are likely to limit generation output from the resource and may propose facility improvements to accommodate the proposal without limitation

- **System Protection (Short-Circuit) Analysis** which analyzes if the new resource identifies and calculates short-circuit fault duty in the area it is located. It is created from the SSWG base case for the resource's first planned year of commercial operation. If any of the required transmission system improvements associated with the INR result in violations of the TSP short circuit criteria, mitigation plans are required.

- **Dynamic and Transient Stability (Unit Stability, Voltage) Analysis**, which analyzes the new resource's response to transient events on the ERCOT transmission grid, including local transmission faults and the expected normal and delayed clearing of faults. It is created from one of the latest approved Dynamic Working Group flat start cases adjusted to be consistent with the steady state base case in the region near the interconnection for the interconnection year. All existing or publicly committed resources in the area will be modeled at full net output. The initial stability study base case transmission configuration will be created from one of the Transient Stability Studies to analyze the performance of the new resource and the ERCOT system. Studies must meet NERC requirements

- **Facility Study**, which analyzes the estimated cost of the facility requirements for direct interconnection and details of the resource, including conceptual design descriptions, construction milestones, and detailed cost estimates for all direct interconnection-related transmission and substation facilities proposed to be installed in accordance with the findings and recommendations of other FIS studies.

- **Sub-synchronous Oscillation (SSO) Study** if the ERCOT engineer identifies that potential SSO risks exist after reviewing the point of interconnection (during the Screening Study)

- **Economic Study** if the estimated cost of transmission improvements exceeds $25,000,000.

When you submit your FIS request, the TSP works with you to scope out the project dates and timelines. Then the TSP advises ERCOT and the other TSPs (and Transmission Distribution Service Providers, or TDSPs) who are knowledgeable and in the vicinity of your proposed resource review the FIS Scope and the study results, including any mitigation plans they deem necessary.

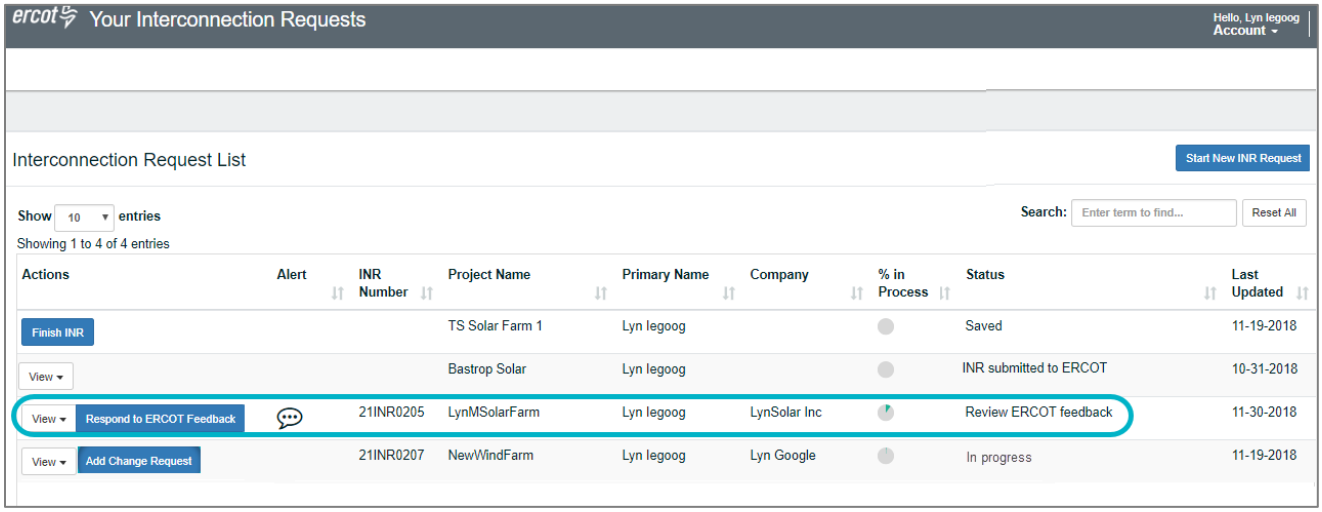
Changes and Updates to INR Information

After the INR has been accepted, you must submit change requests to modify project information (such as a revised project name, COD, or MWs) and upload new documents, including your environmental quality air permit or federal Greenhouse Gas emission permit information, declaration that you have obtained water rights, contracts or groundwater supplies sufficient for the generation of electricity at the resource as well as confirm that the resource has met several required NODAL Protocols and has fulfilled mitigation plans required as part of study results.

The system allows you to submit **only one change request** on an INR **at one time** but you can submit mutliple changes in one request. For example, you can change a project date and attach new files to the INR.

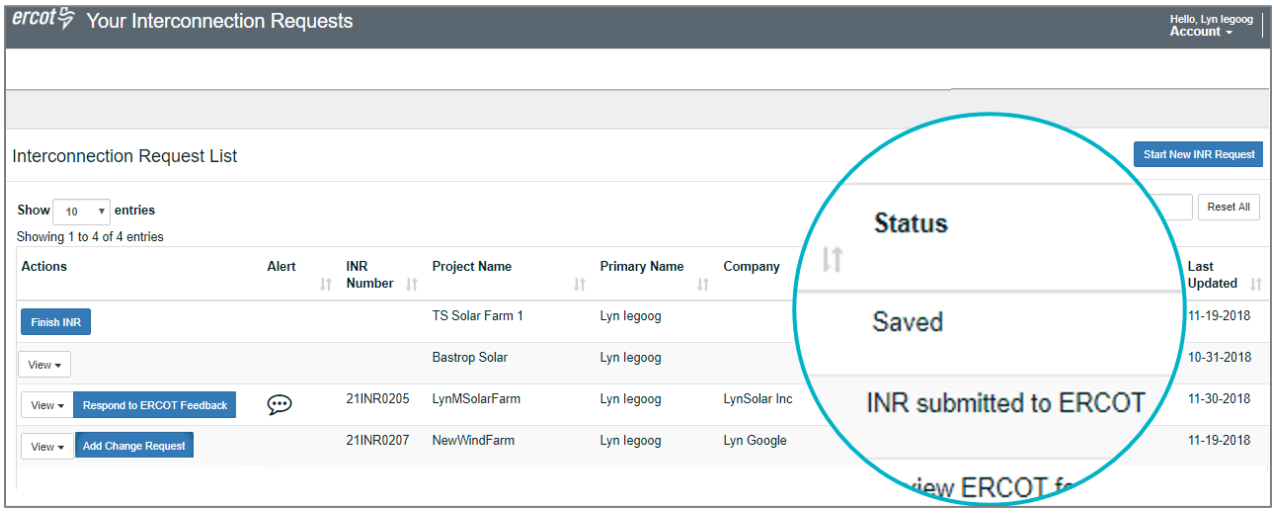
> After the resource is operational, you are required to keep your resource data file (RARF) up to date. You must submit a change request twice a year, during February and again in August, to attest that your RARF is current.

If ERCOT has a question or comment that you need to address about a change request, the 💬 (comment bubble) displays in the Alert column of your INR, `Review ERCOT Feedback` in the Status column, and the **Respond to ERCOT Feedback** button in the Actions column. Clicking the Respond to ERCOT Feedback button displays a page with suggestions, which you can apply to your INR immediately by clicking the **I accept** button.

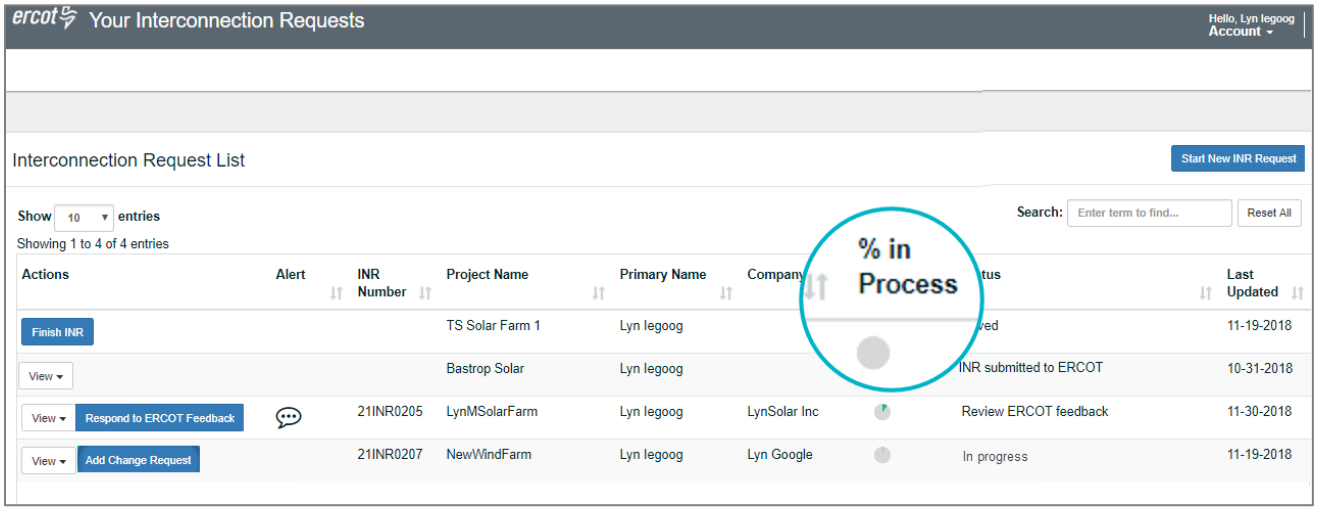


INR Project Status and Progress

If you have submitted a change request, the Status message will show that a change request was submitted but the **Add Change Request** button is no longer visible. When your request is processed, the **Status** message changes to **In progress** and the blue **Add Change Request** button displays again for the next change request.

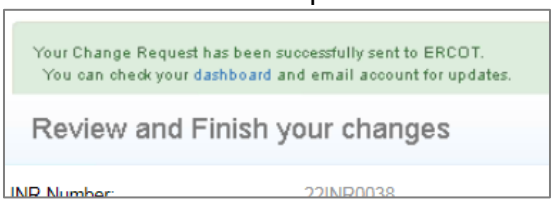


The % in Process column graphically depicts the percentage of the project that has been completed. When you submit an INR, the % in process pie chart contains a thin slice of green. As you progress through the entire INR process, the green slice expands.



Displaying Your Interconnection Requests List from Anywhere in Interconnection Services

While working in Interconnection Services, you can return to your Interconnection Requests List page by clicking the ercot logo at the top of the page.



Some confirmation messages that display after you have performed an action also display a link to return to your dashboard, which is your Interconnection Requests List.

Looking Forward

After your FIS is reviewed and your resource project continues with the notice to proceed, you must negotiate an Interconnection Agreement (IA) with the TSP and then provide a more complete Resource Asset Registration Form (RARF) for modeling the resource. Your project will go through a Protocol Compliance review. According to the Planning Guide, Section 5.9, ERCOT will also run a Quarterly Stability Assessment (QSA) to assess the impact of the proposed resource and determine if mitigation plans are needed. When that is complete, ERCOT will send you an email about meeting this requirement.

Next, you (or another member of your company) will sign up as a Resource Entity (RE) in the market. The milestones in your resource commissioning plan (such as your proposed energization and synchronization dates) extend all the way through testing and approval processes until your resource is commissioned into service.

Before You Begin Your INR

Before starting your INR be sure that you have done the following tasks.

Sign Up for Interconnection Services

You must sign up for an IS account as an Interconnecting Entity (IE) with an email address that is unique from any other ERCOT user email accounts you may have. The instructions are provided in the *ERCOT RIOO Interconnection Services IE Sign-Up Reference* on the *Resource Entities* page on the ERCOT website,

Check for Electronic Payment Debit Blocks

If you intend to submit INR payments by electronic checks drawn on your bank account (ACH payment instead of credit card), you should check with your financial institution to be sure you do not have an automatic debit block on your account for ACH transaction amounts. It may take at least two days to remove the block, which can cause processing delays of your INR.

If you do have an automatic debit block on your account:

1. Have your financial institution send you the form to authorize ACH transactions you will be making with ERCOT.
2. On the form, for:
    - Vendor, enter **Authorize.net**.
    - Vendor ID, enter **1911718107**.
3. Submit the form to your financial institution.

Accessing and Managing Your Account

Accessing your account involves logging into the Interconnection Services website with your login credentials and multifactor authentication method you signed up with (such as Auth0 Guardian or Google Authenticator). Your account contains your first and last name, email address, telephone number, and password. You can update this information when changes occur.

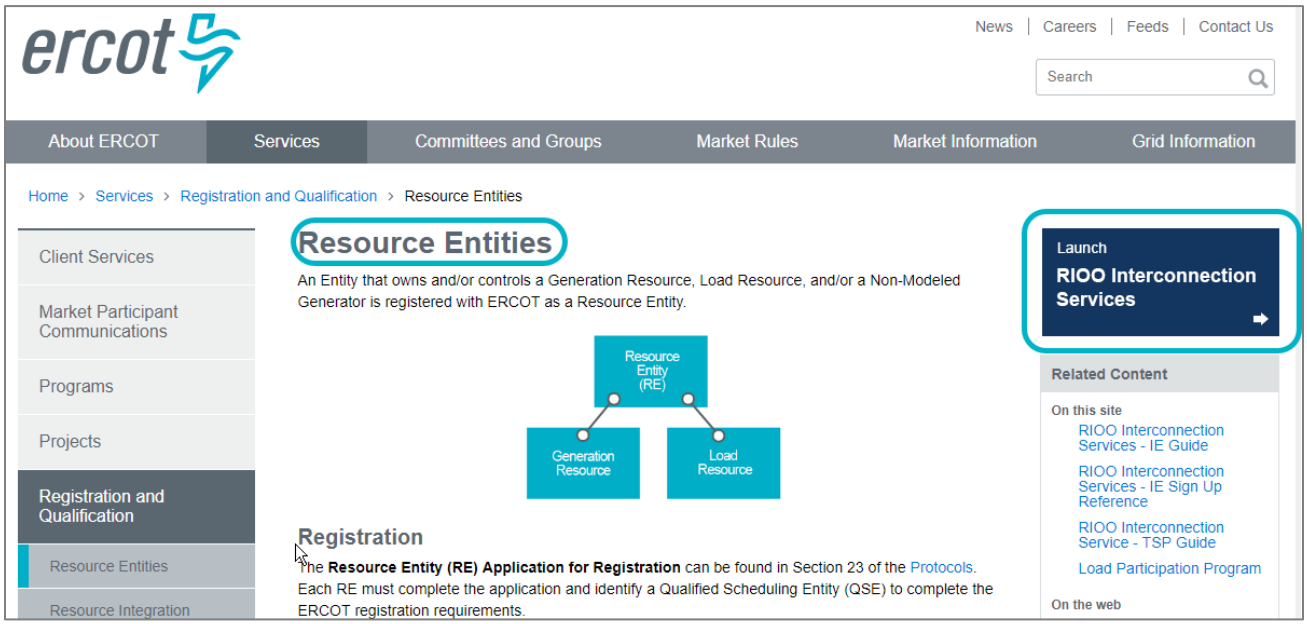
To change the multifactor authentication (MFA) app associated with your account, you must submit a help ticket to the ERCOT help desk to have ERCOT Product Support reset your account. You will receive an email with instructions about changing to a different MFA app.

Logging into Your Account

After launching RIOO Interconnection Services from the Resource Entities page on ercot.com, the Log In page displays for you to enter your account information.

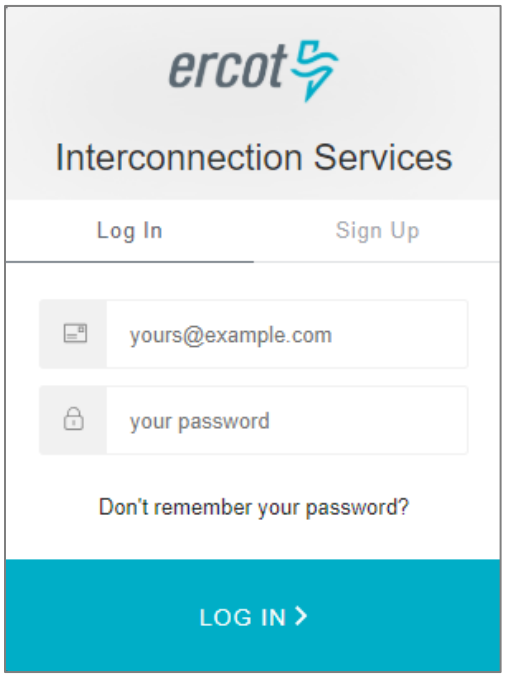
> If you cannot log in or the Use Your Recovery Code message displays , refer the Troubleshooting Tips on page 156.

Resource Entities Page



1 Display the Resource Enties page on the ERCOT website (**ercot.com > Services > Registration and Qualification > Resource entities**) and click the blue **Launch** button.

Log In Page



2. Type in the email address you entered when you signed up for the account.

3. Type in the password associated with this account.

4. Click the **LOG IN >** button.

If you cannot log in after 10 tries, the system displays the YOUR ACCOUNT HAS BEEN BLOCKED AFTER MULTIPLE CONSECUTIVE LOGIN ATTEMPTS message at the top of the page. Open a Help Desk ticket that tells them you are blocked by Auth0 Guardian and Operations should unblock your ID.)

If you appear to be stuck on the Log In page, you may need to add Auth0 Guardian or Google Authenticator as a trusted site. Refer to page X.

If the **Whoops something went wrong** error message displays, check to be sure the ERCOT Interconnection Services site is listed as a trusted site. Refer to page X

The next action depends on the authentication method you are using for sign in:

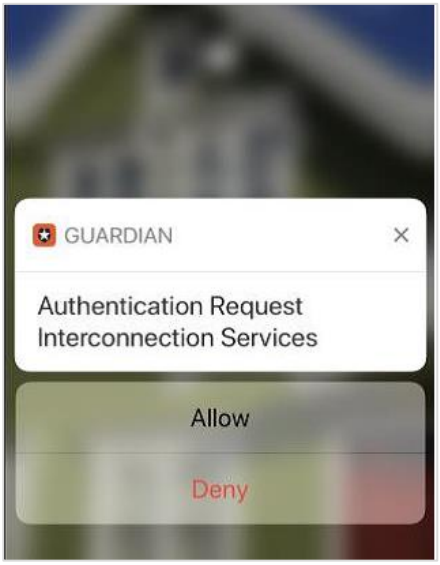
- For Auth0 Guardian, refer to the next page.
- For Google Authenticator, refer to page 12.
- For SMS Text Messaging, refer to page 13.

Auth0 Guardian Authentication Page

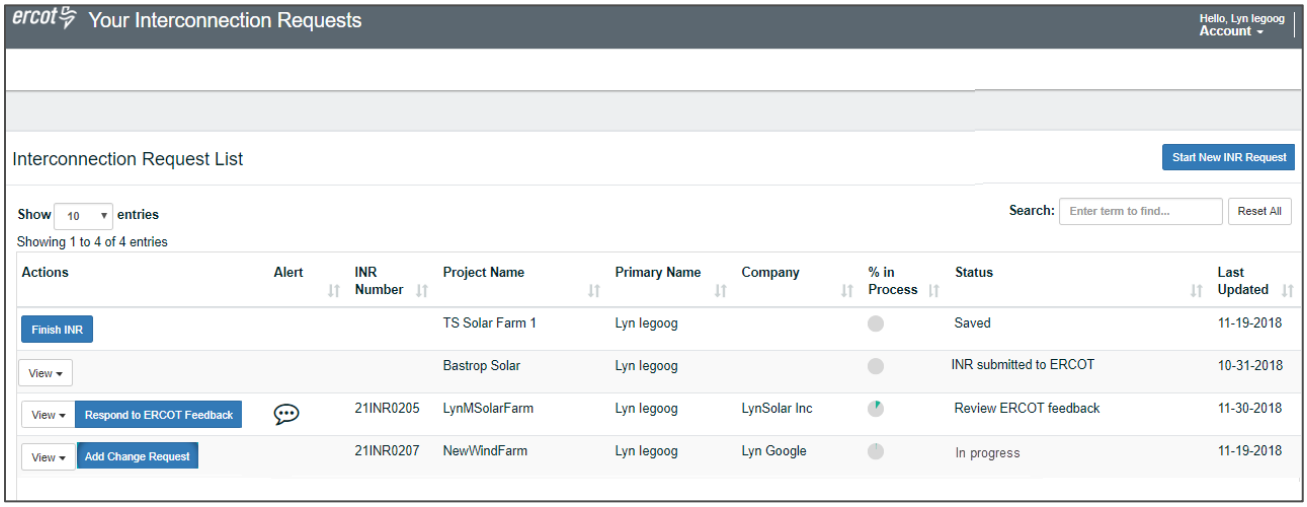
Auth0 Guardian is in the process of updating certain product screens. Some of the screens pictured here may be replaced by those updated screen.

5 Go to the Guardian text message on your phone and swipe to open the message.

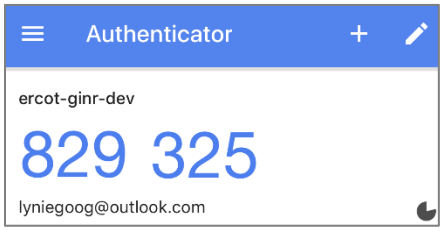
6 Tap the **Allow** button.



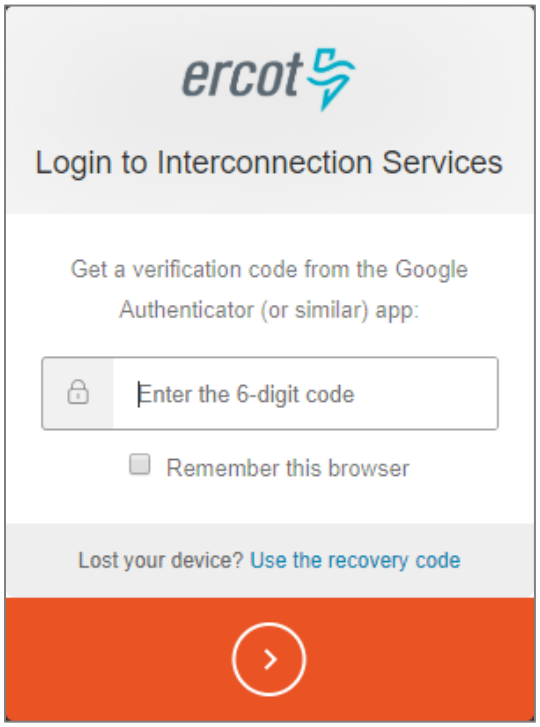
Your Interconnection Requests List Page



Google Authenticator Authentication Page



5 Go to your mobile phone and open Authenticator.

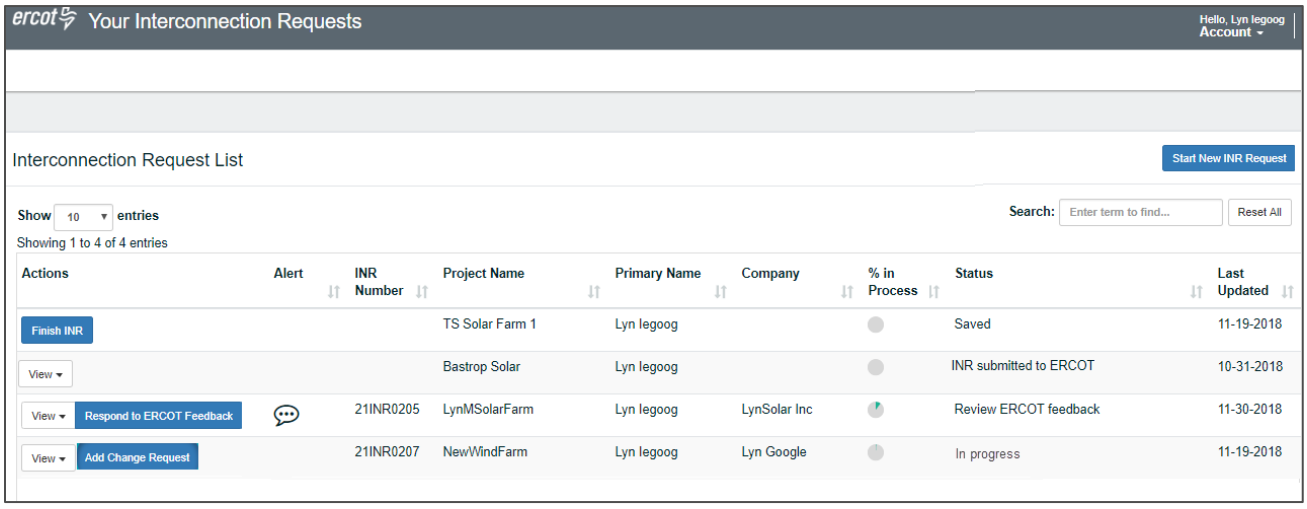


6 Type in the six numbers of your new code.

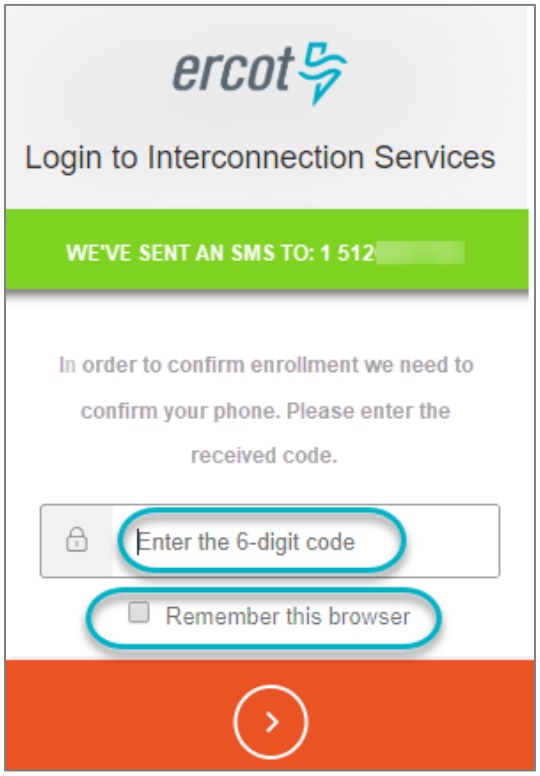
7 Click this **Remember this browser** checkbox to avoid having to do this every time you log in during the next 7 days.

8 Click to continue to the Interconnection Requests List page.

Interconnection Requests List Page



SMS Authentication Page



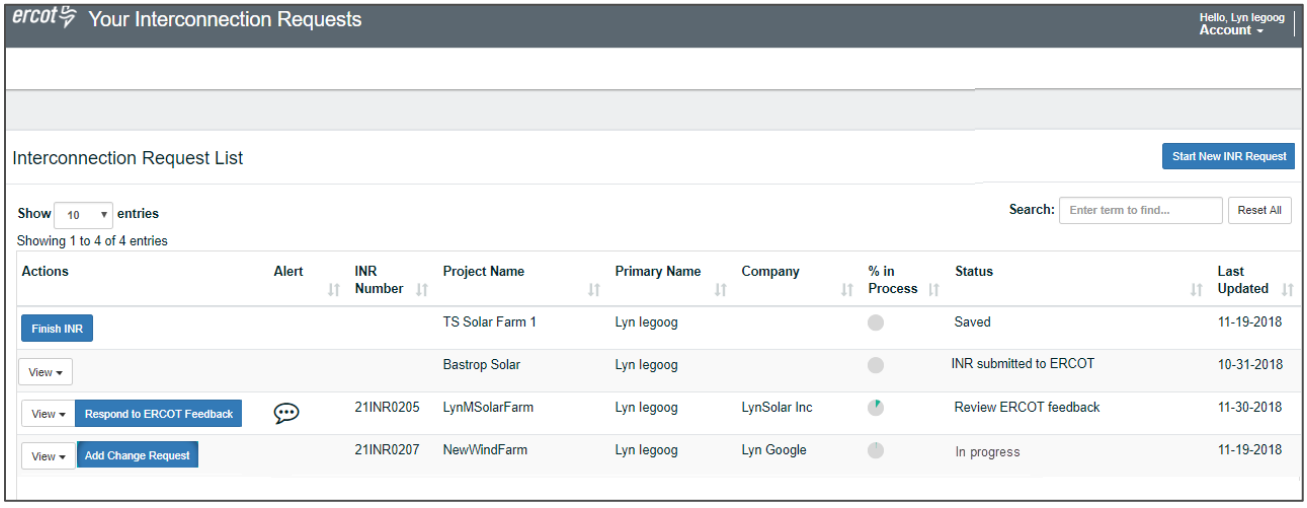
5. Go to your mobile phone and open the new authentication message.

6. Type in the 6 numbers of your new code.

7. Click this checkbox to avoid having to do this when you log in for the next 30 days.

8. Click to continue to the Interconnection Requests List page.

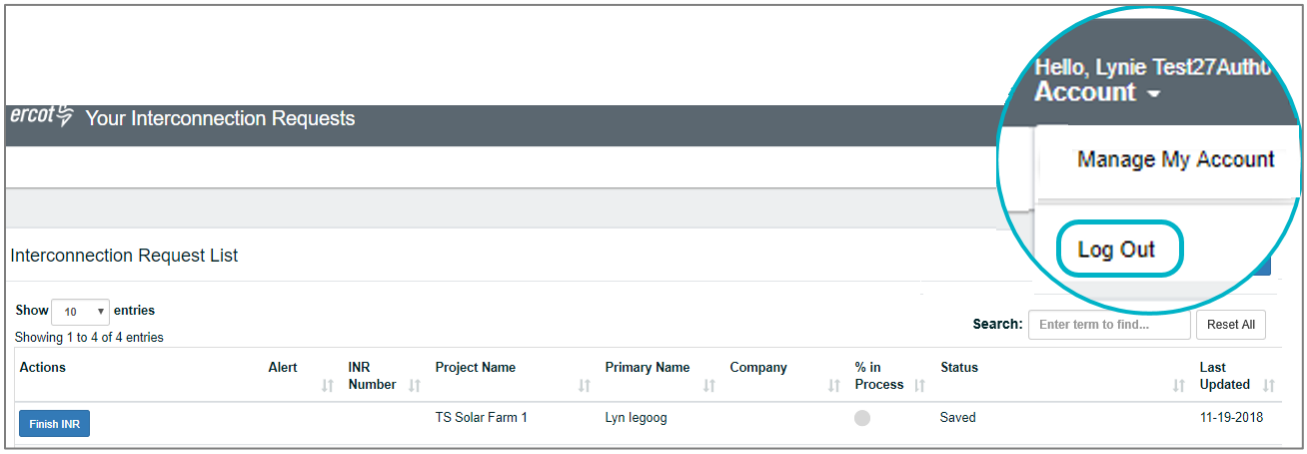
Interconnection Requests List Page



Logging Out of Your Account

You should log out of your account when you are finished performing tasks.

Your Interconnection Requests Page



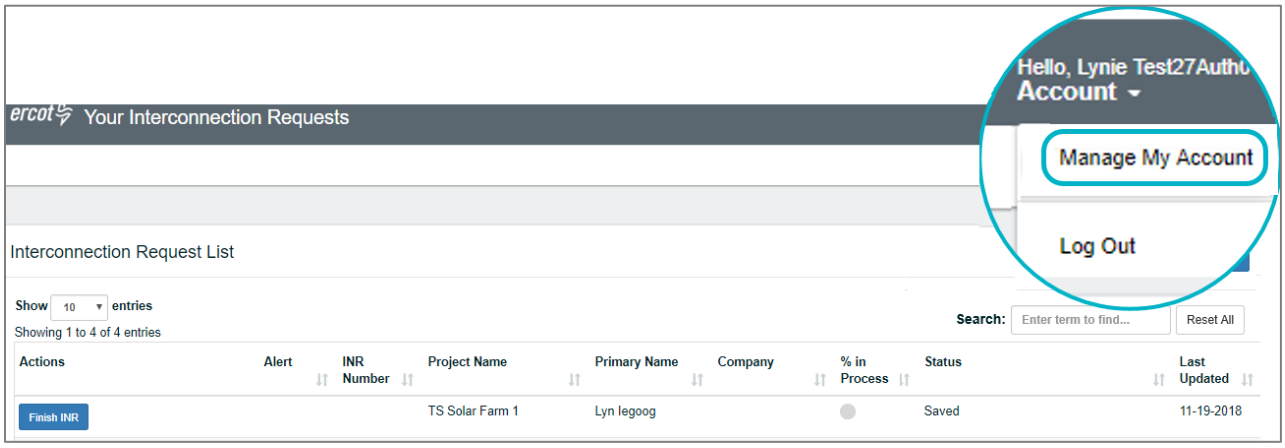
1. Locate the **Account** dropdown in the upper right of *Your Interconnection Requests* page.

2. Click the **Account** dropdown and click **Log Out**.

Changing Your Account Information

You can update your account to modify your information associated with your account, such as your email address and phone number.

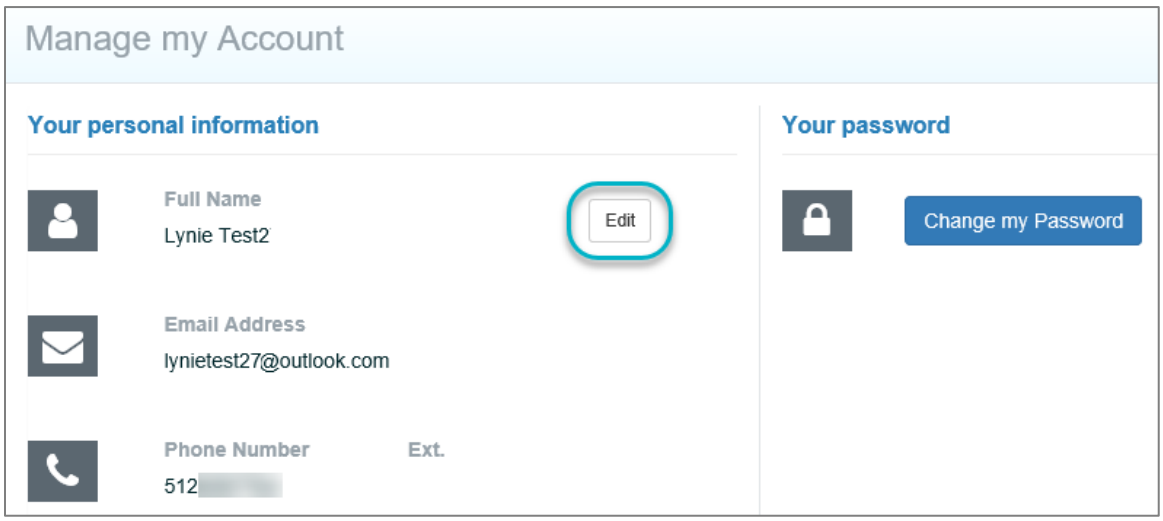
Interconnection Requests Page



1. Locate the **Account** dropdown in the upper right corner of the *Interconnection Requests* page.

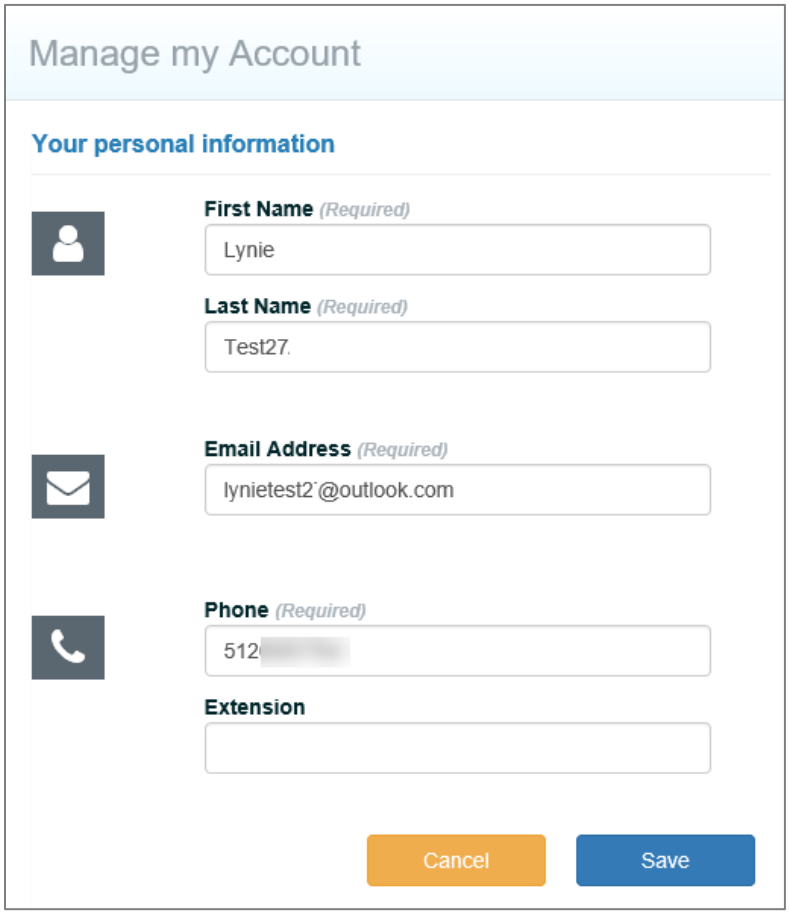
2. Click the **Account** dropdown on the upper right side of the page and click **Manage My Account**.

Your personal information Page



3. Click the **Edit** button.

Edit My Account Page



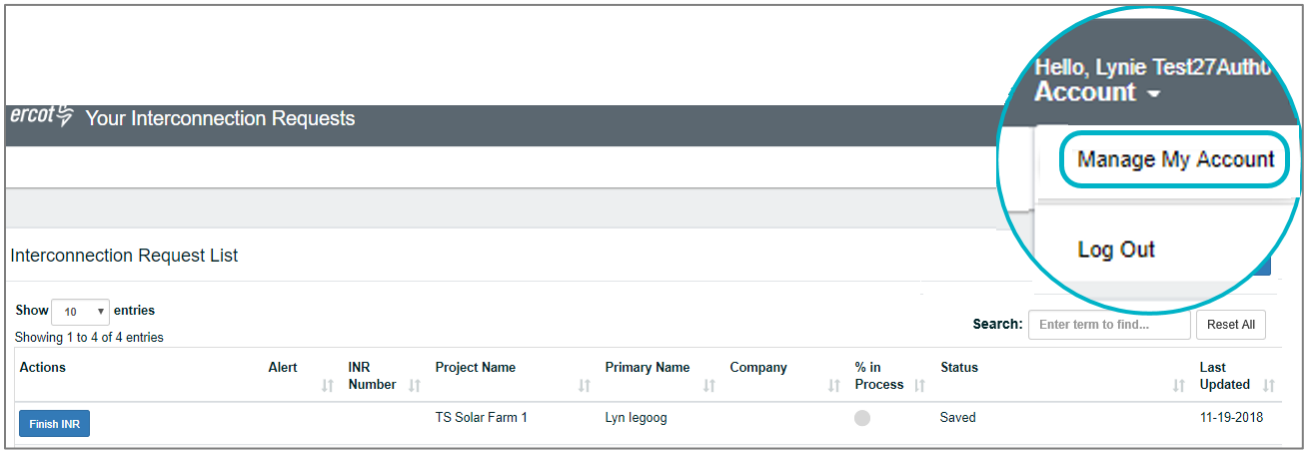
4 Make your changes.

5 Click the **Save** button.

Changing Your Password

When you request a password change, ERCOT sends you an email to confirm the change.

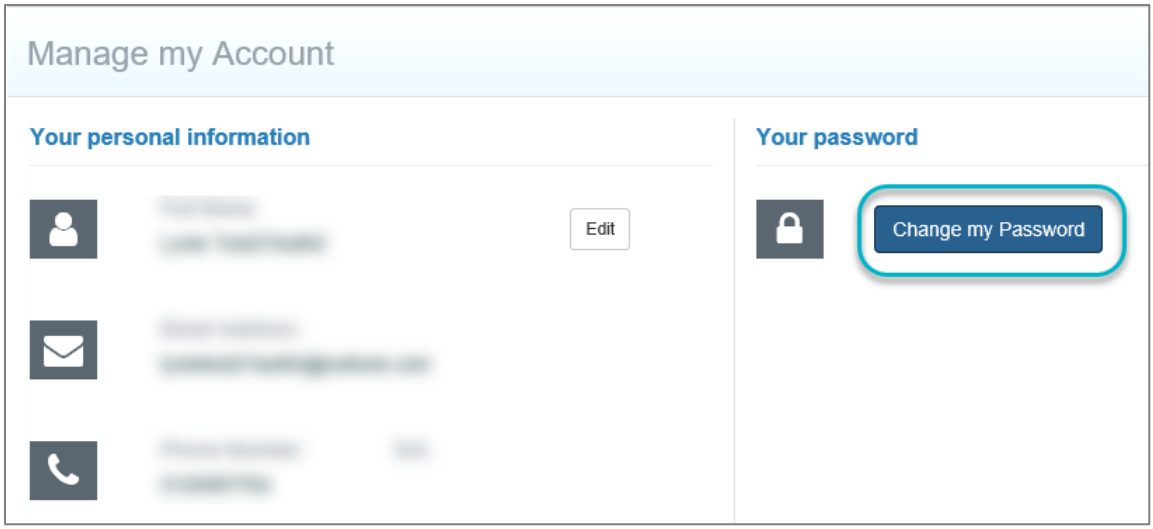
Interconnection Requests Page



1. Locate the **Account** dropdown in the upper right corner of the *Interconnection Requests* page.

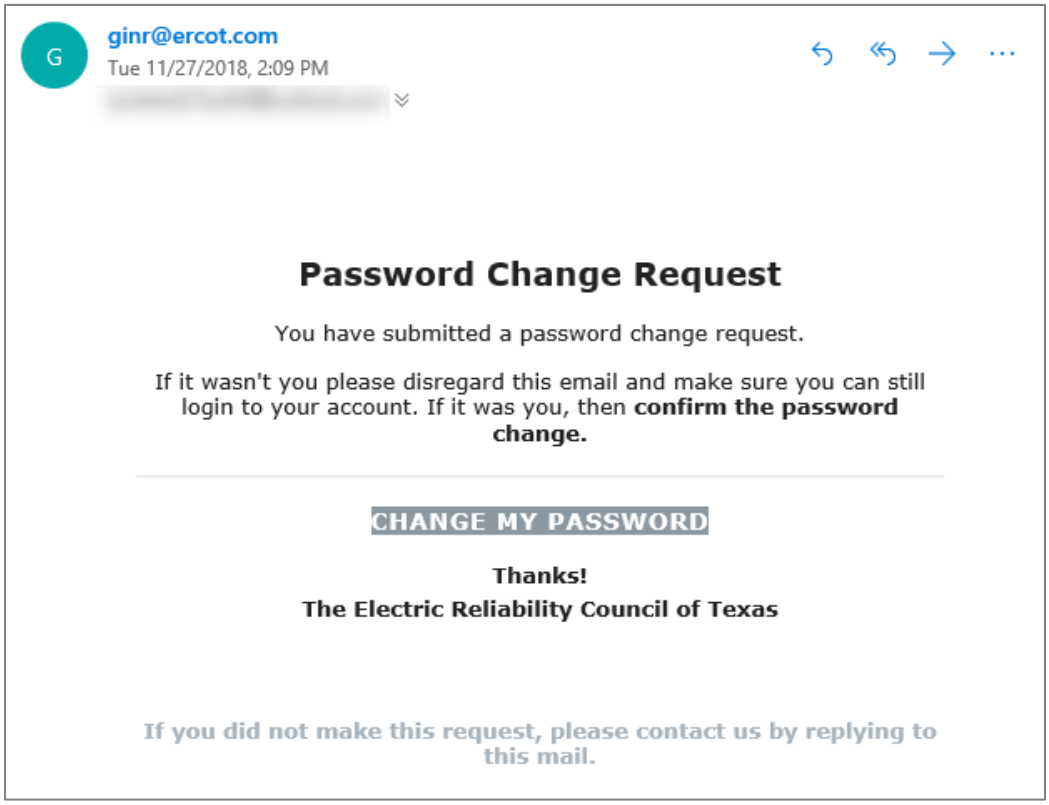
2. Click the **Account** dropdown on the upper right side of the page and click **Manage My Account**.

Manage Account Page



3. Click the **Change my Password** button.

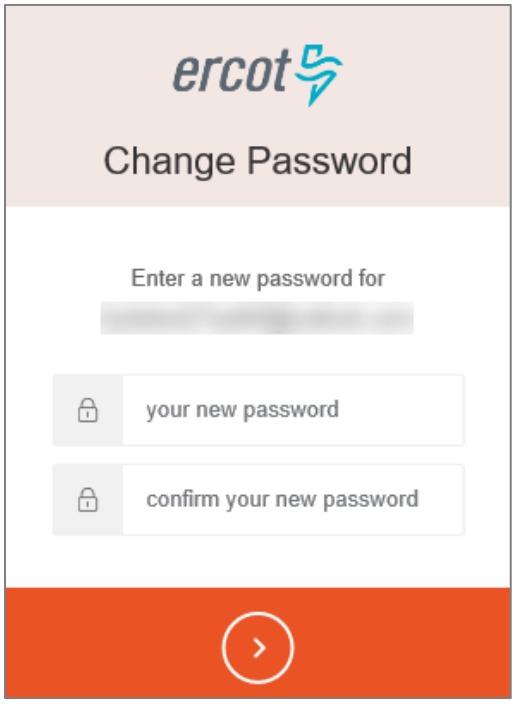
Password Change Request Email Message



4. Go to your email and open the email message with **Reset your Password** from ercot.com.

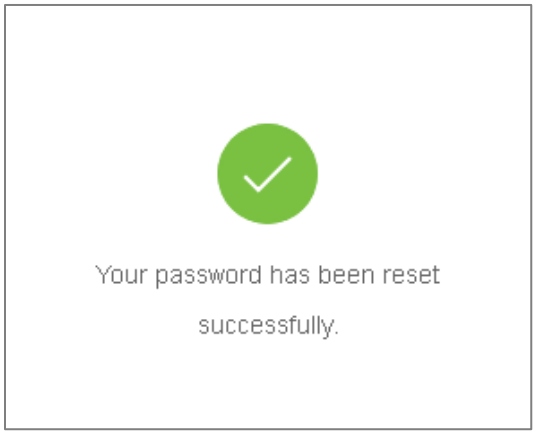
5. Click the **CHANGE MY PASSWORD** button.

Change Password Page



6. Type in your new password.
7. Type in your new password again.
8. Click the **Continue** button.

Success Page

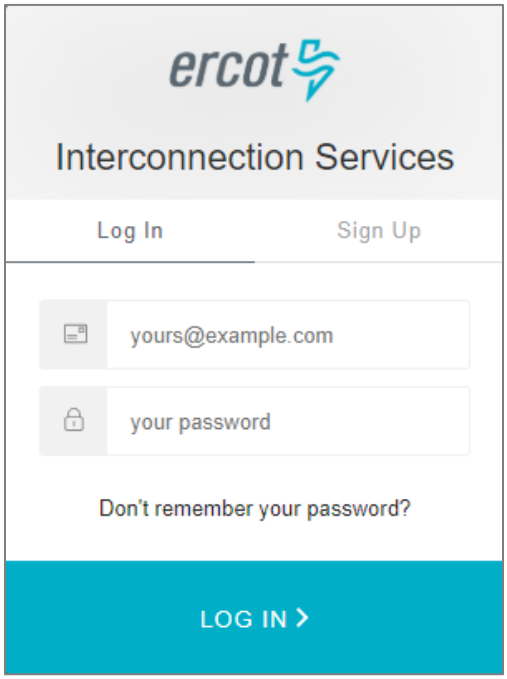


To close this page and return to the Interconnection Requests List, click the link in this message or the ercot logo at the top left of the page.

Resetting Your Forgotten Password

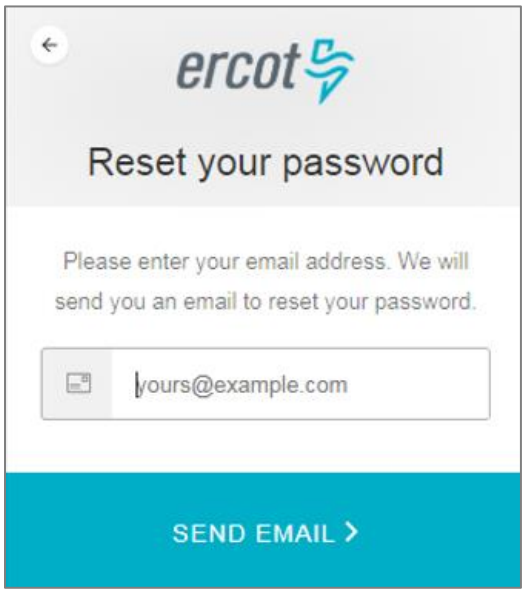
If you have forgotten your password, you can request to reset it.

Interconnection Services Login Page



1. Click the **Don't remember your password?** link.

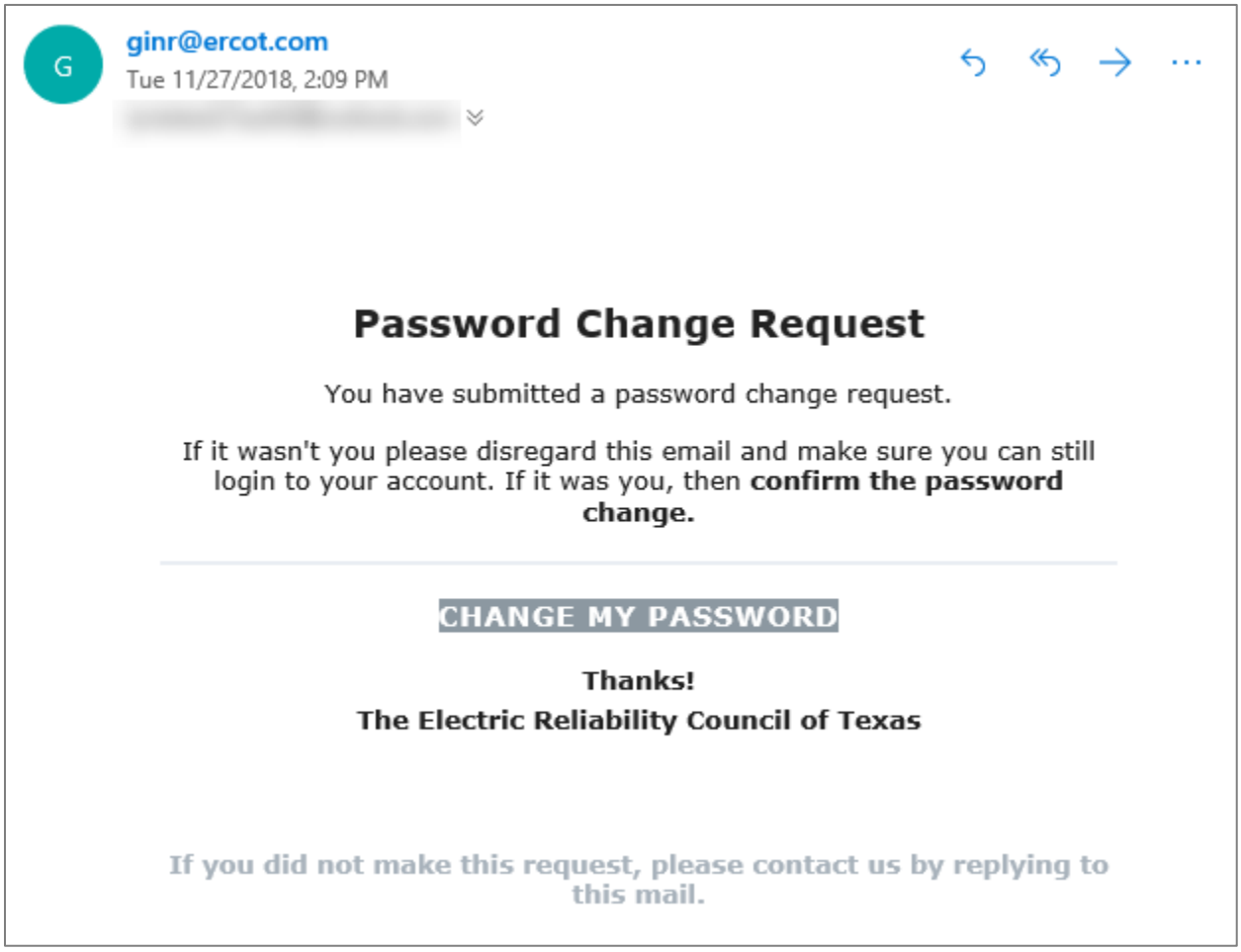
Reset Your Password Page



2. Type in the email address associated with this account.

3. Click the **SEND EMAIL >** button.

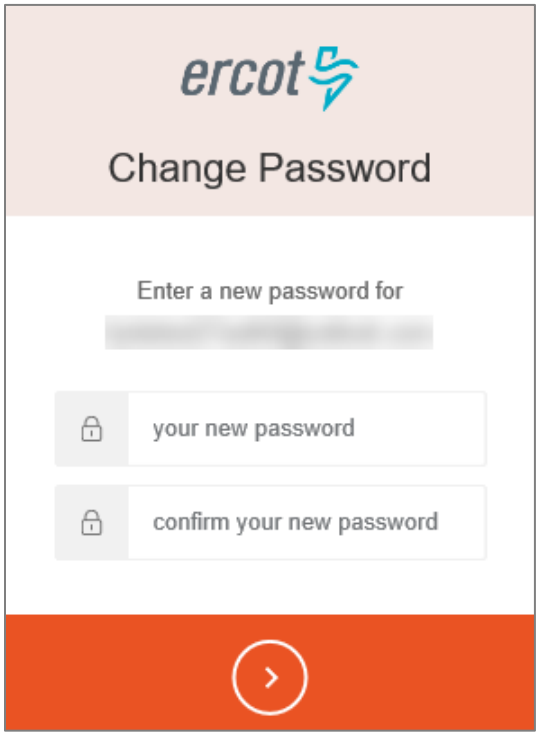
Password Change Request Email Message



4. Go to your email and open the email message with **Reset your Password** from ercot.com.

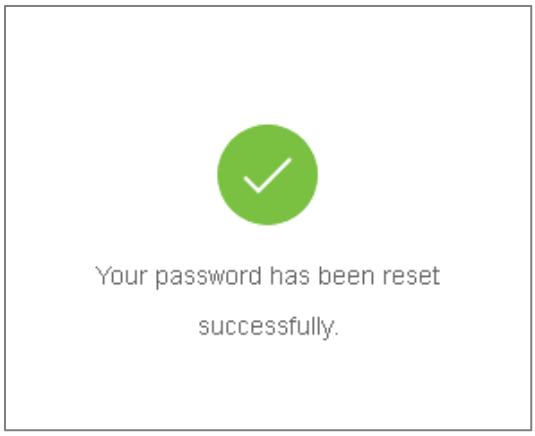
5. Click the **CHANGE MY PASSWORD** button.

Change Password Page



6. Type in your new password.
7. Type in your new password again.
8. Click the **Continue** button.

Success Page



To close this page and return to the Interconnection Requests List, click the link in this message or the ercot logo at the top left of the page.

Creating an Interconnection Request (INR)

Creating an INR for a new generation project involves starting the request by identifying details about your generation project and when, where, and who will be involved with it.

After you complete the appropriate web pages and upload required information files, you are prompted to review the information you put in your INR and make any necessary edits required to submit it.

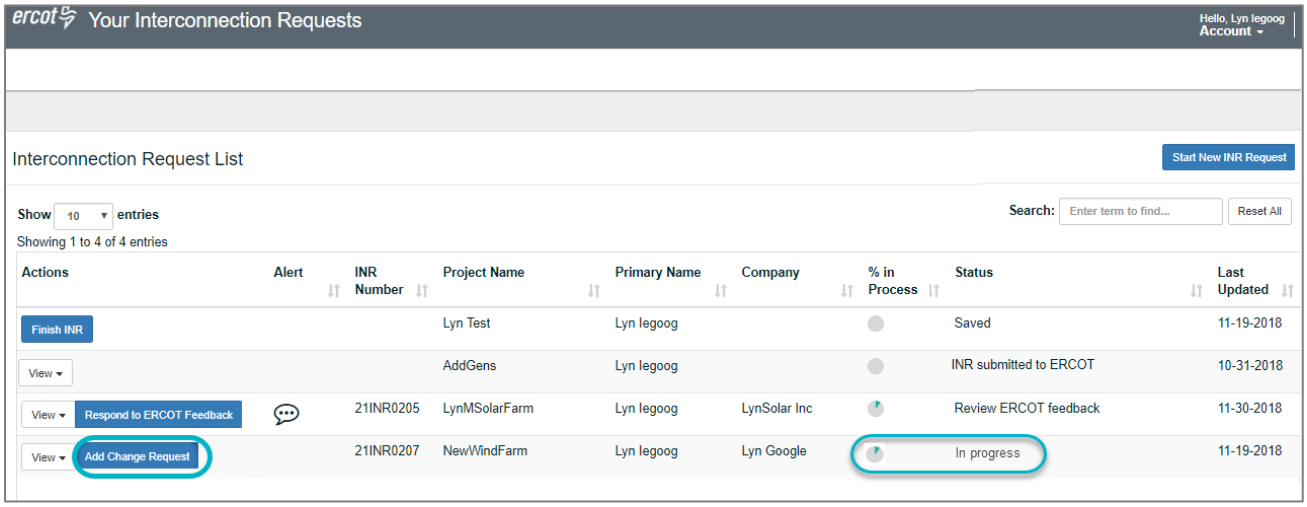
The request is automatically saved even if you do not finish it. You can return to the Interconnection Requests List and finish the request before submitting it.

When you have completed the section, the Generation Entity Information page displays for you to read and electronically sign before the Payment page displays. After completing the Payment pages, you can submit your request.

The new request is displayed on your Interconnection Requests List with View in the Actions column (or Finish INR if you have not submitted it).

After you submit the request, ERCOT will review it and may start corresponding with you about modifications to various items before the request is considered accepted. ERCOT will send you an email when your request application has been accepted, and in the Interconnection List, the:

- **Add Change Request** button will display in the **Actions** column
- **In Progress** displays in the **Status** column

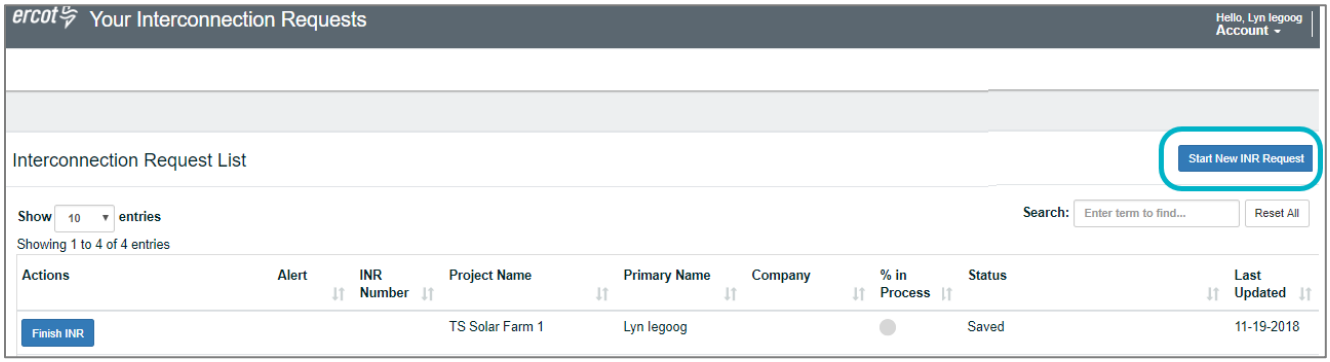


To modify details or add new information after ERCOT has processed your request, you must submit change requests to the INR. For more information, refer to page 49.

Starting the INR.

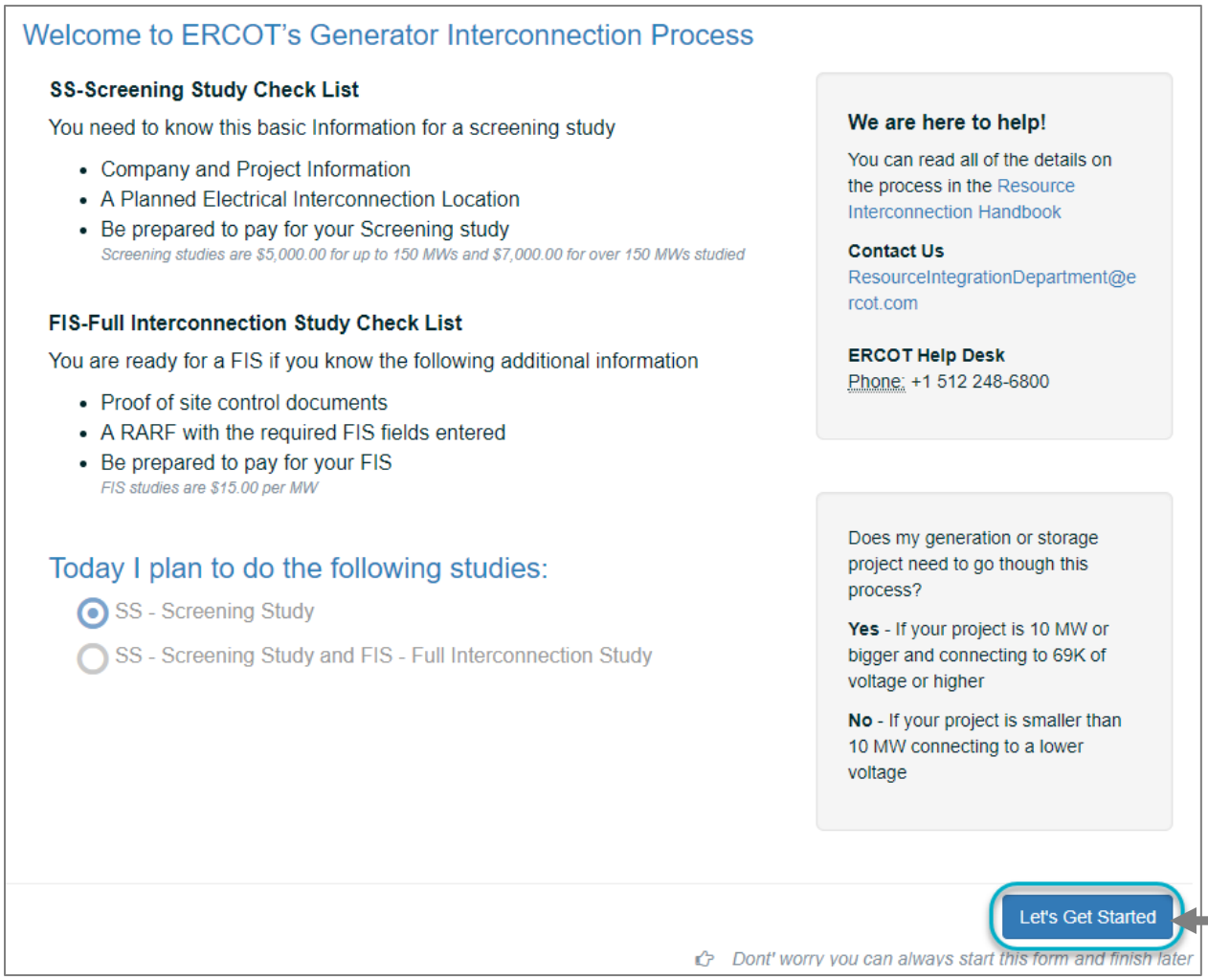
A series of seven web pages display for gathering project information, like if your project is for a new generation site or adding generation to an existing site; if you want to move forward with a Full Interconnection Study now, the MWs of your resource. You will also identify where you plan to locate the resource and who will be working with you on the project.

Your Account Page



1. Click the **Start New INR Request** button.

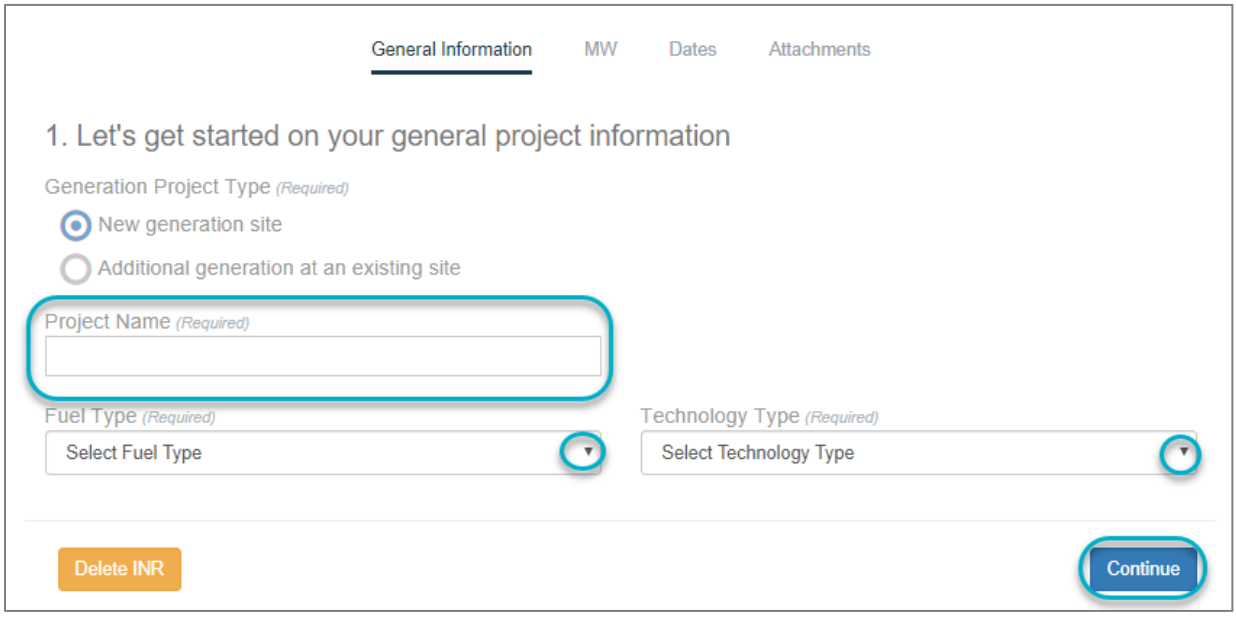
Welcome Page



1. Leave **SS - Screening Study** selected.
   Or, click the **SS -Screening Study and FIS – Full Interconnection Study** option if appropriate.

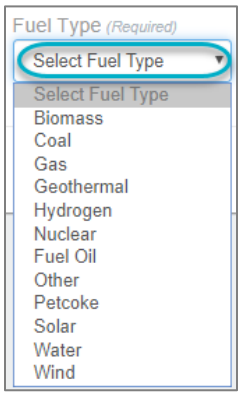
2. Scroll to the bottom of the page and click the **Let's Get Started** button.

General Information Page



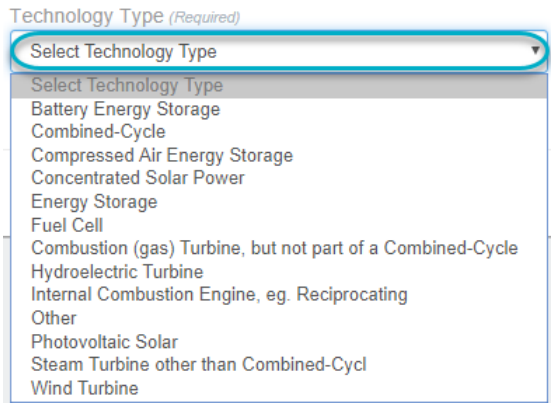
1. Leave the **New generation site** selected ***Or***, Click the **Additional generation at an existing site** option.

2. Type in the name of your project as you want it to appear in all your documentation. This name must be unique across the ERCOT ISO grid.



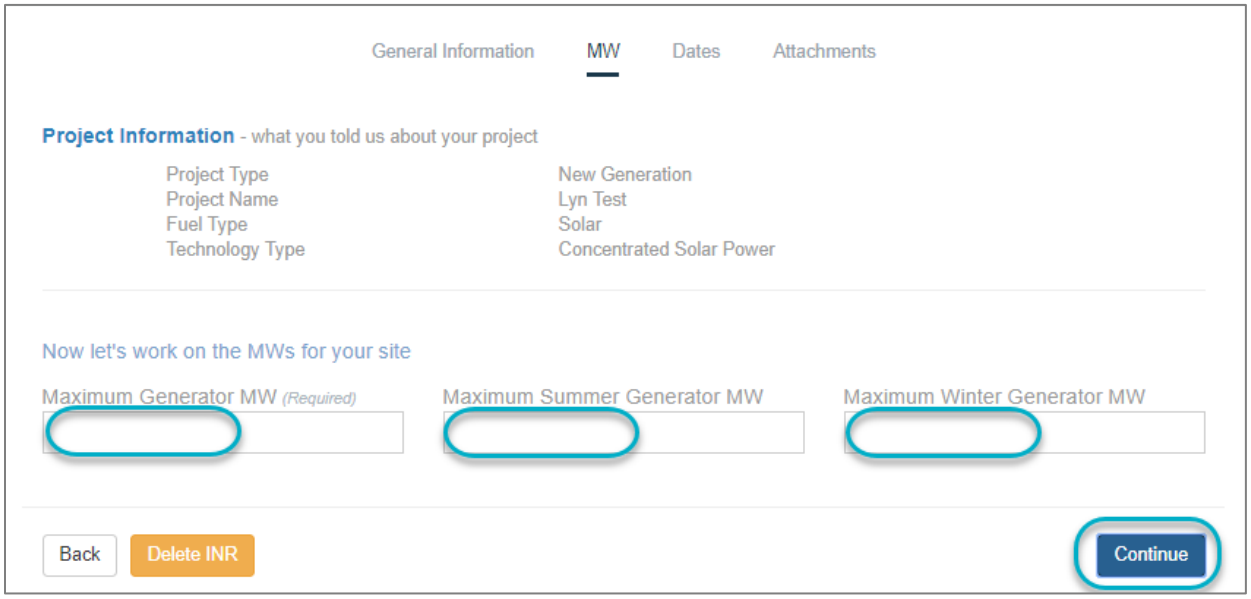
3. Click the **Fuel Type** dropdown and select the type of fuel that will be used at your project.

4. Click the **Technology Type** dropdown and select the appropriate option for your project.



5. Click the **Continue** button

MW Page



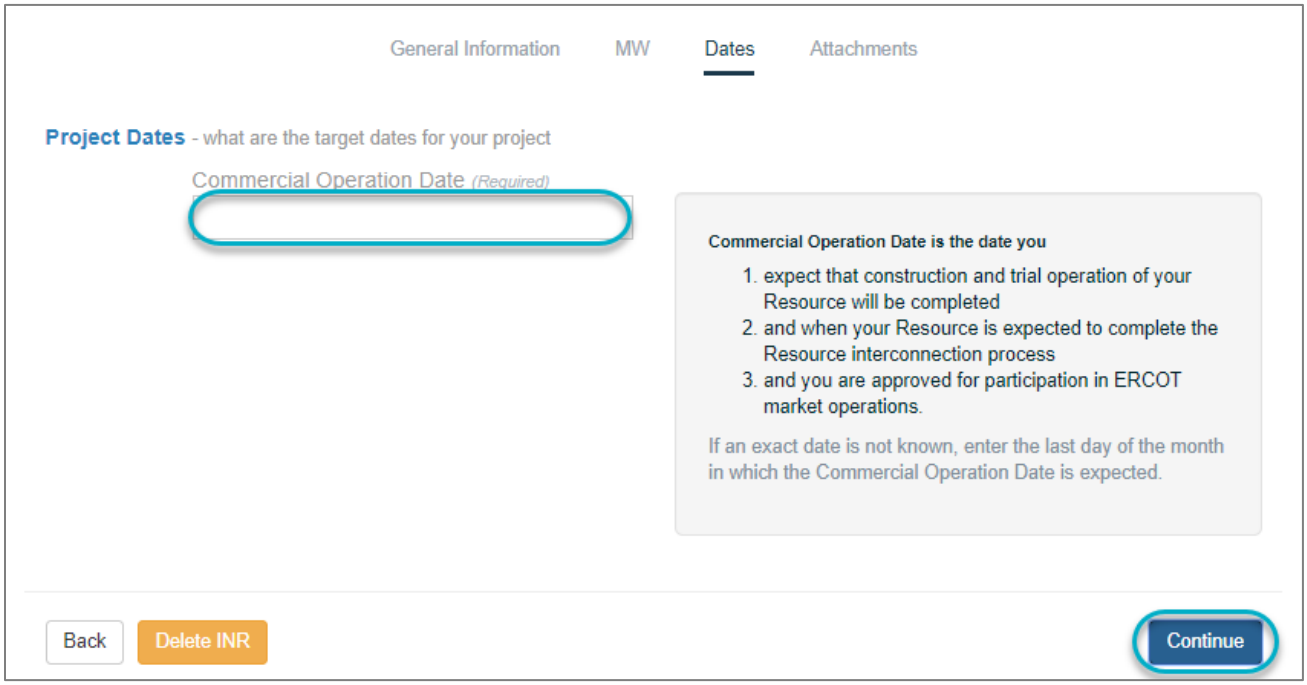
1. For **Maximum Generator MW**, type in the capacity of the resource (which must be less than 10,000).

2. For **Maximum Summer Generator MW**, type in the incremental capacity change that can occur during the summer (which cannot exceed the overall MWs).

3. For **Maximum Winter Generator MW**, type in the incremental capacity change that can occur during the winter (which cannot exceed the overall MWs).

4. Click the **Continue** button.

Project Dates Page

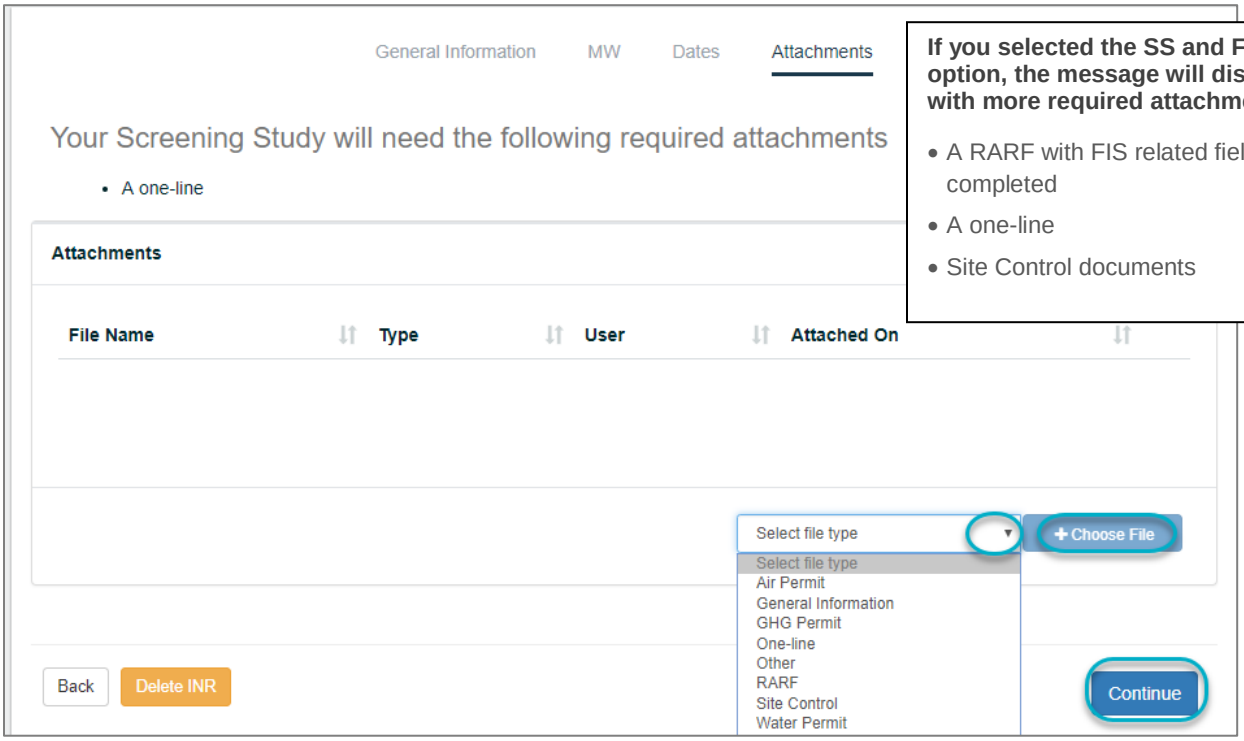


1. Type in the **mm-dd-yy** of your commercial operation date.

   Depending on the type of technology of this resource, you must plan at least 15 months from starting point to completion. If you do not know the exact day, use the last day of the month you are targeting.

2. Click the **Continue** button.

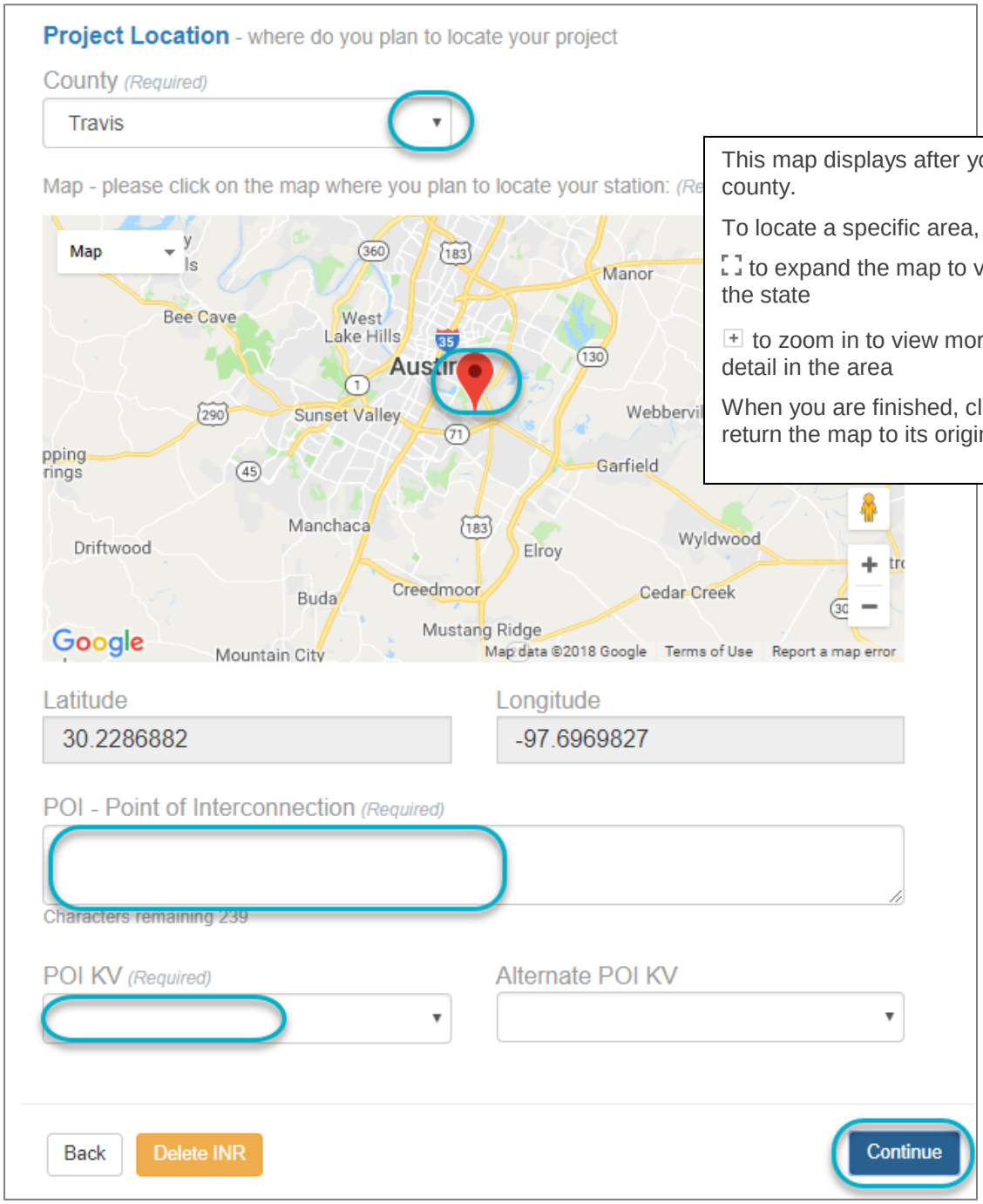
Attachments Page



1. Click the **Select file type** dropdown and click **One-line**.
2. Click the **+Choose File** button, navigate to the file on your computer, and click the file.
3. Repeat the steps above for each file type and file you want to upload.
4. When you are finished, click the **Continue** button.

Just uploaded the wrong file? Use the trash can icon to remove it.

Location Page



This map displays after you select the county.

To locate a specific area, click:

⛶ to expand the map to view more of the state

⊞ to zoom in to view more street detail in the area

When you are finished, click ⛶ to return the map to its original size.

1. Click the **County** dropdown and select the county where your resource will be located.
2. When the map displays, click the map where your resource will be located to drop a pin.

   📌 The latitude and longitude are automatically populated based on your pin drop.

3. Type a description that identifies where your resource will interconnect with the grid.

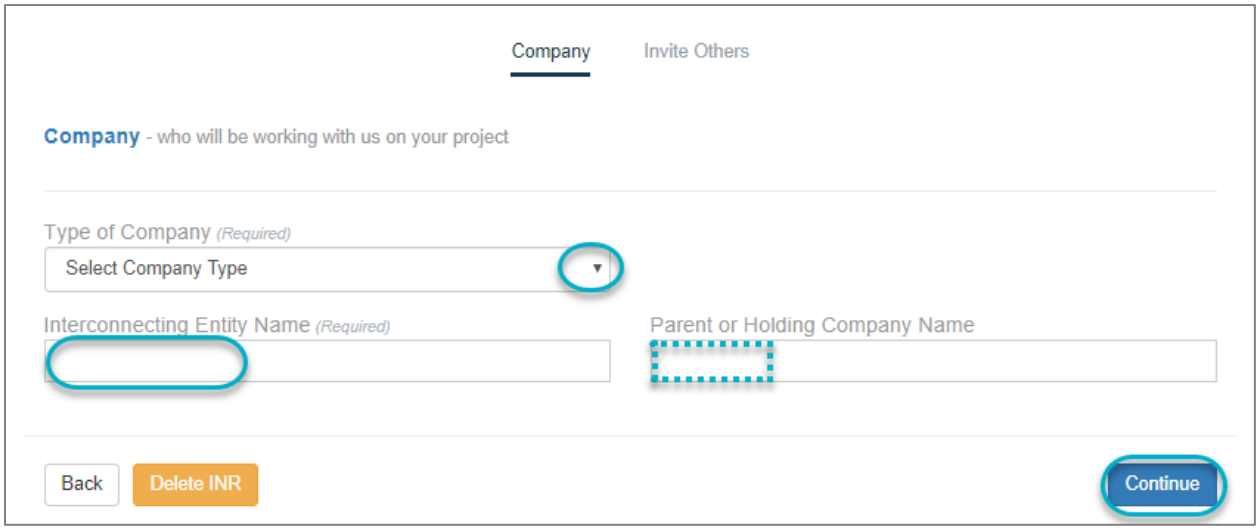
4. Click the **POI KV** dropdown and select the primary kilovolt level for this point of interconnection.

5. If you listed a second POI, click the **Alternate POI KV** dropdown and select the kilovolts for the second POI interconnection

6. Click the **Continue** button.

If you need to reset the location on the map, you may need to select a different county from the dropdown to reset the map and then select the correct county in order to display the correct map.

Company and Invite Page



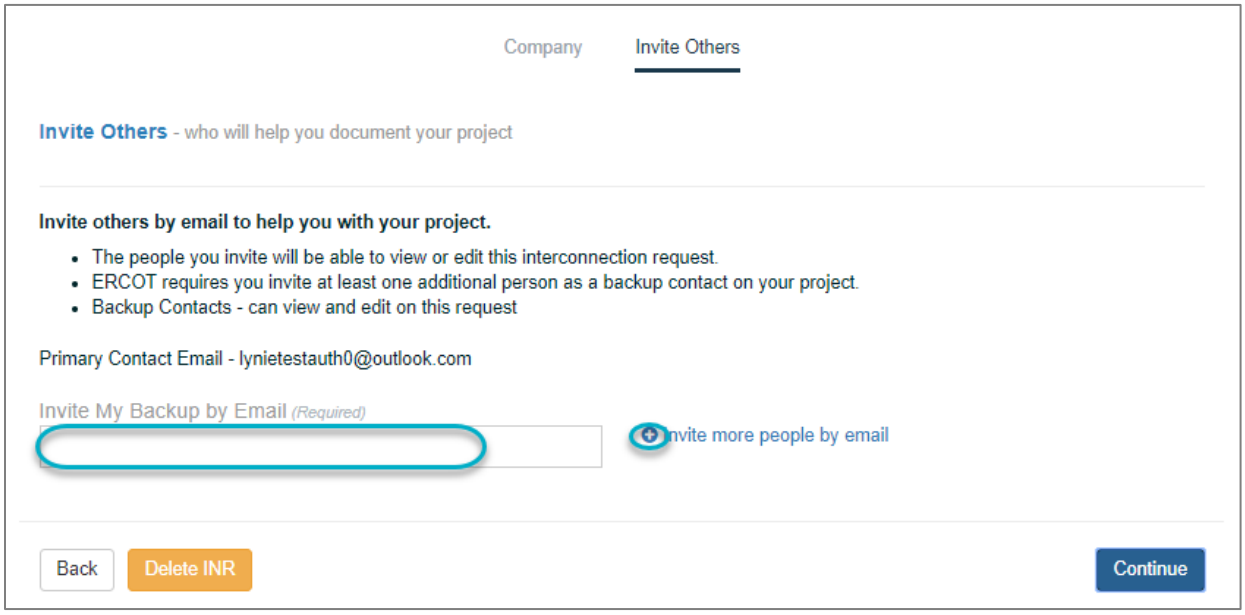
1. Click the **Type of company** dropdown and select **LLC** or **Other**.

2. Type in your name as the Interconnecting Entity.

3. If you selected the **LLC** option in Step 2, type in the name of your parent or holding company.

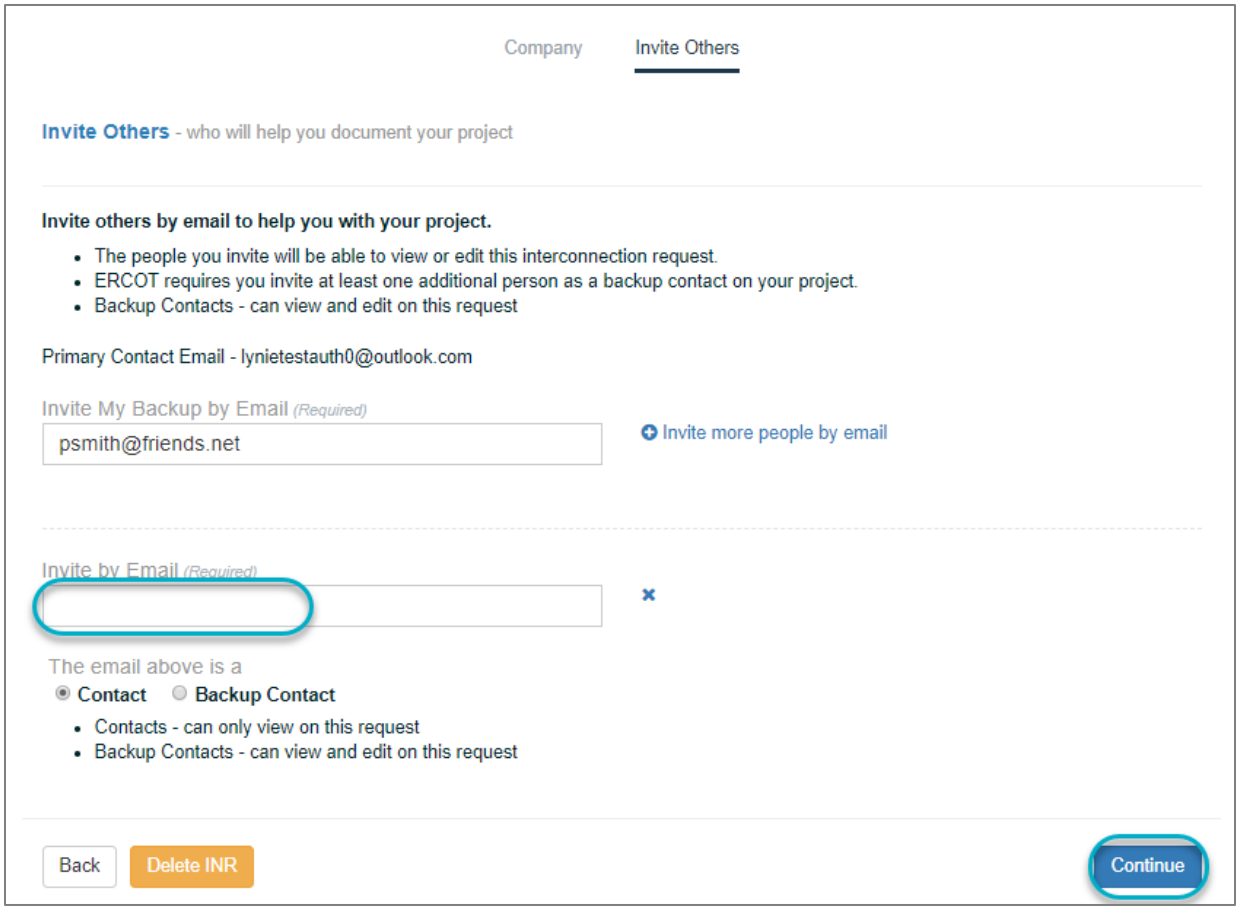
4. Click the **Continue** button.

Invite Others Page



1. Type in the email address of a person in your company who is the backup to work with your interconnection request. This Backup will receive an email with instructions on how to sign in and create an Interconnection Services account.

2. Click the **+ Invite more people by email** link to display fields where you can add more contacts who can view or work with the request.



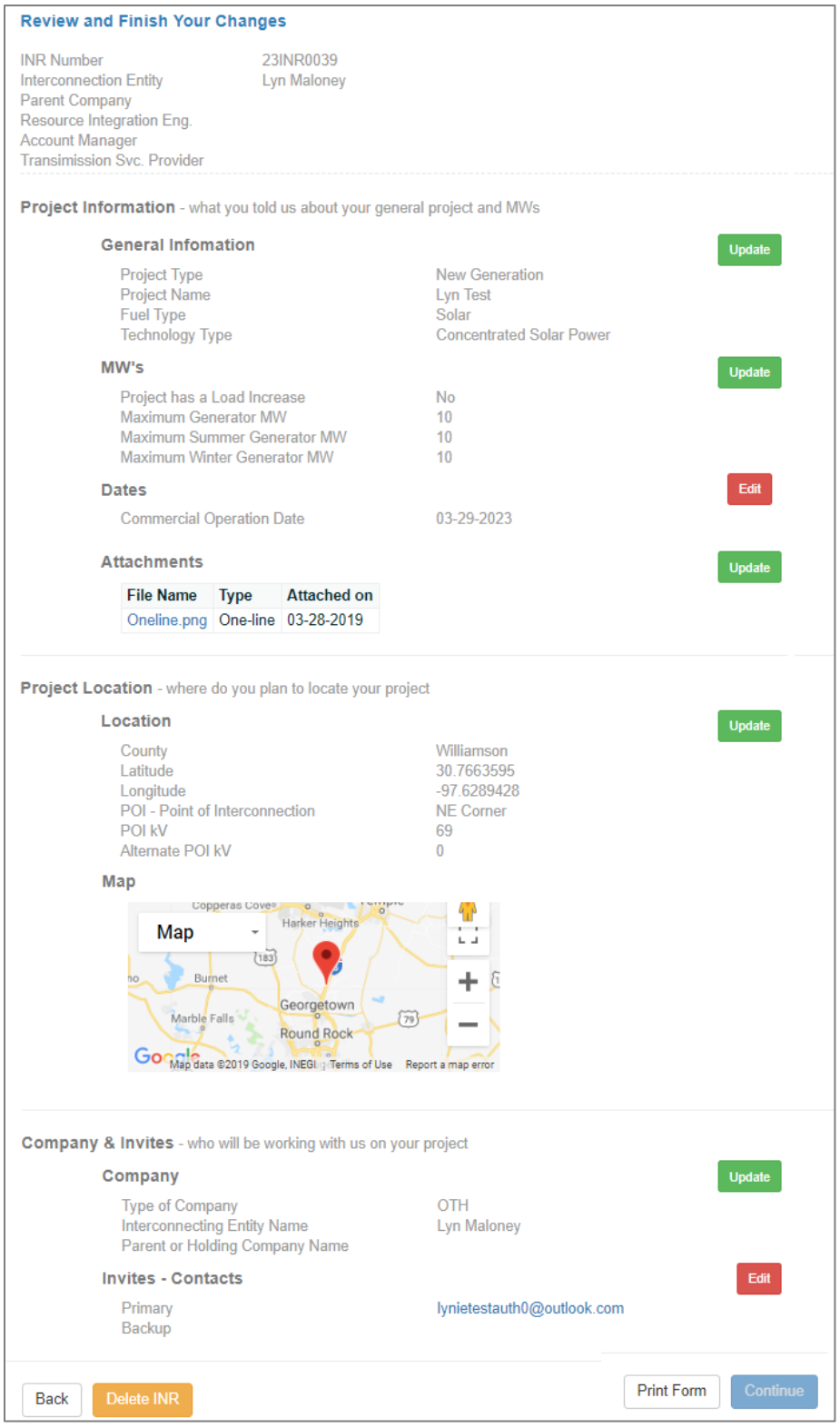
3. Type in the email address of the person to invite to serve as a Contact for this request and click the appropriate **Contact** or **Backup Contact** option for this person.

4. To add another person, click repeat Step 3 and Step 4.

5. When you are finished adding contacts, click the **Continue** button.

Reviewing Your Interconnection Request

The review page displays after you finish identifying your Backup contact or contacts.



1. Click the **Edit** button of a section to go back and make any required edits.

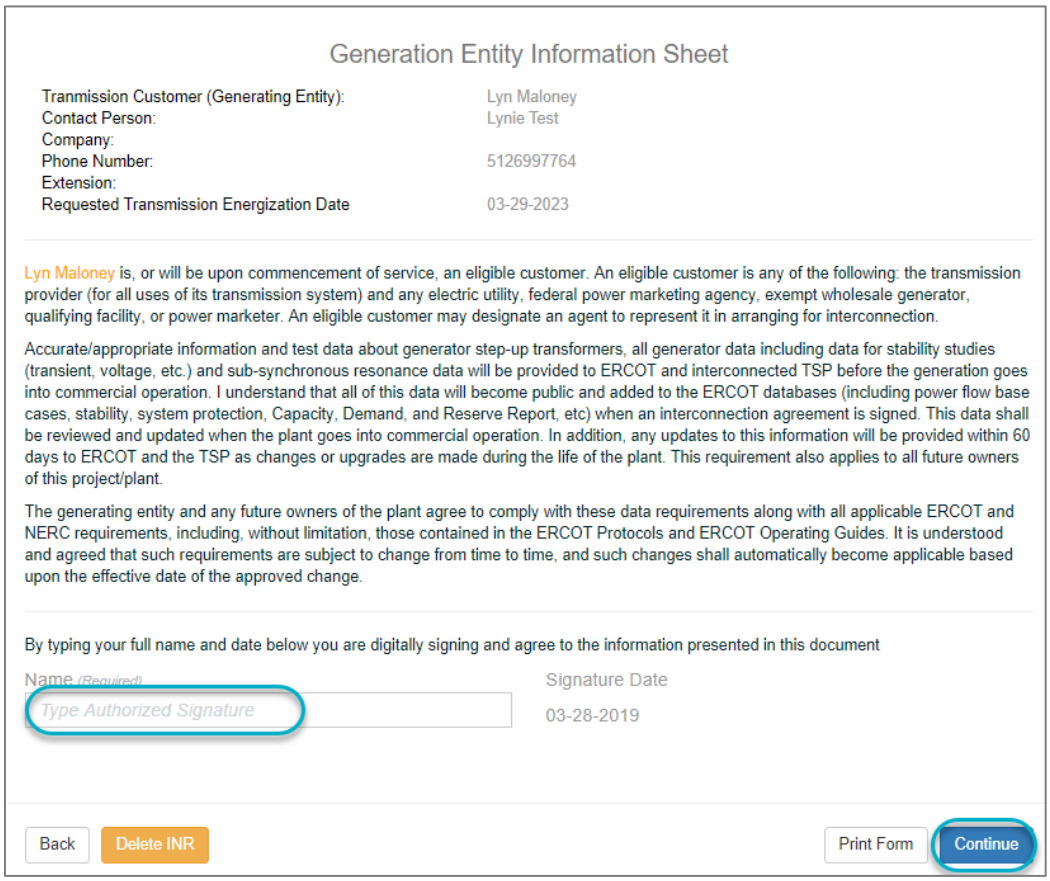
2. When you are finished, scroll to the bottom of the page and click the **Continue** button.

Electronically Signing Your INR

You must carefully read through the information in the Generation Entity Information page about becoming an eligible power transmission provider customer and agreeing to provide ERCOT with the most current data as well as agreeing to comply with all regulations..

If you have opted to have the FIS performed during the initial request along with the Screening Study, the Department of Defense (DoD) Notification is displayed that you must also sign and select the appropriate option of notifying the DoD of the proposed generation resource or that this resource is not required to provide notice to the DOD and Federal Aviation Administration (FAA) because the project does not meet the criteria requiring notice.

Generation Entity Information Page

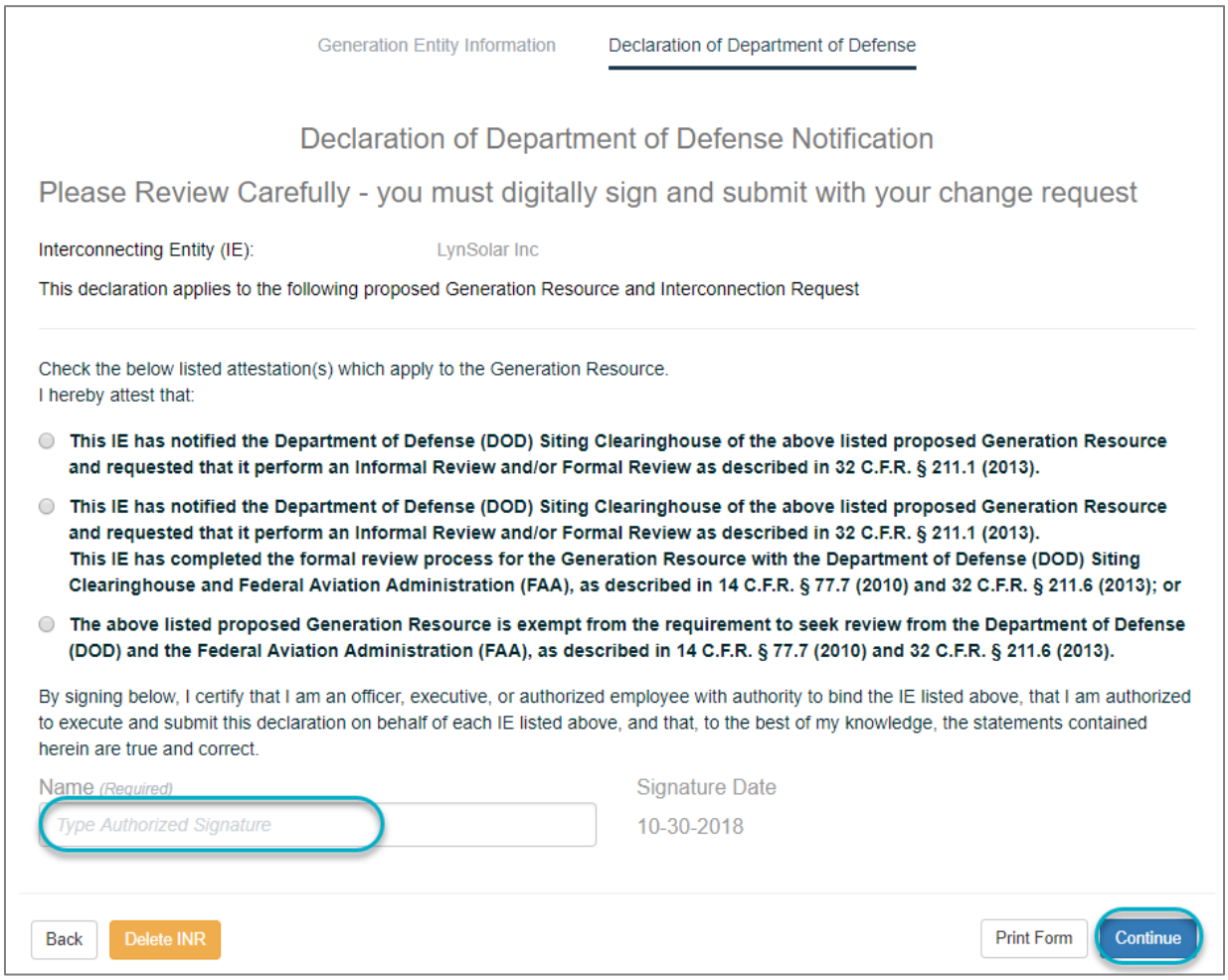


1. After reading the page, type in your authorized signature.

2. Click the **Continue** button.

Department of Defense Notification Page

Displays only if you checked the option to perform the FIS with the Screening Study (refer to page 26).



1. After reading the page, type in your authorized signature.
2. Click the **Continue** button.

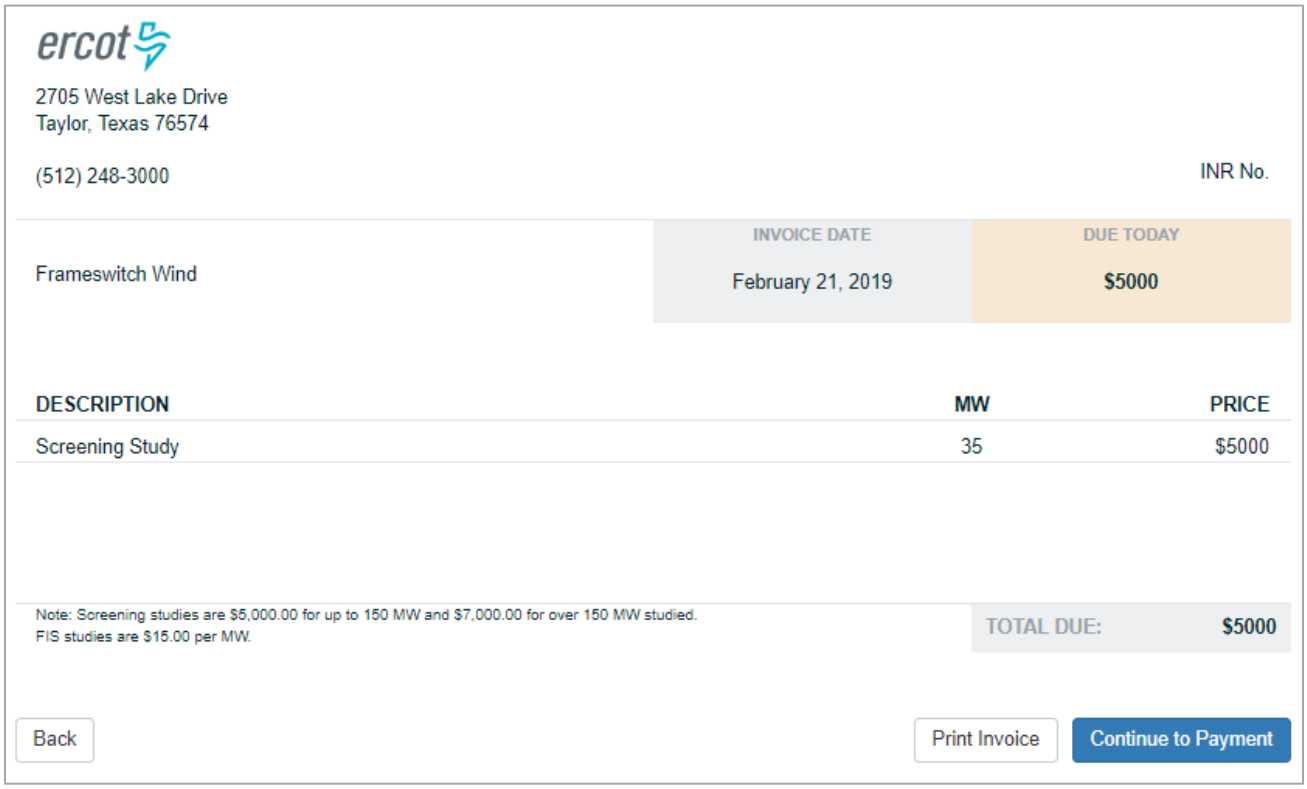
Adding Payment Information and Submitting Your INR

ERCOT accepts credit card payments and electronic checks from your bank (often referred to as automated clearing house electronic funds transfers, or ACH, payments) online for your Screening Study. You can use your personal checking or savings, or a business account.

In some cases, businesses have an automatic debit block for ACH transaction amounts on their bank account. Prior to submitting your INR, contact your financial institution to determine if your account has the ACH block. If such a block exists, have the financial institution send you the form to authorize the transactions you will be making with ERCOT. Use **Authorize.net** with ID **1911718107** for the Vendor Information and allow at lease two business days for them to process the form before you submit your payment to RIOO IS.

Before you submit your payment, you can delete this INR. After you submit the INR, you can cancel it; however, your payment is not refundable.

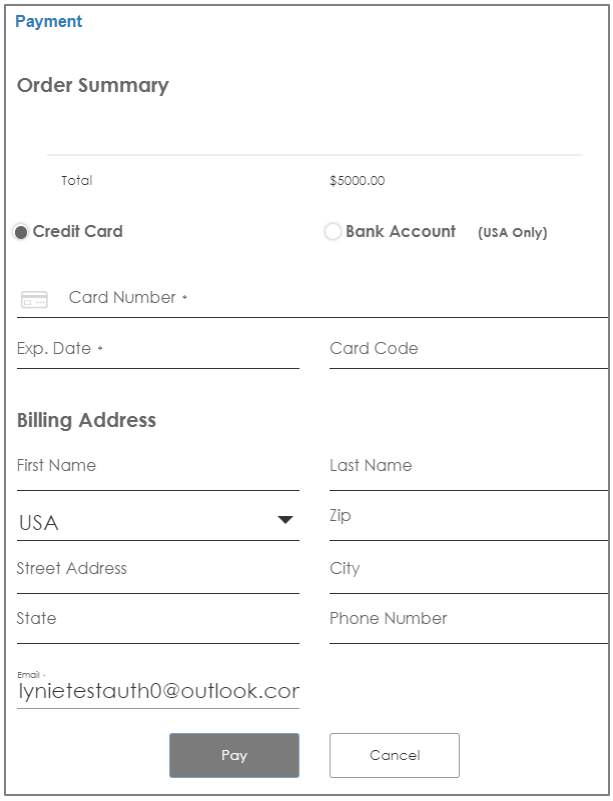
Invoice Page



1. After carefully reviewing the information, click the **Continue to Payment** button.

Payment Method Page

Paying by Credit Card



15 Click the **Credit Card** option.

16 Type in your card number.

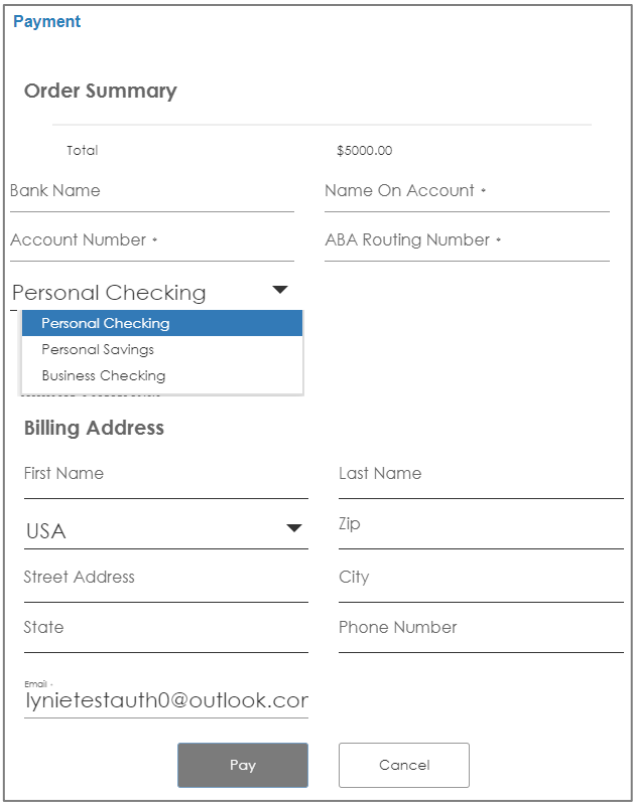
17 Type in the expiration date on your card.

18 Type in the CVV code from the back of the card.

19 Type in your **First Name** and **Last Name**, and then type in your address information (that corresponds to the billing address of the credit card

20 Click the **Pay** button.

Paying with Electronic Check (ACH)



15 Click the **Bank Account** option.

16 Type in the name of the bank and then your name as it appears on the account.

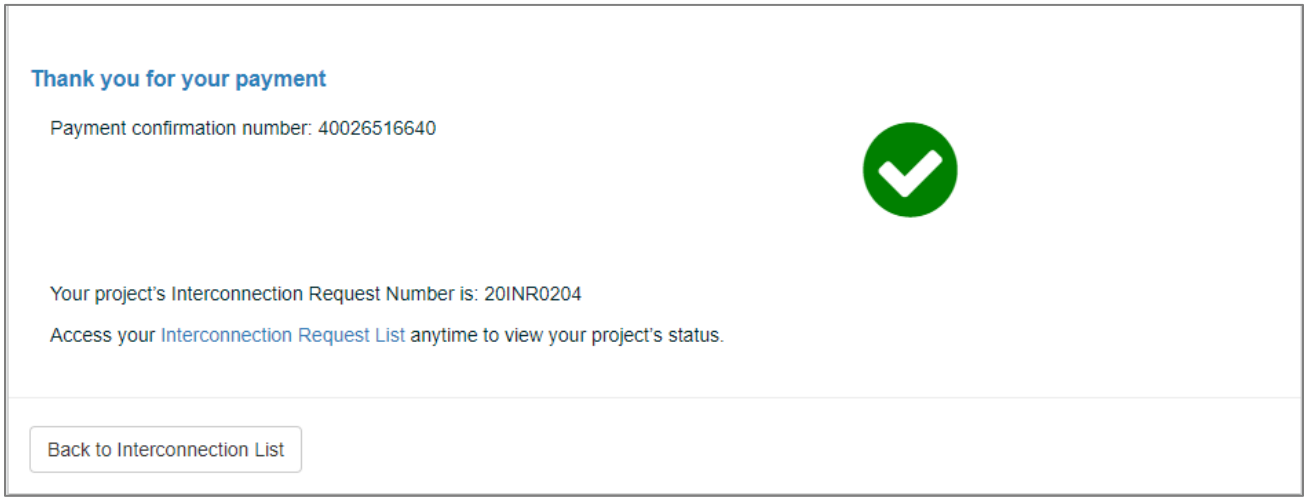
17 Type the number of the account you plan to use and the routing number of the bank.

18 Select the type of account from the dropdown.

19 Type in your **First Name** and **Last Name**, and then type in your address information (that corresponds to the address of the bank account you are using

20 Click the **Pay** button.

Payment Confirmation Page



21 Note your INR number. You will need it for all communications with ERCOT.

22 To close this page and continue to work in your Interconnection List, click the **Back to Interconnection List** button. Or, to exit RIOO IS, click the **Account** dropdown and click **Log Out**.

Corresponding with ERCOT About Your INR and Cancelling a Submitted INR

After receiving your submitted INR and payment, ERCOT has 10 days to review the INR to be sure all fields are complete and contain the required information. If any questions or issues arise, ERCOT sends you an email about needing input and places the UD (Update) alert in your Interconnection Request List along with the Update INR button to respond. When the INR is deemed materially complete, ERCOT sends you an an email notifying you that the INR is accepted and starts your Screening Study.

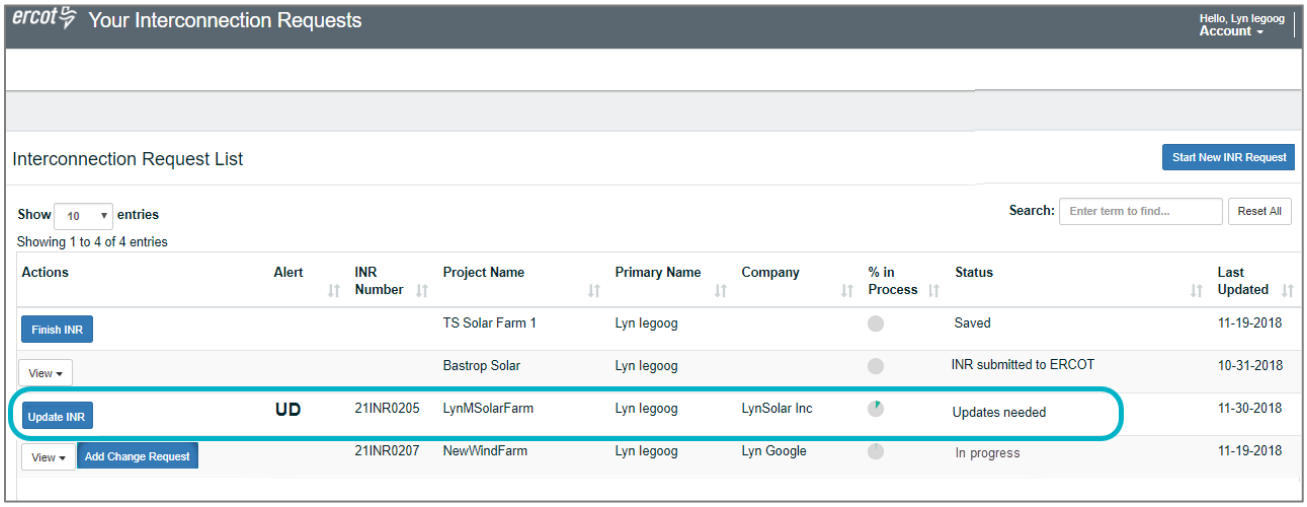
To modify details or add new information from this point forward, you must submit change requests to the INR. For more information about change requests, refer to page 49.

To stop ERCOT from processing your request at this point, you can cancel the INR from the View Interconnection Request Page. If you have not submitted the INR yet, you can delete it (refer to *Deleting an Unfinished INR* on page 130).

Corresponding with ERCOT About Your INR

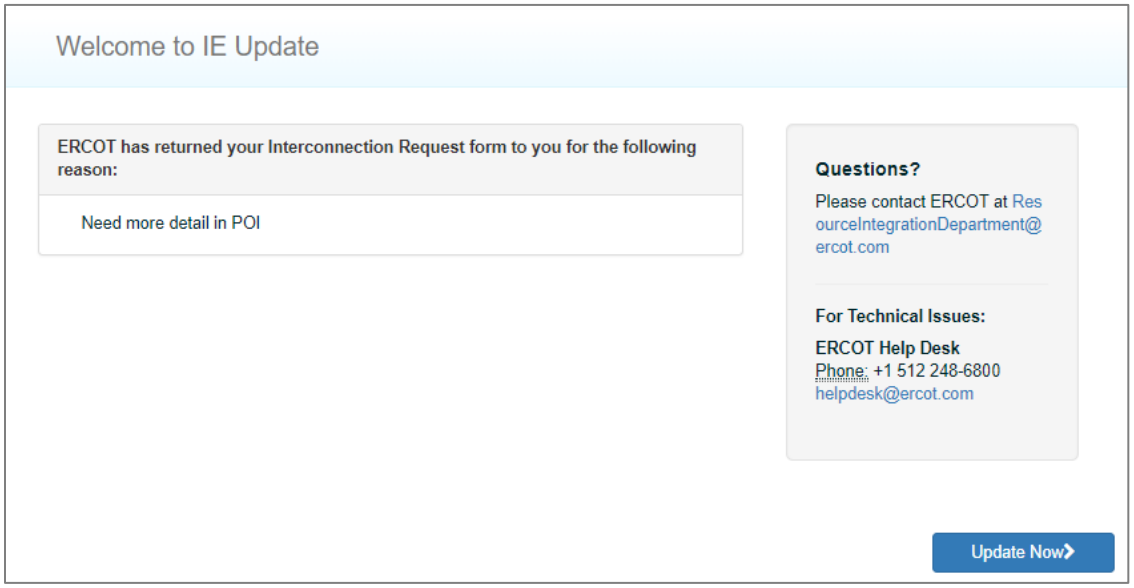
When you submit your INR, ERCOT reviews your initial request and will send you an INR Needs Input email with questions or issues as well as place a UD (Update) Alert on your Interconnection Request List along with the Update INR button for you to read and respond to the question.

Your Interconnect Request List Page



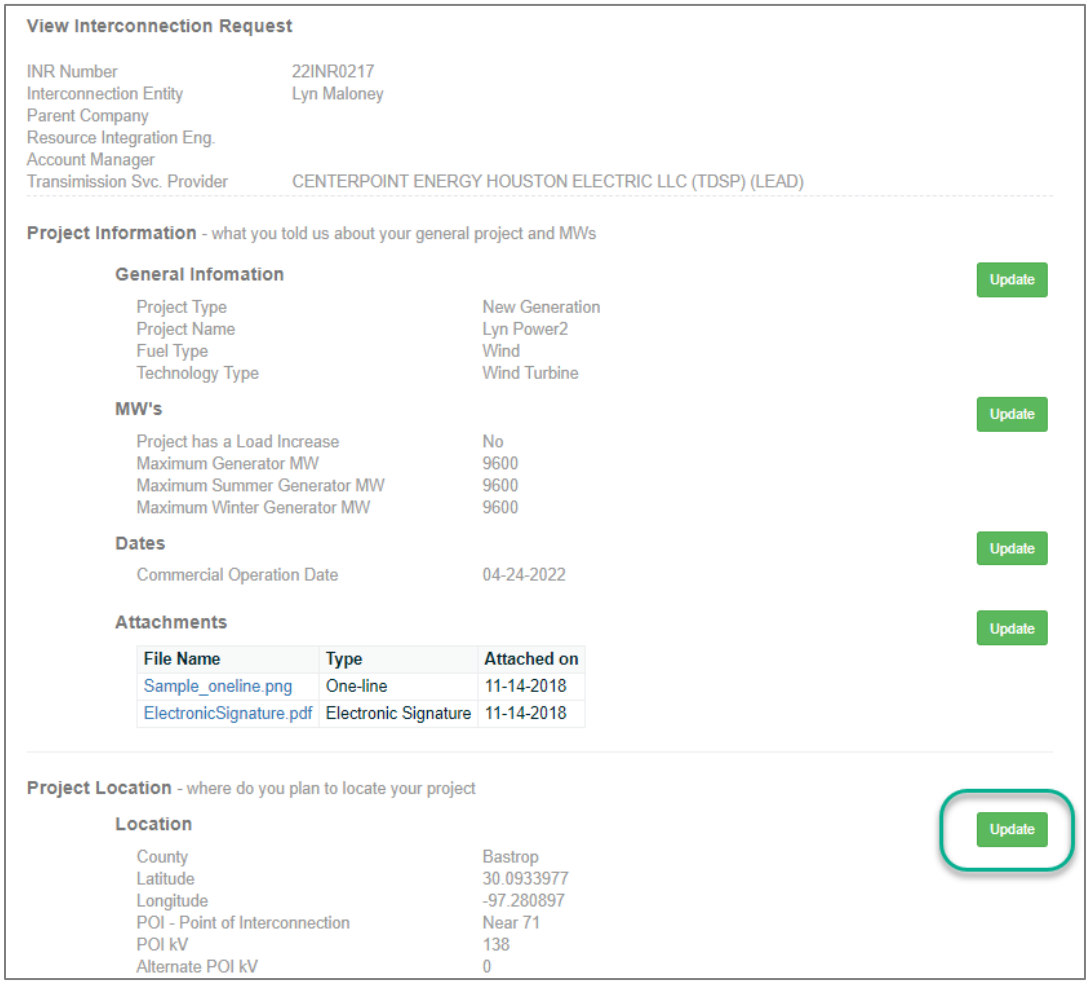
1 Locate the INR and click the **Update INR** button in the Actions column.

Welcome Panel



2. After reading the message, click the **Update Now** button,

View Interconnection Request Page



3. Locate the section containing the information requested and click the **Update** button.

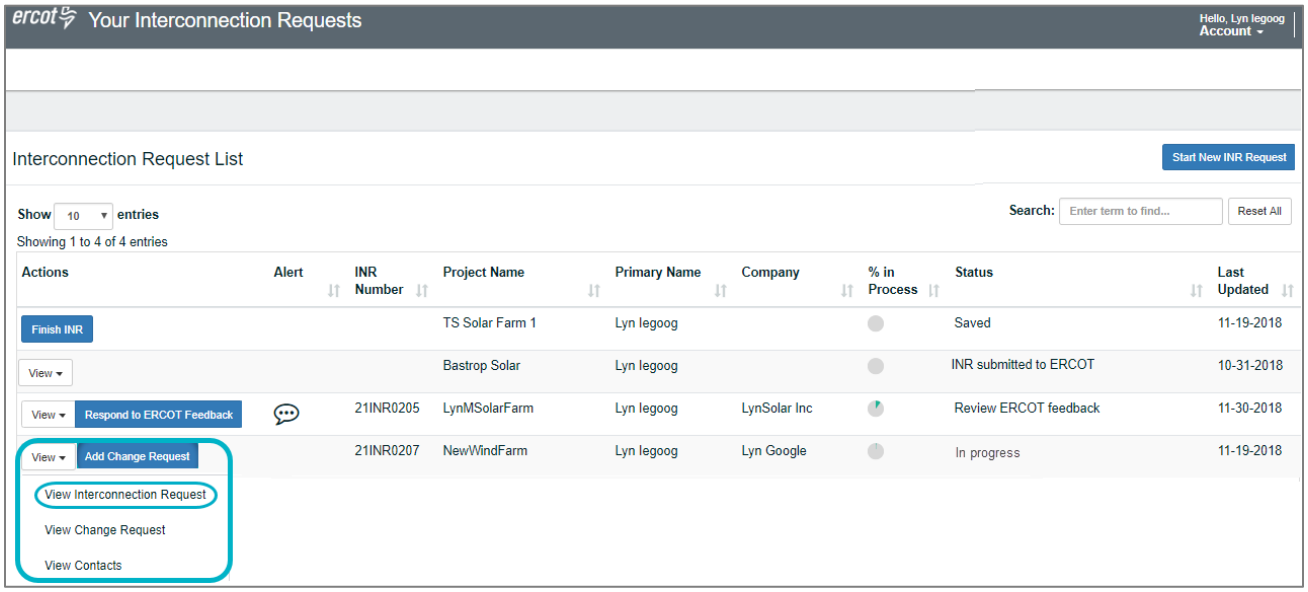
4. After making the update, click the **Continue** button.

5. If the *Generation Entity Information* page displays (or other page directly connected to a change made displays), click the **Continue** button again.

Viewing and Cancelling Your Submitted INR

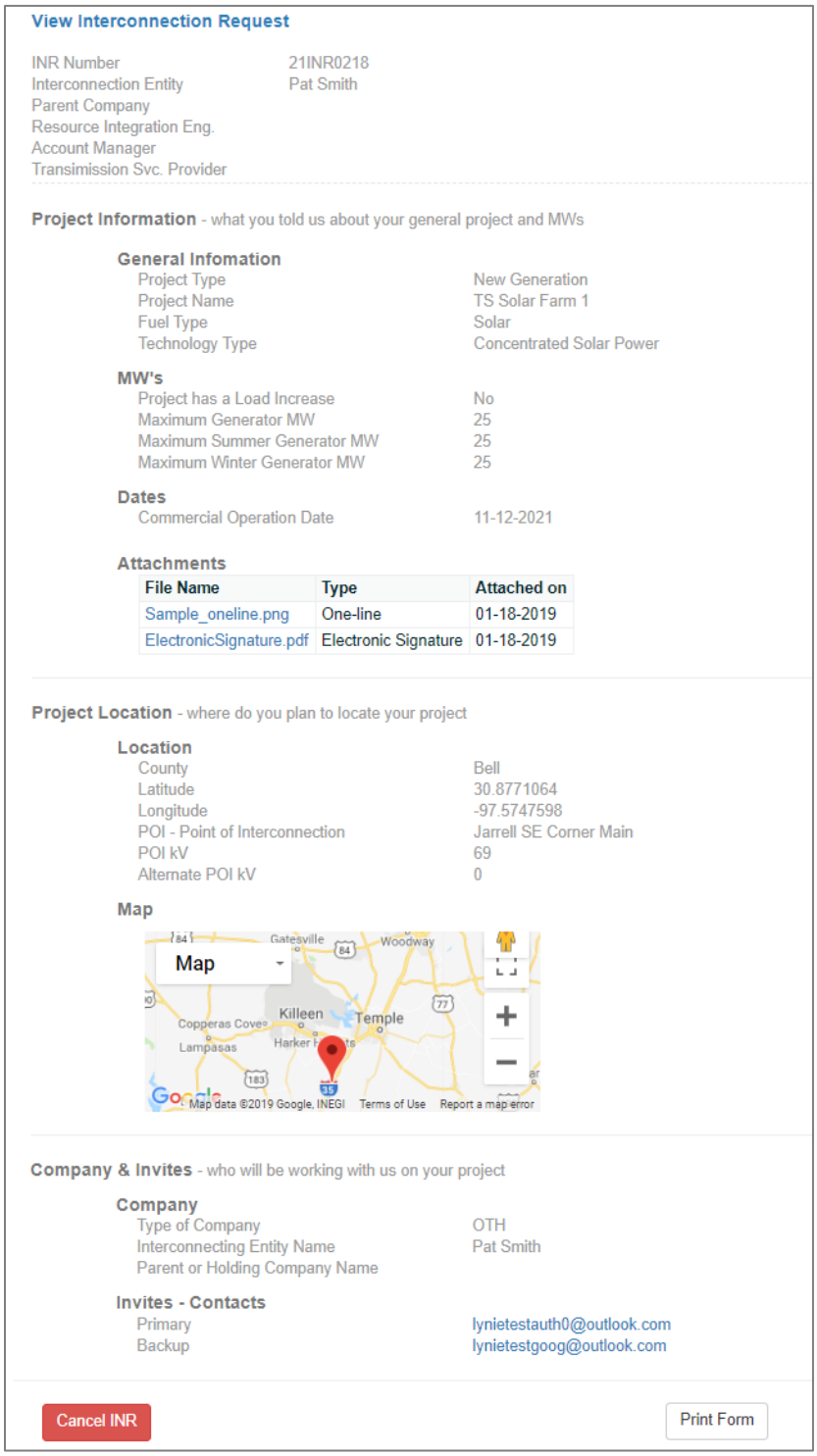
You can view the details and project information you submitted from the Review page. You can also cancel the INR.

Interconnection Request List



1. Locate the INR and click the **View** dropdown in the **Actions** column.
2. Click the **View Interconnection Request** option.

View Interconnection Request Page

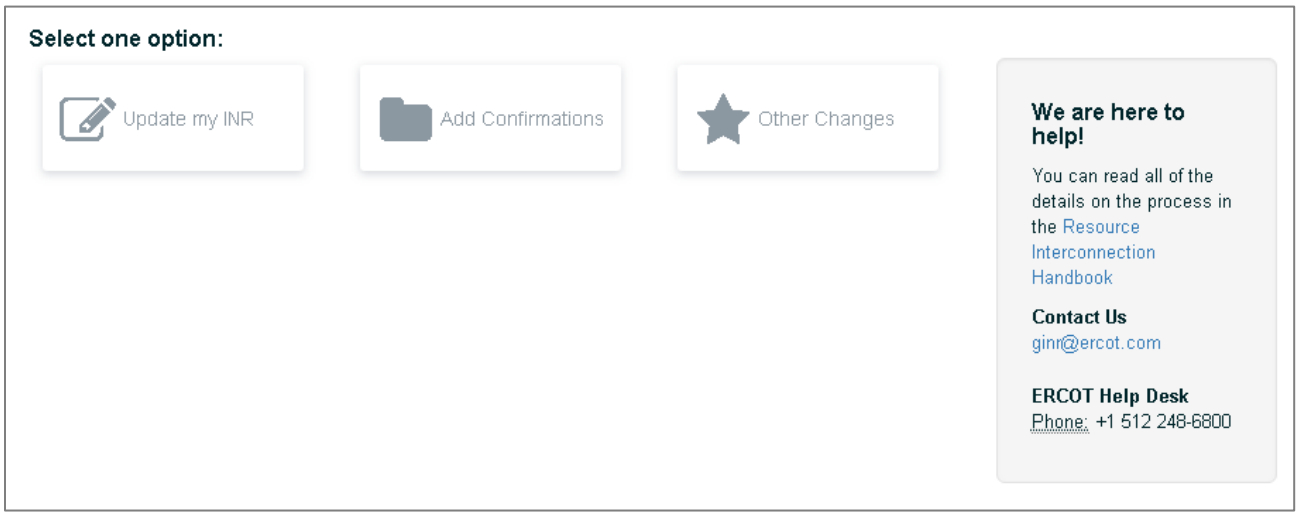


3. Scroll to the bottom of the page and click the **Cancel INR** button.

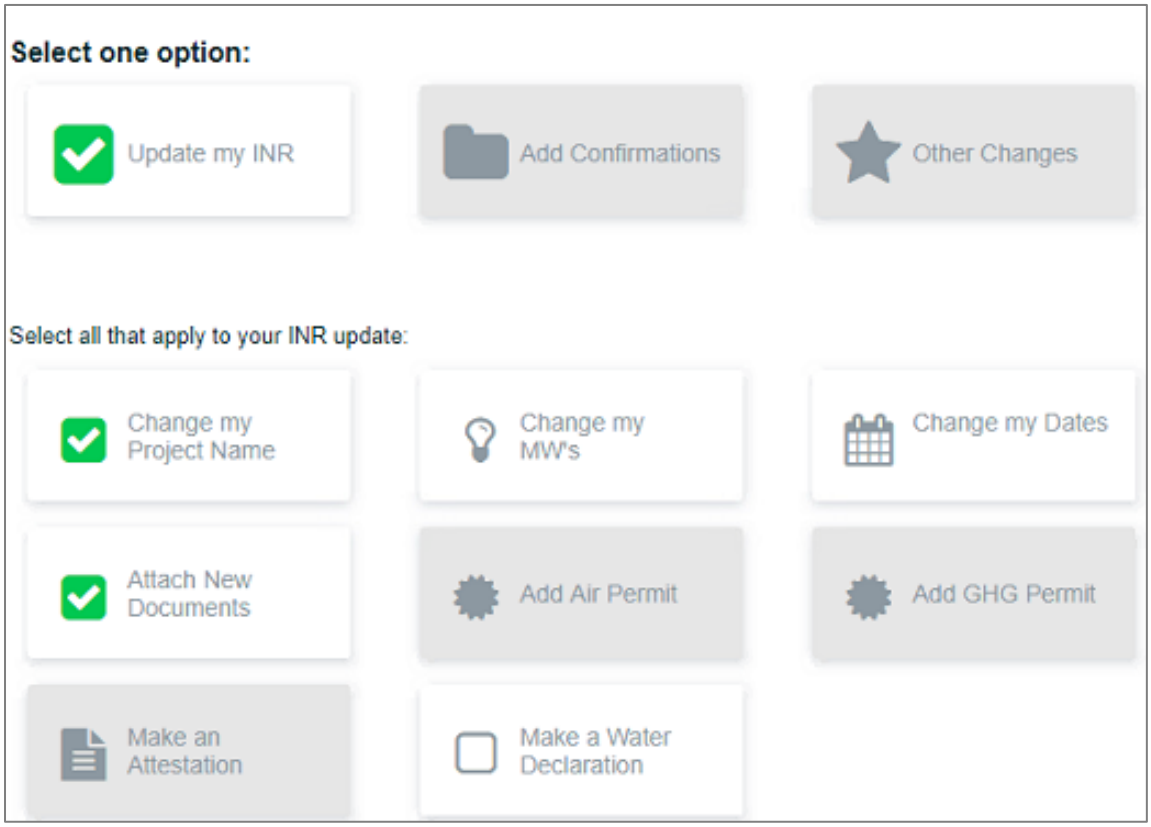
4. To close this page without cancelling, click the ERCOT logo in the upper left corner of the web page.

Understanding the Change Request Process

To update information in your INR, you must add a change request to the original request in your Interconnection Requests List. The types of changes are grouped in three main categories.



When you select one of the 3 main category buttons, a green checkmark displays to confirm your selection and the page expands to display the options available in that category. You can select as many choices under an category as you need. Each selection is confirmed with a checkmark.



From this page:

- **Update My INR** contains the:
    - Modify actions associated with the project details as shown above.
    - Acknowlege your
- **Add Confirmations** contains the options to electronically sign and confirm that your resource has met the required Nodal Protocols (as outlined in your Planning Guide).
- **Other Changes** contains

The Other Changes options include requesting the FIS Study and reporting that you have sold your project.

The change request navigation guides you through each process by displaying web pages with information you must complete and a review page that displays with any areas needing updates before you can submit your request.

Note that when you submit the change request to start your FIS Study, you must also submit a payment.

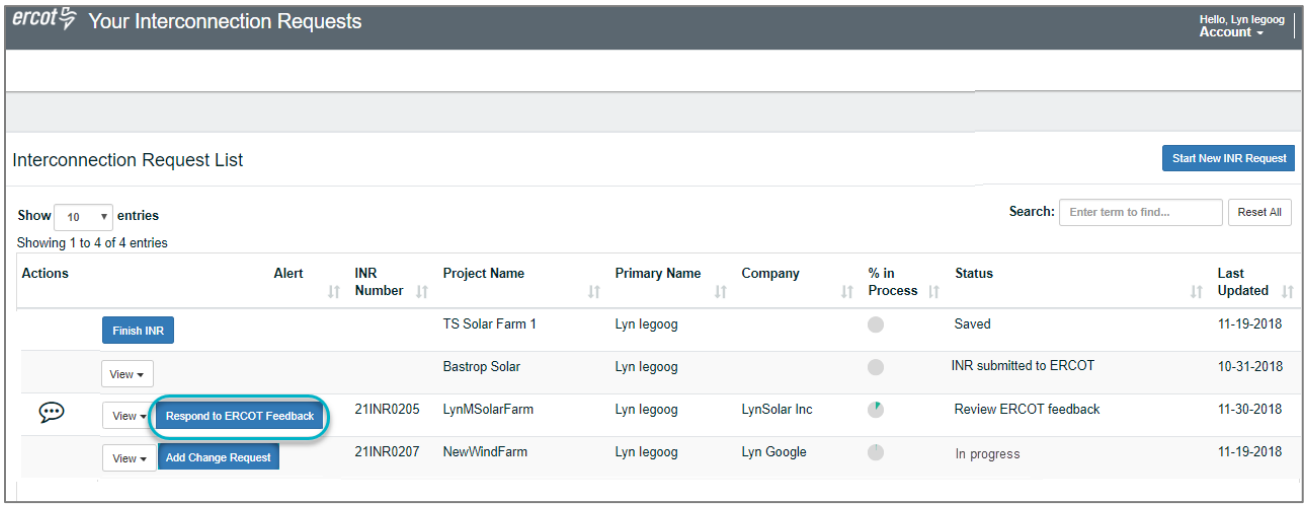
If you select more than one option in a category, the review page displays with each section you have modified.

If ERCOT has questions about your change request, the 💬(comment bubble) displays in the Alerts column of your Interconnection Request List along with the **Respond to ERCOT** button as explained in the next section.

Responding to ERCOT Comments About Your Change Request

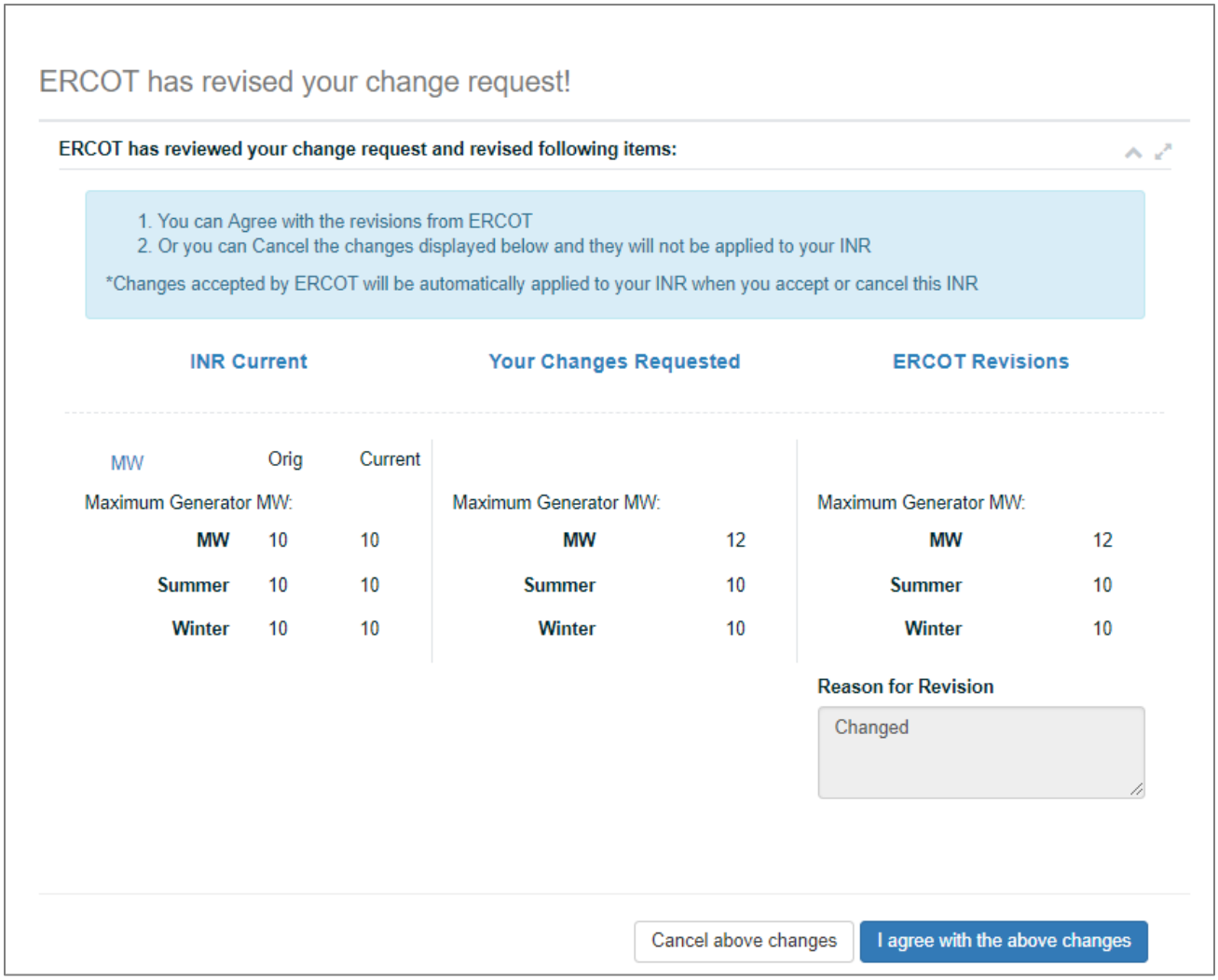
If the 💬 (comment bubble) displays in the Alerts column of your INR on your Interconnection Requests List, ERCOT has a question or comment that you need to address about a change request.

Your Interconnection Request List Page



1. Click the **Respond to ERCOT Feedback** button.

ERCOT Has Revised Your Change Request Page



2. After reviewing the suggestion, click the **I agree with the above changes** button.

   Or, if you want additional feedback or want to respond to the suggested changes, click the **Cancel above changes** button and the requested change witll not be added to your INR.

Changing INR Details

You can change project details that you originally entered on your INR and attach updated or new documents, including your environmental quality air permit or federal Greenhouse Gas emission permit, and your water rights documents.

The system allows you to submit **only one change request at a time** but you can submit mutliple changes in one request. For example, you can change a project date and attach new files to the INR.

To change project ownership, refer to *Reporting a Change of Ownership* on page 115.

You can select more than one option to have each appropriate option page display before the Review and Finish page, which avoids starting over for each change and enables you to review all changes on the same page. For example, if you select to change project dates and add a greenhouse gas permit, the GHG page displays immediately after the Project Dates page and then the Review page will show that both sections were updated.

You can do the following:

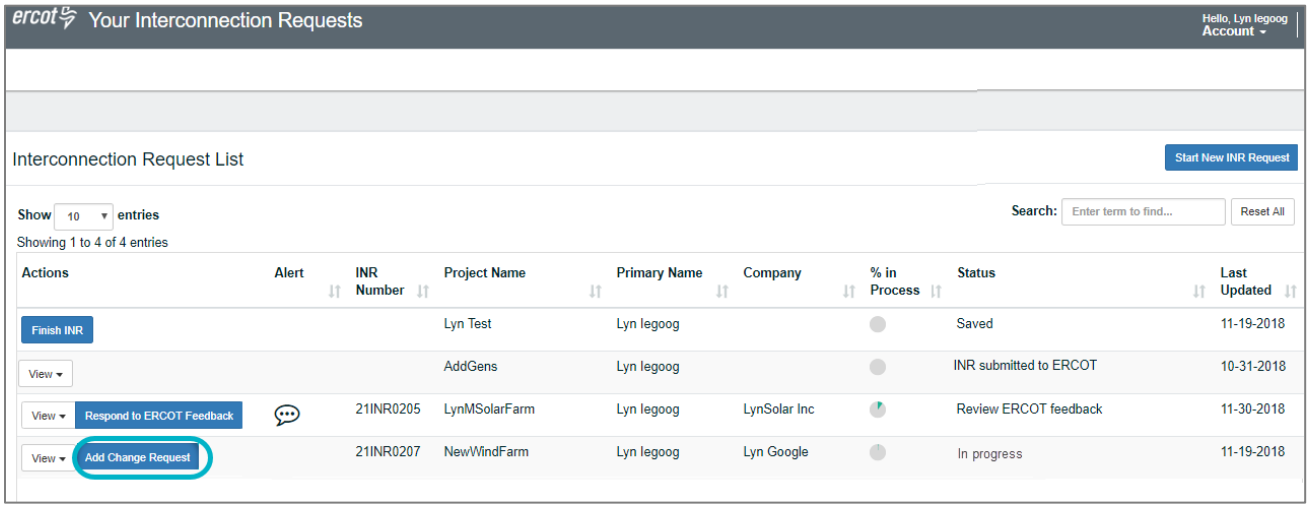
- Change the project name (refer to page 43)
- Change the MWs (refer to page 54)
- Change the project dates (refer to page 58)
- Attach new documents (refer to page 62)
- Add an Air Permit (refer to page 66)
- Add a Green House Gas Permit (refer to page 70)
- Add a Water Rights Declaration (refer to page 74)

ERCOT sends

Changing the Project Name

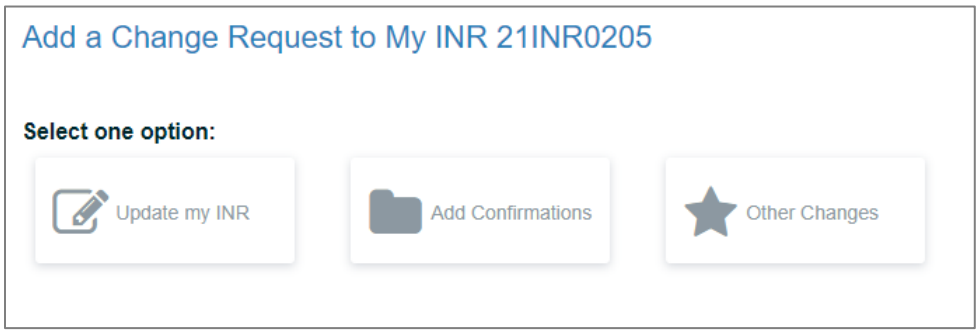
You can add a change request to modify or change the name of your project. Remember that project names must be unique across ERCOT.

Interconnection Requests List Page



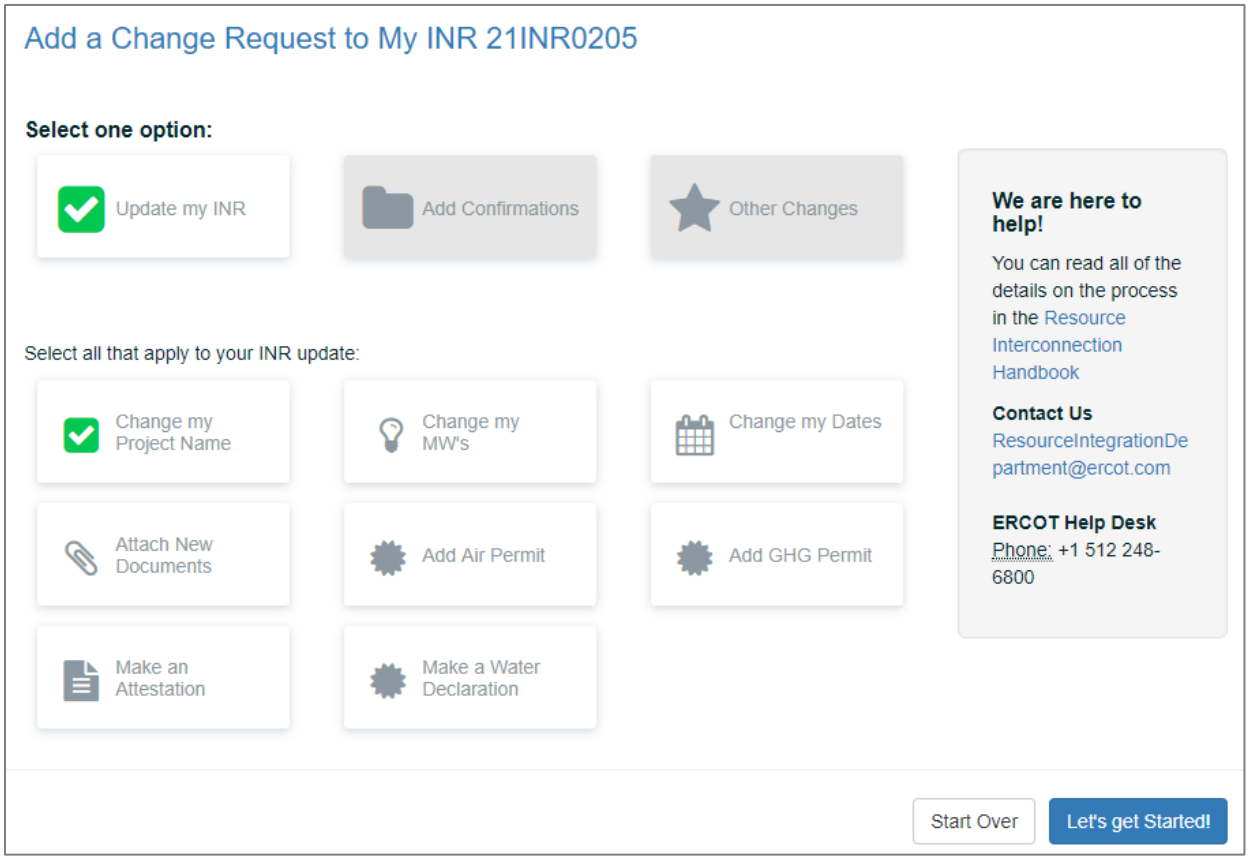
1 Click the **Add Change Request** button.

Add a Change Request Page



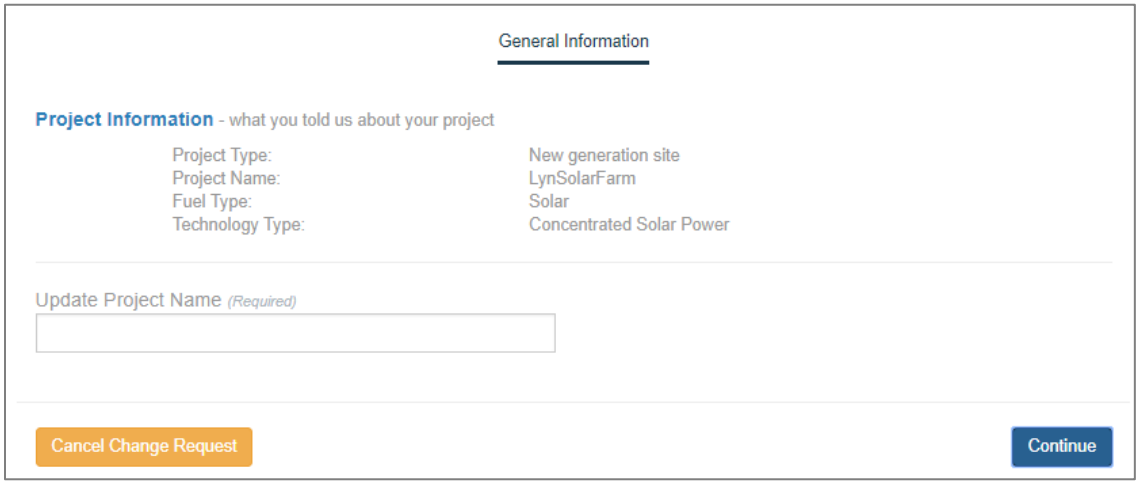
2 Click the **Update My INR** button. The page expands with the appropriate options.

Add a Change Request Page With Options



3 Click the **Change my Project Name** button and then click the **Let's get Started** button.

Project Information Page



4 Type in your new or modified project name.

> Remember that the project name **must be unique** across ERCOT.

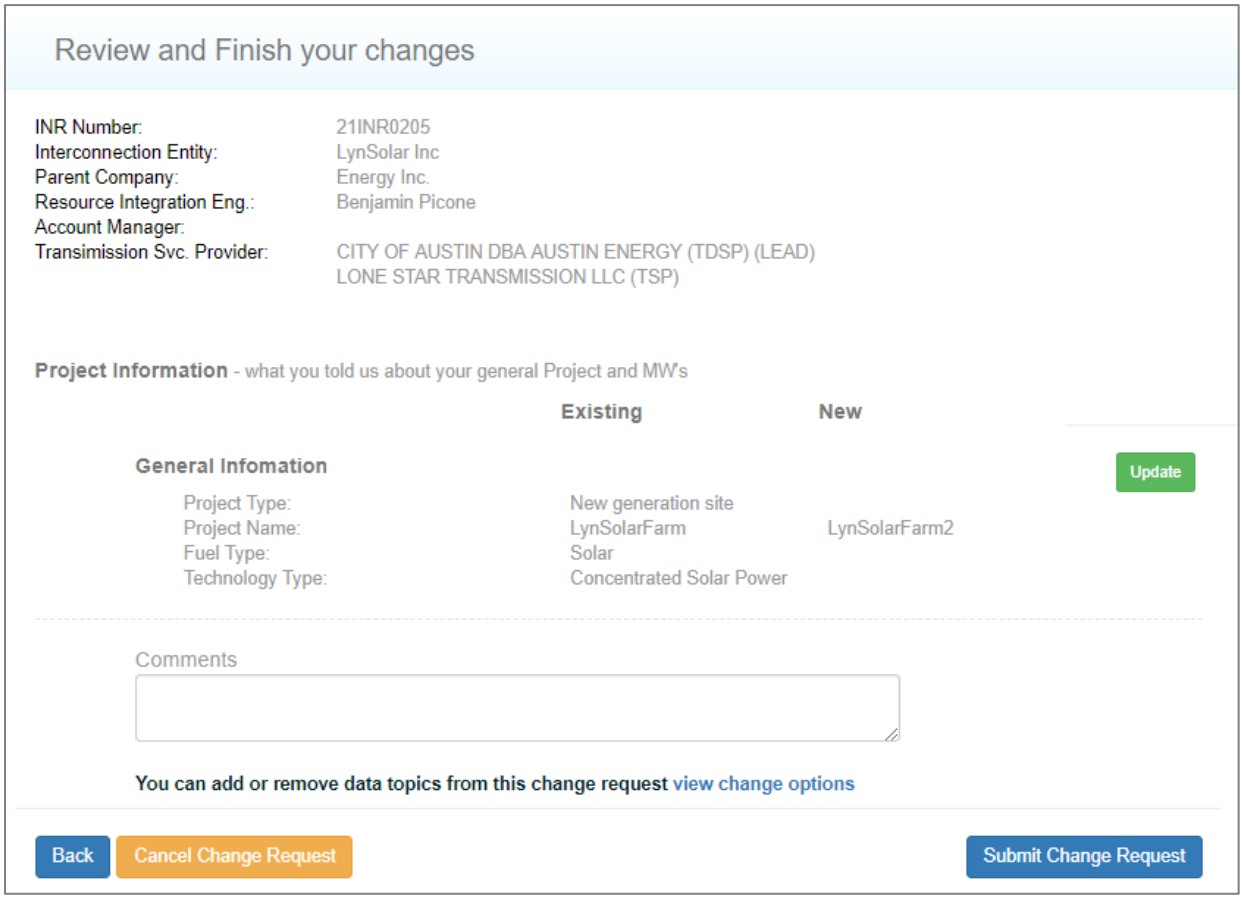
5 Click the **Continue** button.

The *Review and Finish your changes* page displays next unless you have clicked multiple **Change My INR** options. If you also clicked the:

- Change my MWs option, the MWs page on page 56 displays.
- Changing the project dates, the Project Dates page on page 60 displays.
- Attaching new documents, the Attach Document page on page 63 displays.
- Adding an Air permit, the Air Permit page on page 68 displays.
- Adding a GHG permit, the GHG Permit page on page 72 displays.

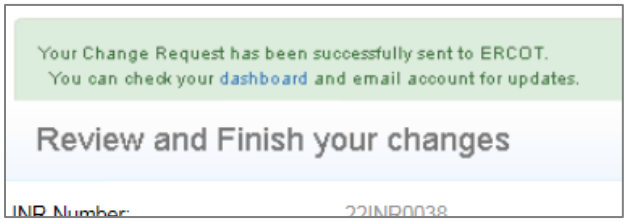
After you complete the options page, then a *Review and Finish your changes* page displays with all of the options you have changed listed.

Review and Finish your changes Page



6 Click the **Submit Change Request** button.

Change Request Successfully Sent Message

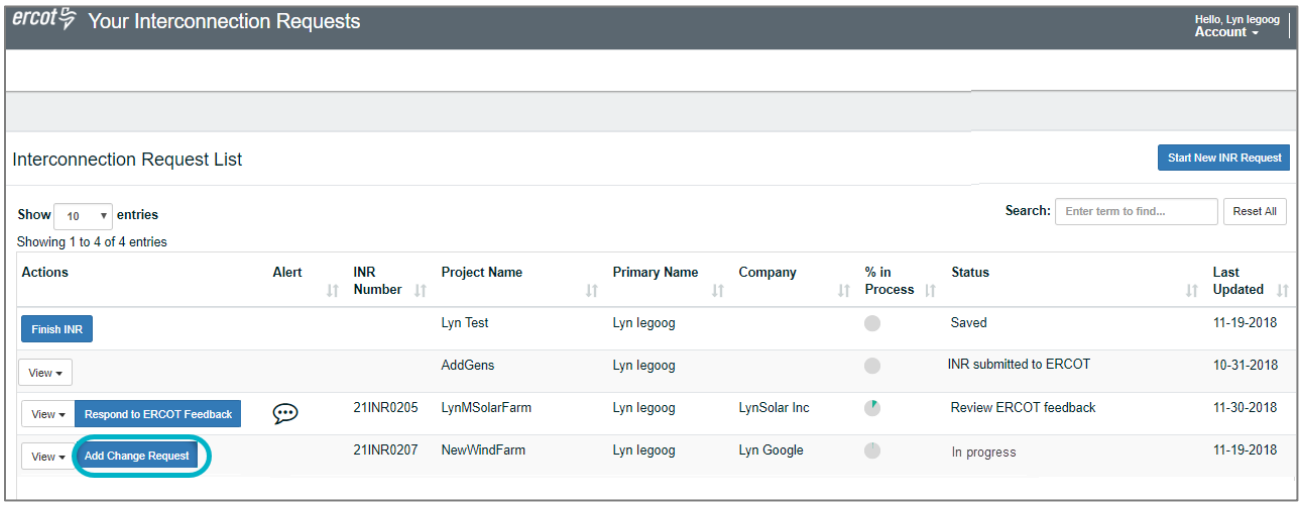


To close this page and return to the Interconnection Requests List, click the link in this message or the ercot logo at the top left of the page.

Changing the MWs

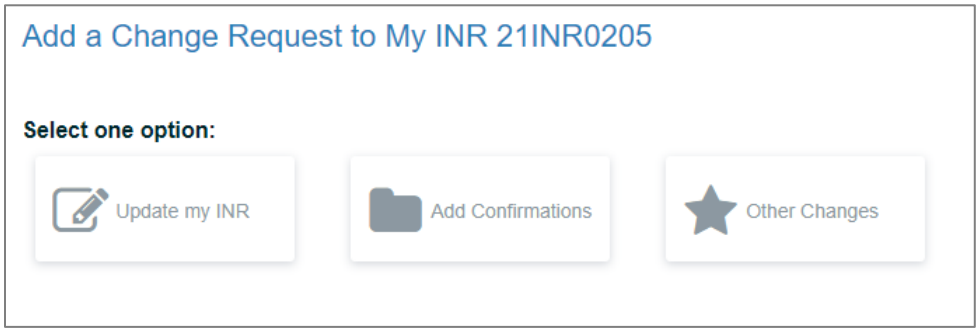
You can change the number of megawatts (MWs) you originally entered up to 20% of the amount you originally entered on your INR. If you change your summer or winter MWs, they cannot exeed 20% of the original and the overall MWs.

Interconnection Requests List Page



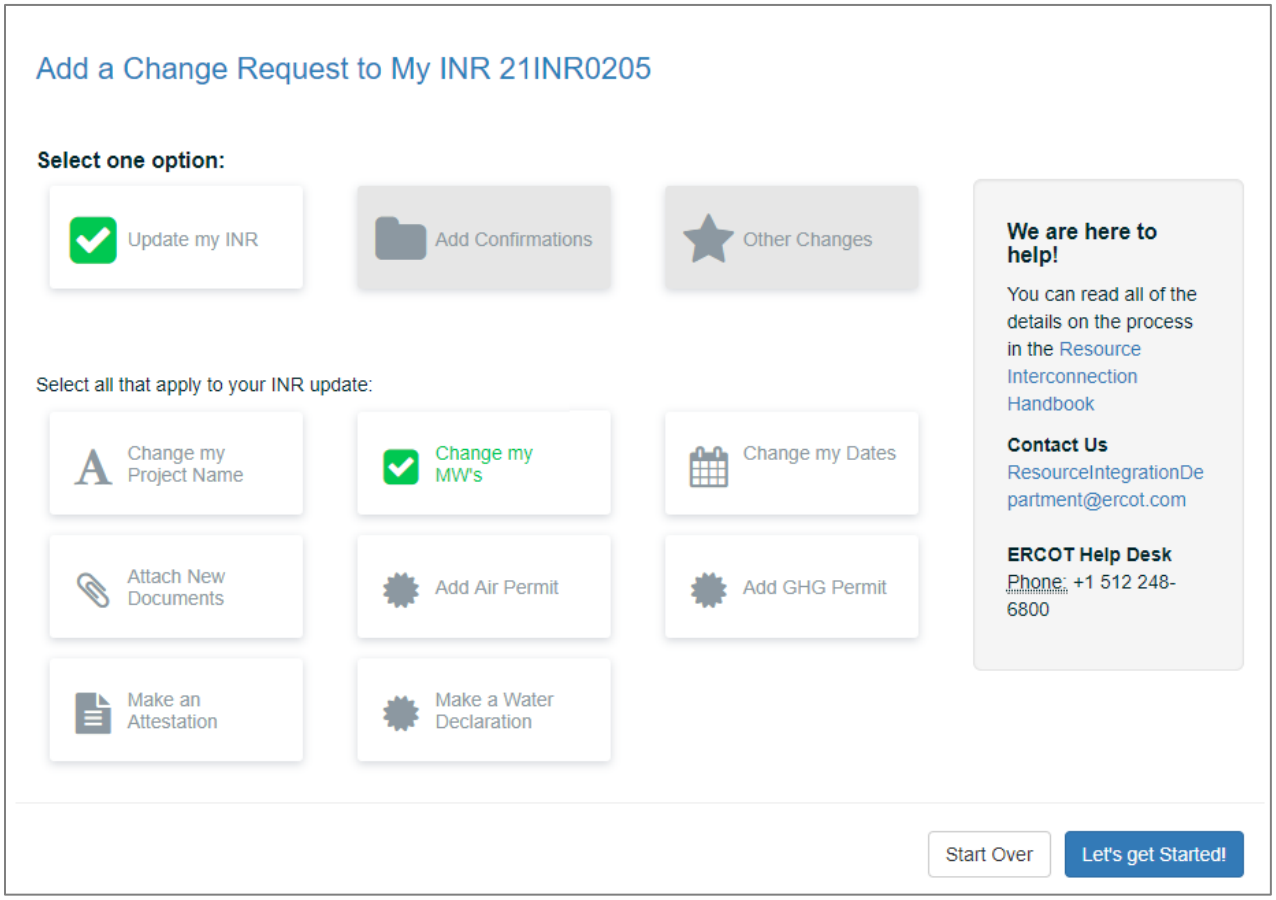
1 Click the **Add Change Request** button.

Add a Change Request Page



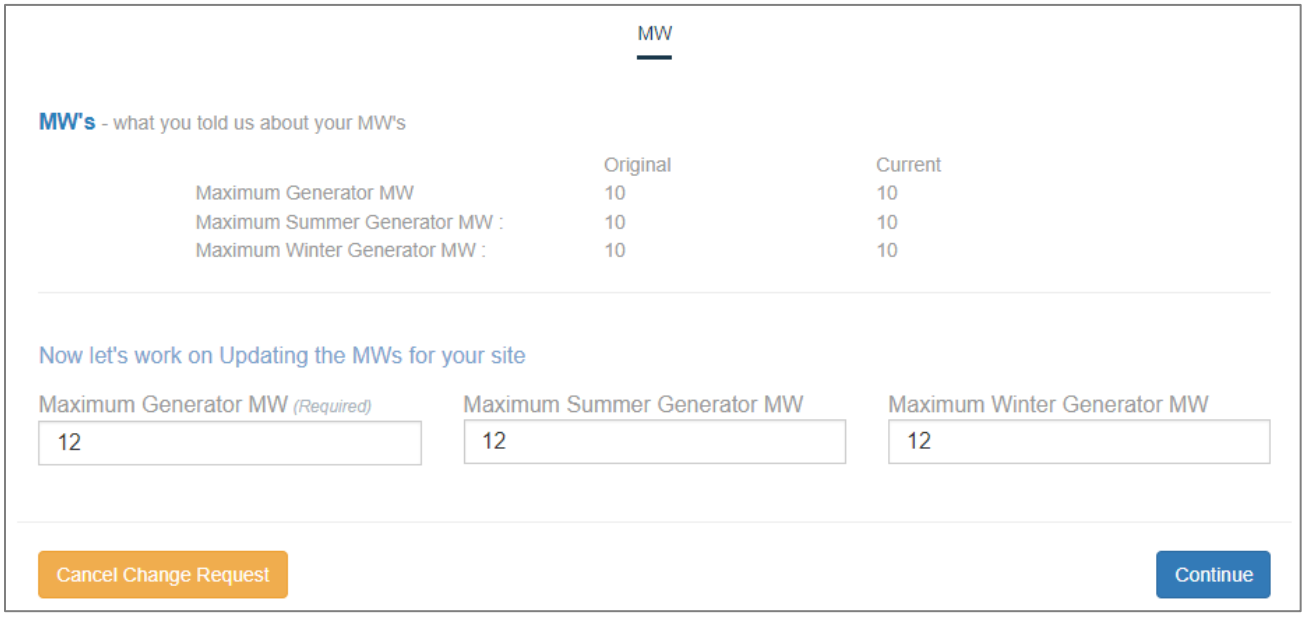
2 Click the **Update My INR** button. The page expands with the appropriate options.

Add a Change Request Page With Options



3 Click the **Change my Project Name** button and then click the **Let's get Started** button.

MWs Page



4 Make your changes.

Reminders:

- The maximum value cannot be greater than 20% more than original displayed here.
- MW must be less than 10,000.
- Summer MWs and Winter MWs cannot exceed overall MWs.

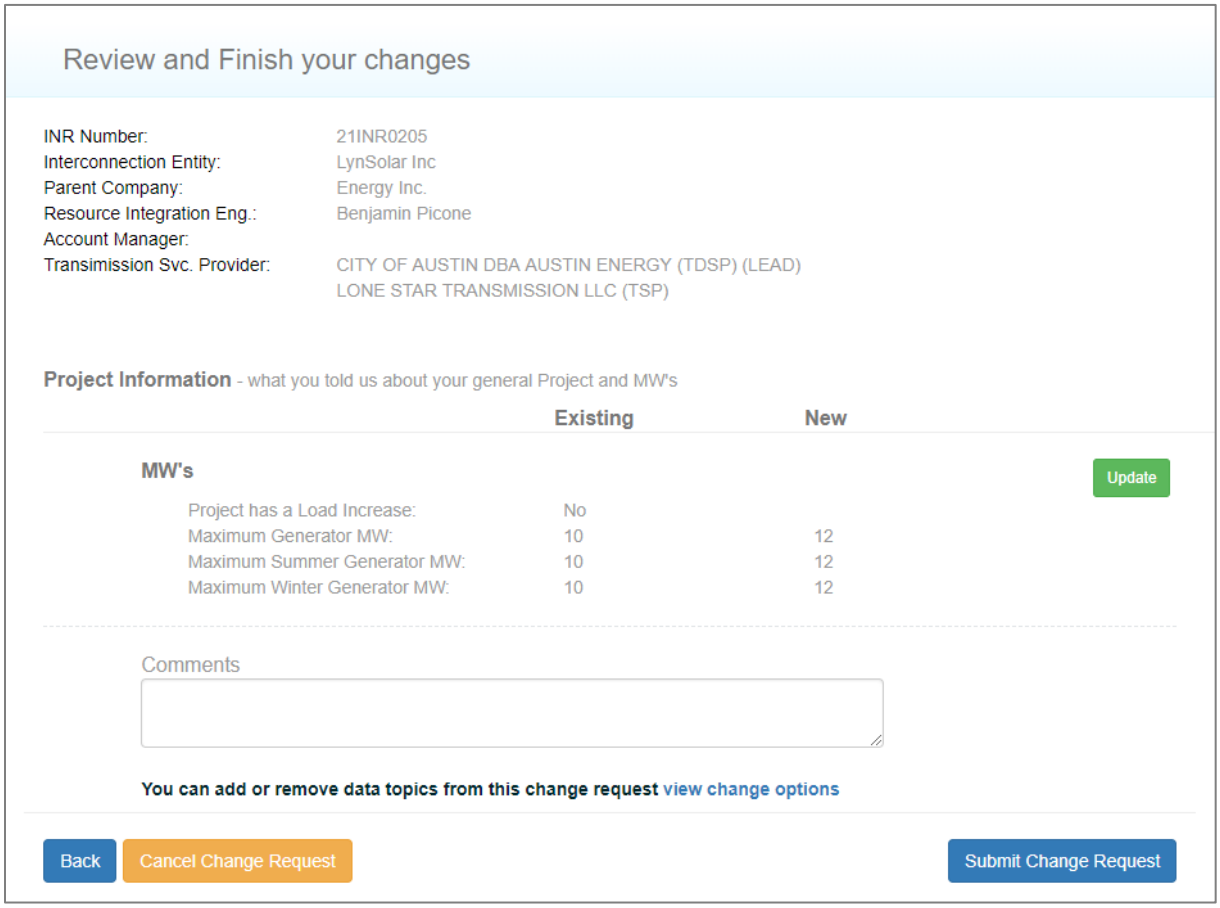
5 Click the **Continue** button.

The *Review and Finish your changes* page displays next unless you have clicked multiple **Change My INR** options. If you also clicked the:

- Changing the project dates, the Project Dates page on page 60 displays.
- Attaching new documents, the Attach Document page on page 63 displays.
- Adding an Air permit, the Air Permit page on page 68 displays.
- Adding a GHG permit, the GHG Permit page on page 72 displays.

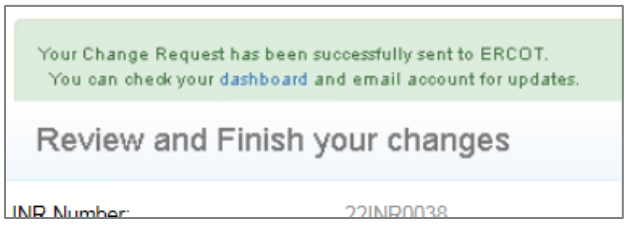
After you complete the options page, then a *Review and Finish your changes* page displays with all of the options you have changed listed.

Review and Finish your changes Page



6 Click the **Submit Change Request** button.

Change Request Successfully Sent Message

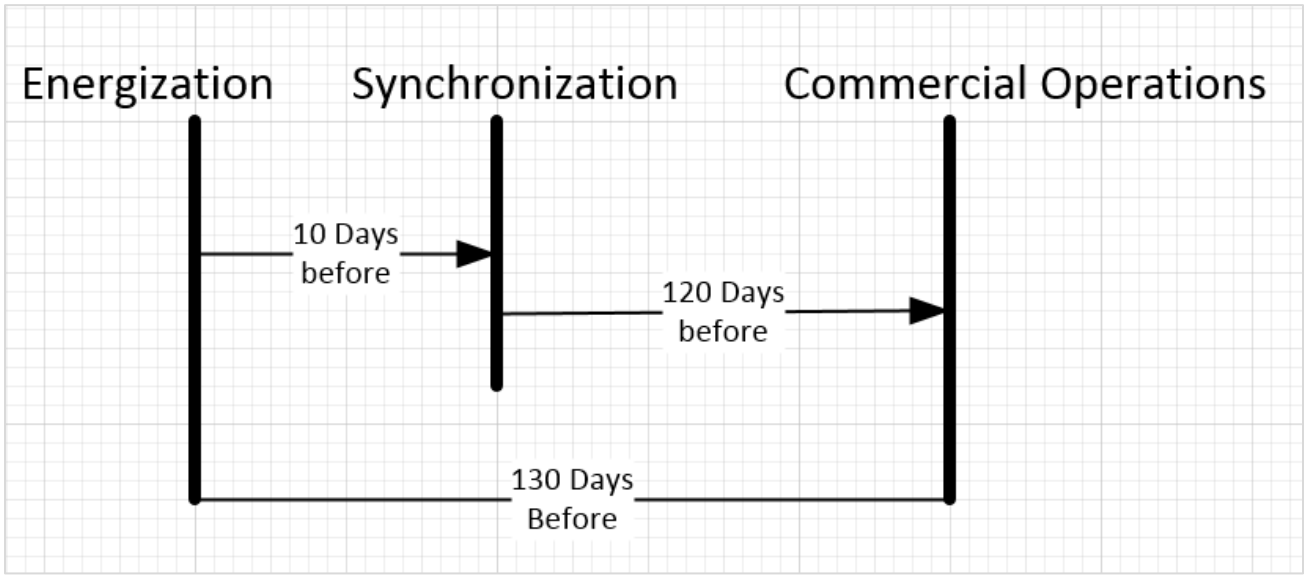


To close this page and return to the Interconnection Requests List, click the link in this message or the ercot logo at the top left of the page.

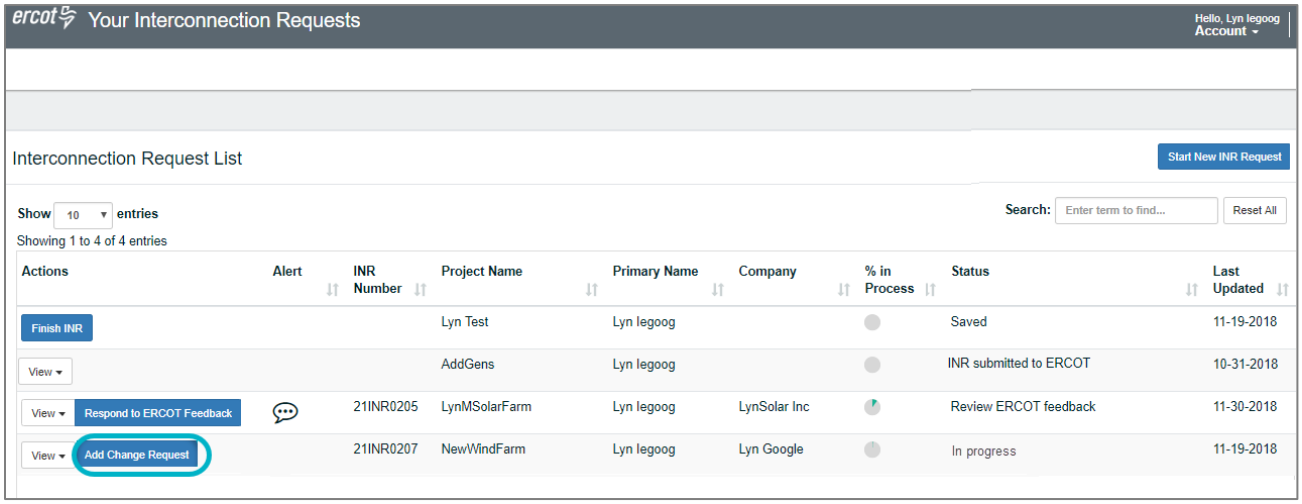
Changing the Project Dates

You can change your original Commercial Operation date (COD) as well as the Energenization and Synchronization dates, or add them if you did not in your original request.

The dates must be in the order shown on the page. The Energization date must be at least 130 days before the COD and 10 days before the Synchronization date. The Synchronization date must be at least 10 days after the Energization date and 120 days before the COD.

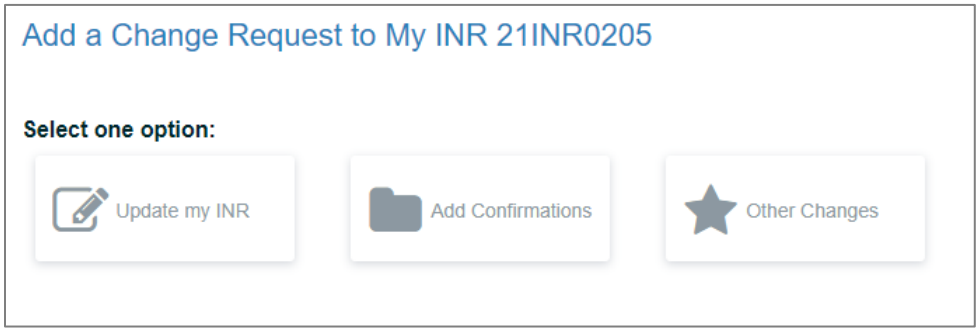


Interconnection Requests List Page



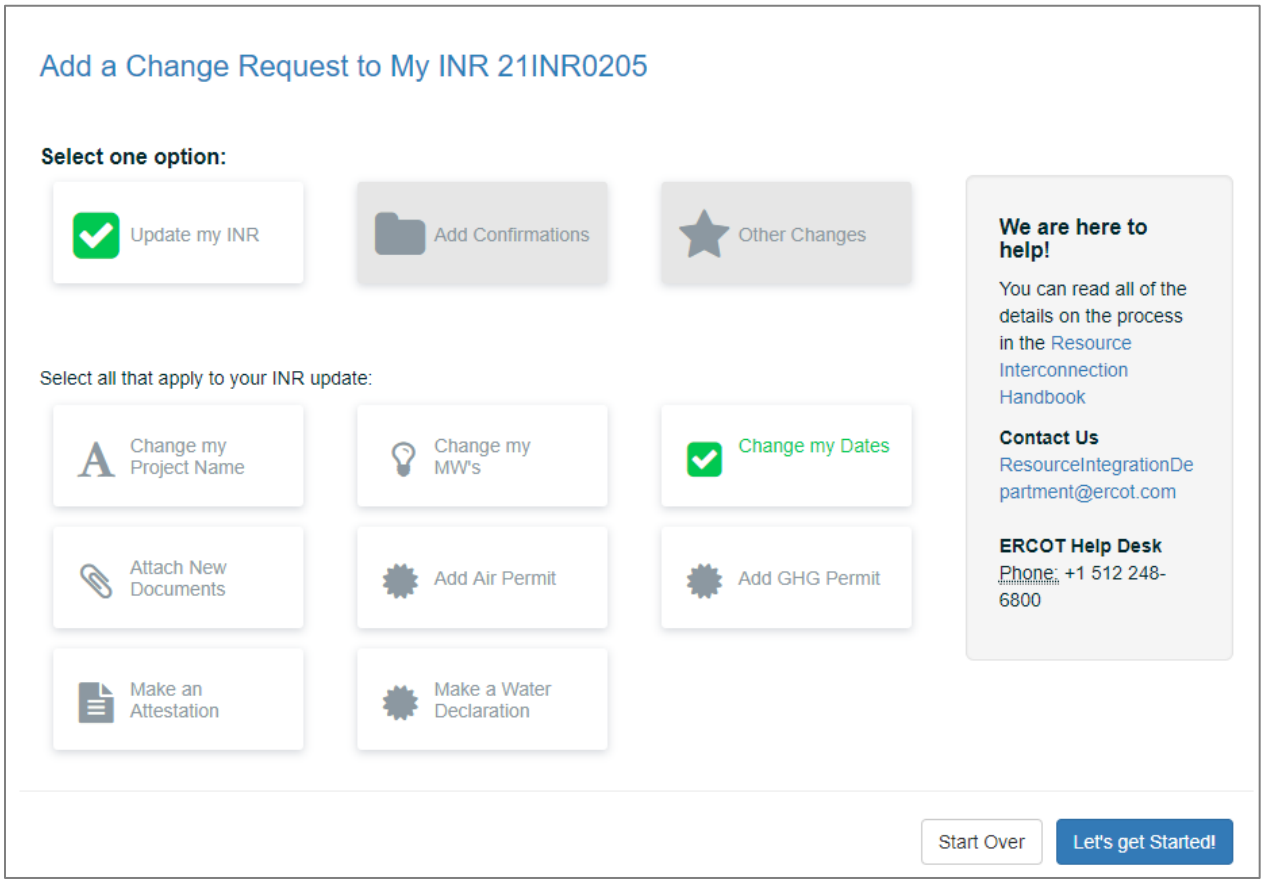
1 Click the **Add Change Request** button.

Add a Change Request Page



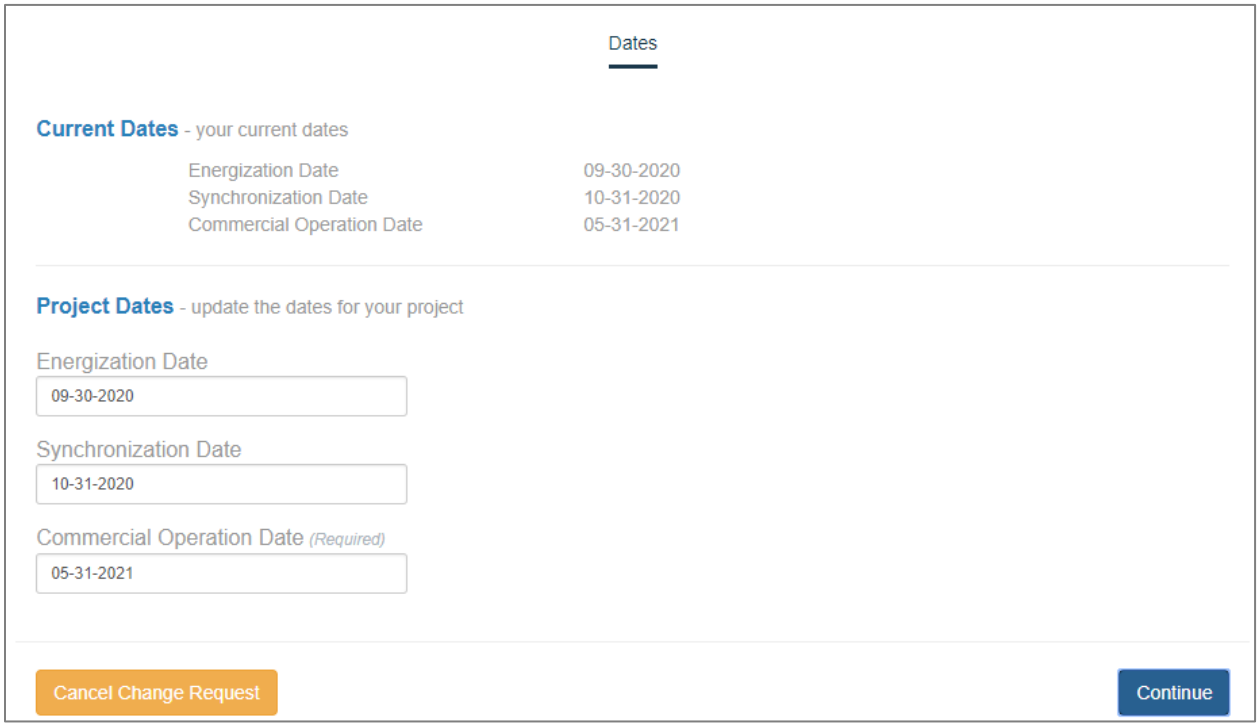
2 Click the **Update My INR** button. The page expands with the appropriate options.

Add a Change Request Page With Options



3 Click the **Change my Dates** button and then click the **Let's get Started** button.

Project Dates Page



4 Type in your changes.

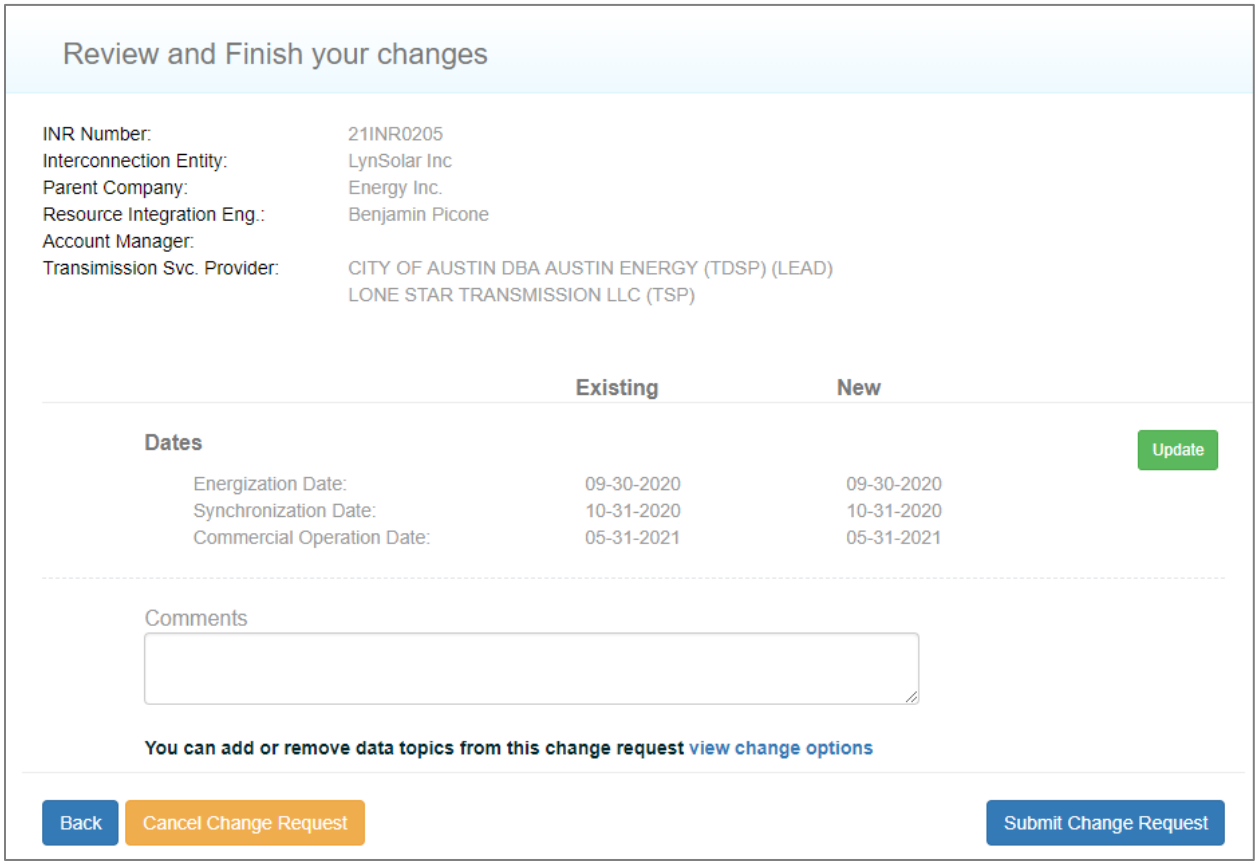
5 Click the **Continue** button

The *Review and Finish your changes* page displays next unless you have clicked multiple **Change My INR** options. If you also clicked the:

- Attaching new documents, the Attach Document page on page 63 displays.
- Adding an Air permit, the Air Permit page on page 68 displays.
- Adding a GHG permit, the GHG Permit page on page 72 displays.

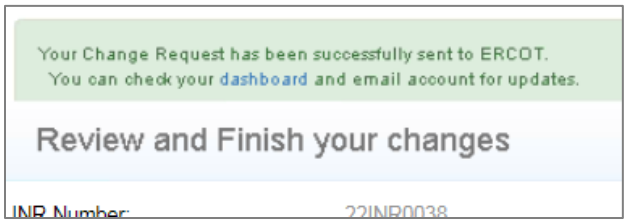
After you complete the options page, then a *Review and Finish your changes* page displays with all of the options you have changed listed.

Review and Finish your changes Page



6 Click the **Submit Change Request** button.

Change Request Successfully Sent Message

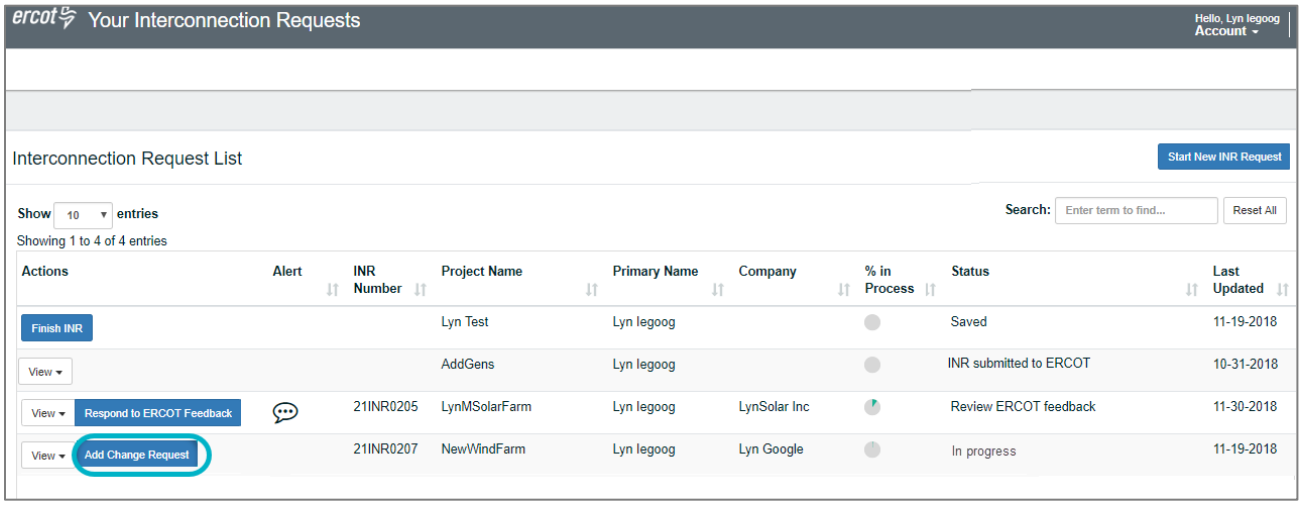


To close this page and return to the Interconnection Requests List, click the link in this message or the ercot logo at the top left of the page.

Attaching New Documents

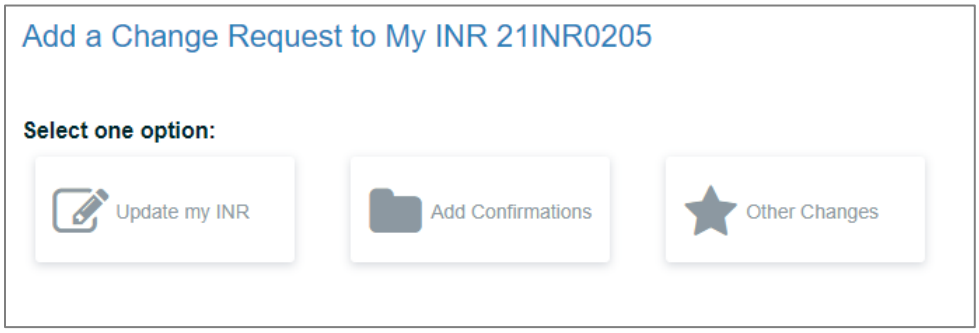
When you created your Interconnection Request, you were required to upload certain documents. You can upload modified versions of the documents plus any other documents your project needs.

Interconnection Requests List Page



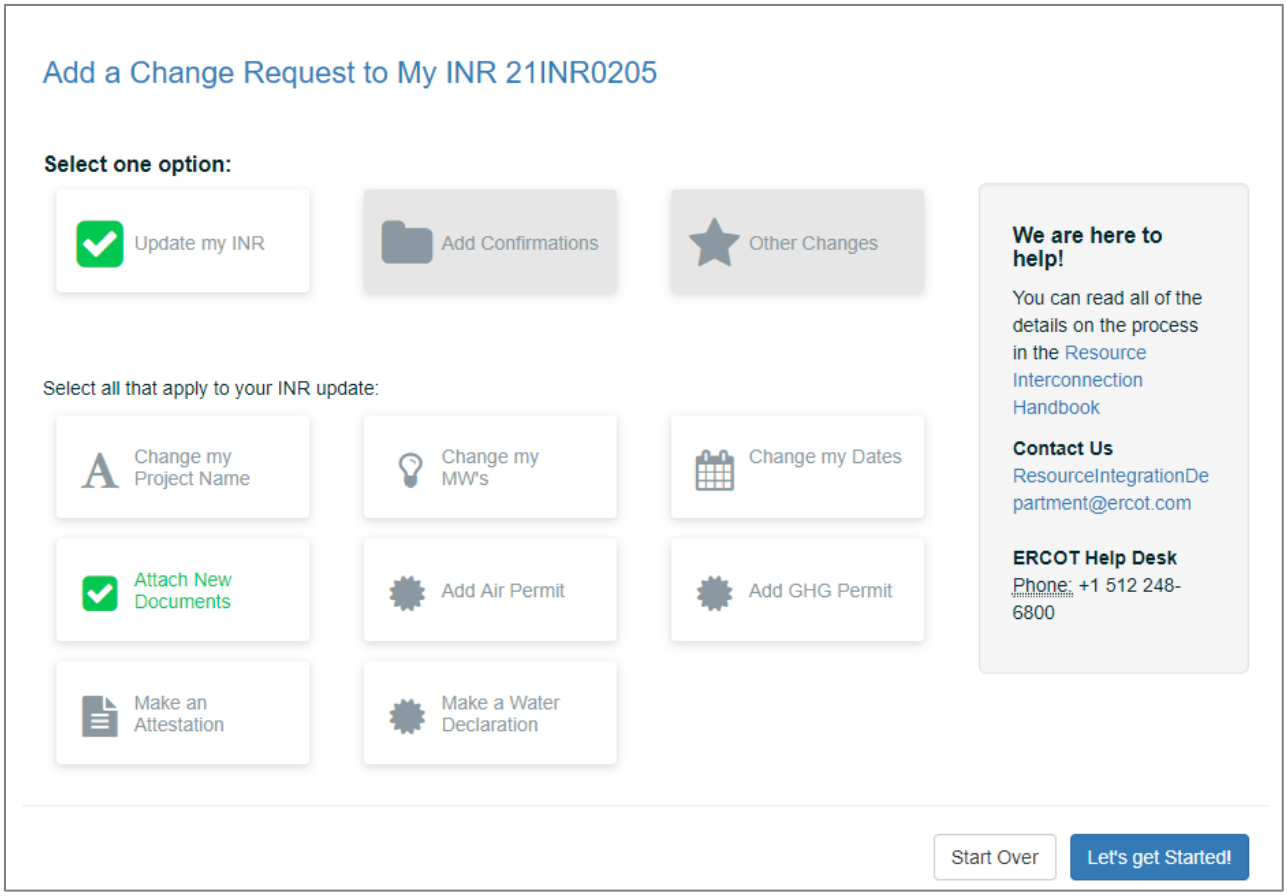
1. Click the **Add Change Request** button.

Add a Change Request Page



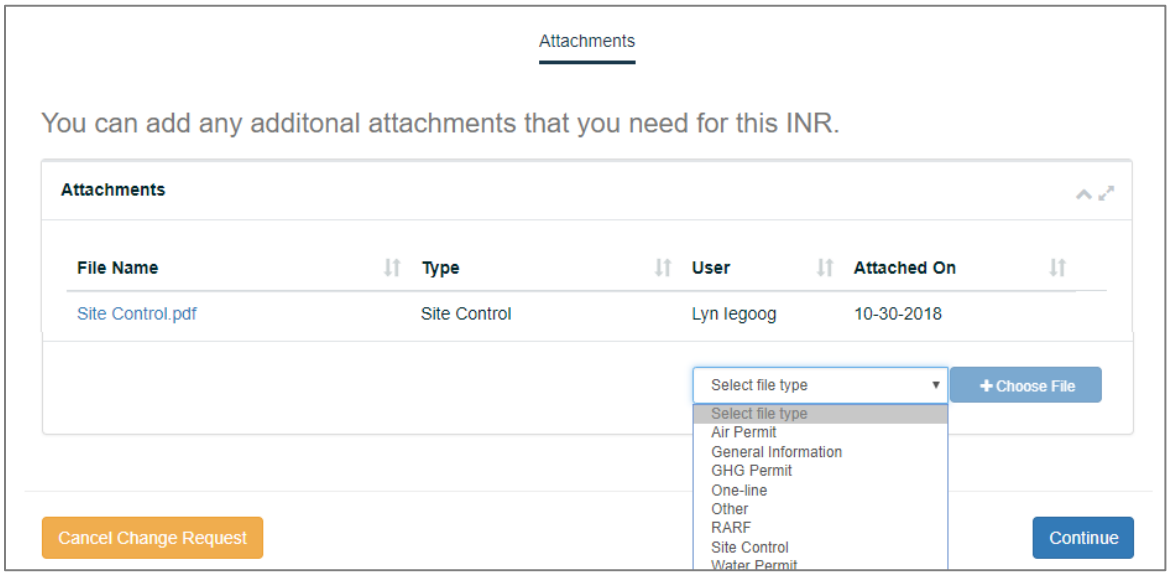
2. Click the **Update My INR** button. The page expands with the appropriate options.

Add a Change Request Page With Options



3 Click the **Attach New Documents** button and then click the **Let's get Started** button.

Attachments Page



4. Click the **Select file type** dropdown and click the type of file you plan to upload.

5. Click the **Choose File** button and navigate to the file on your computer.

6. Repeat the steps above for each file you want to upload.

7. Click the **Continue** button.

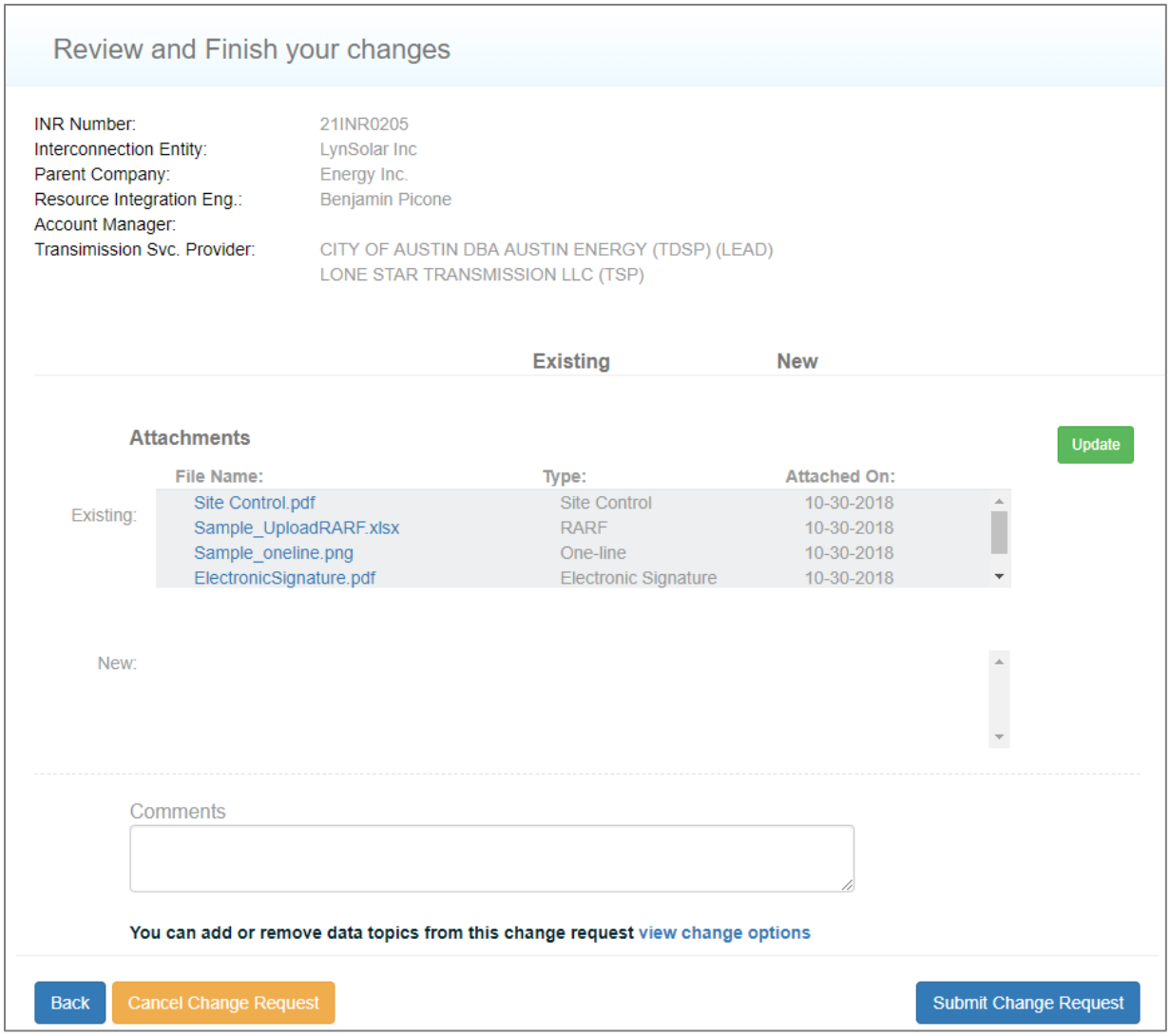
> Uploaded the wrong file? Use the **Delete** button to remove it.
>
> Need to delete a submitted document? You can contact ERCOT at ginr@ercot.com

The *Review and Finish your changes* page displays next unless you have clicked multiple **Change My INR** options. If you also clicked the:

- Adding an Air permit, the Air Permit page on page 68 displays.
- Adding a GHG permit, the GHG Permit page on page 72 displays.

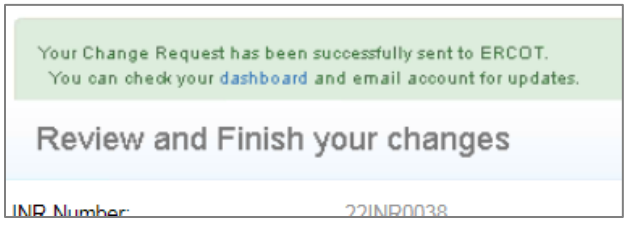
After you complete the options page, then a *Review and Finish your changes* page displays with all of the options you have changed listed.

Review and Finish your changes Page



8 Click the **Submit Change Request** button.

Change Request Successfully Sent Message

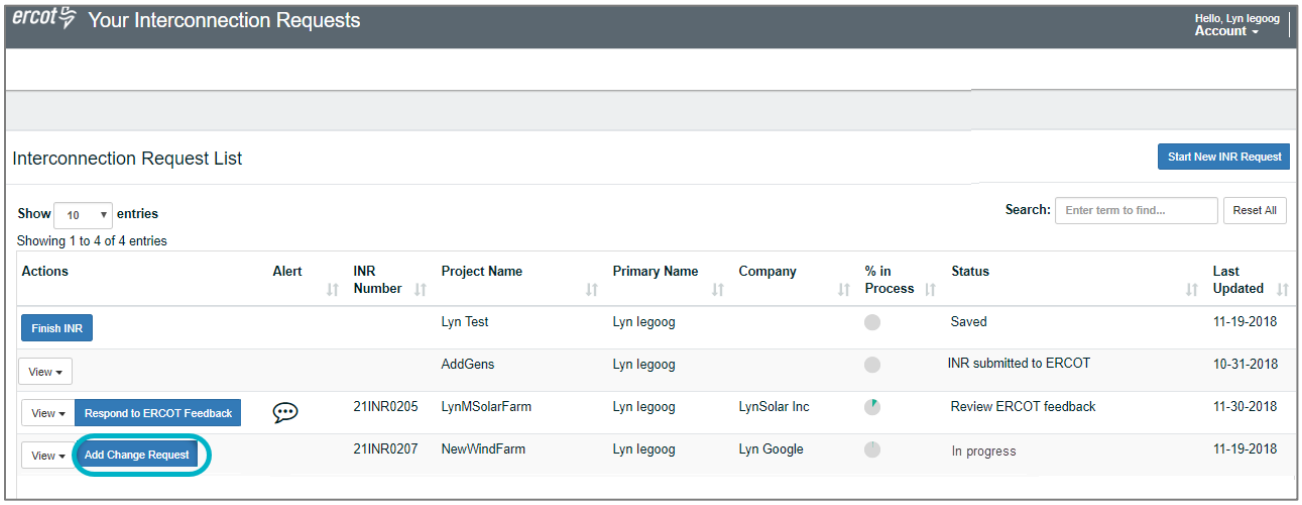


To close this page and return to the Interconnection Requests List, click the link in this message or the ercot logo at the top left of the page.

Adding an Air Permit

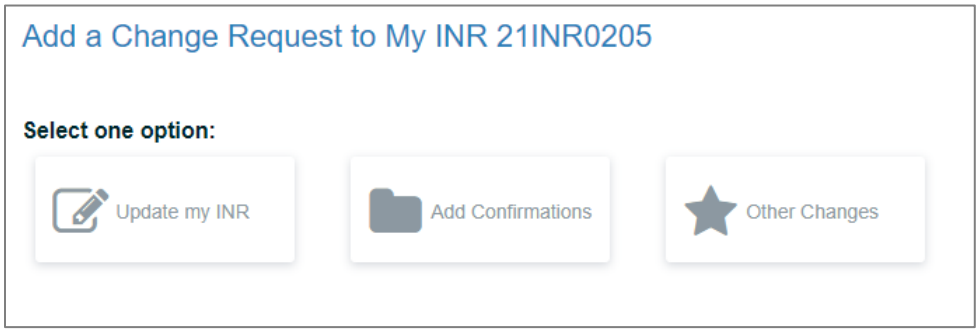
If your project requires an Air quality permit, you must enter the date it was issued. You can optionally upload a file containing a copy of the permit.

Interconnection Requests List Page



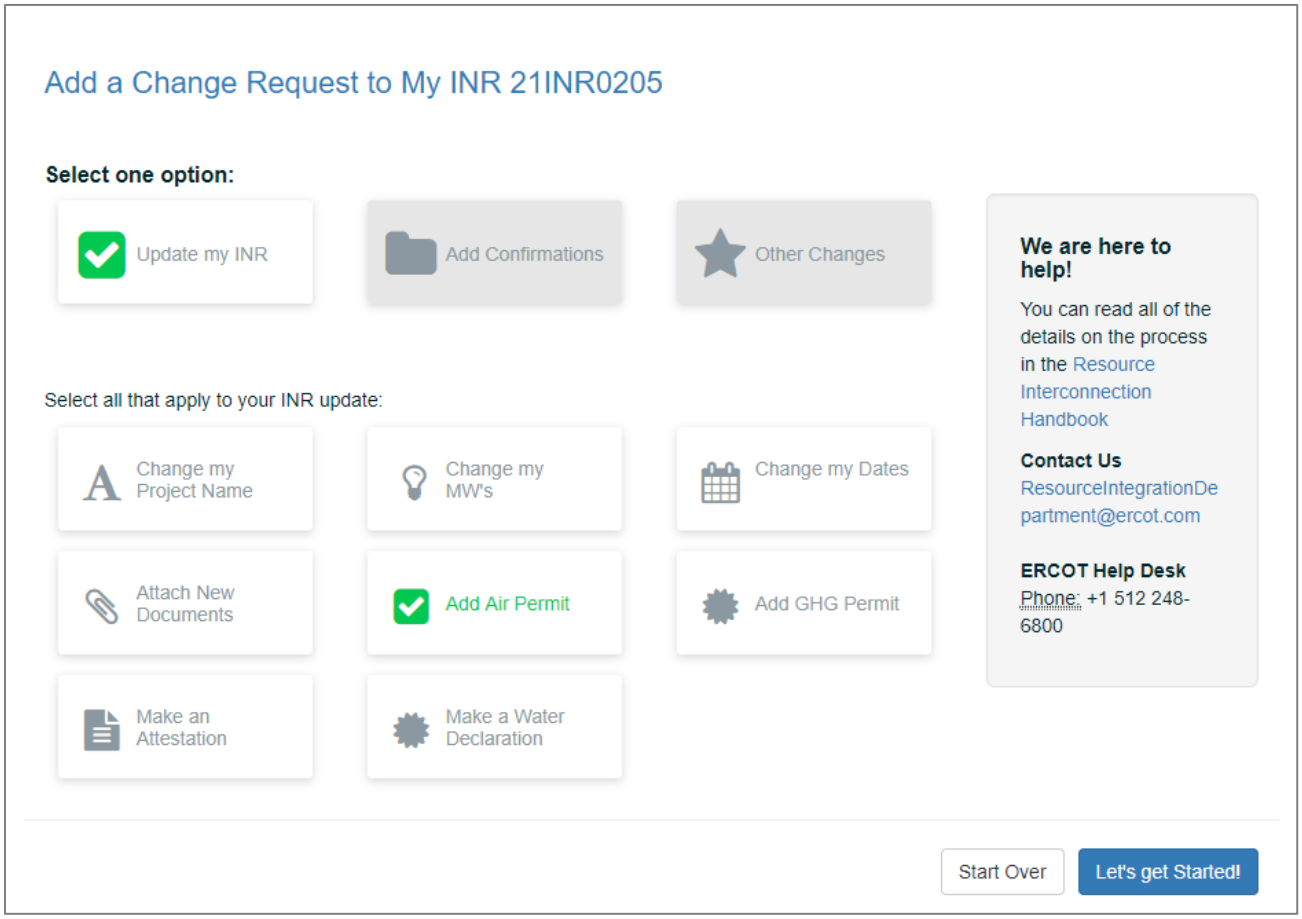
1 Click the **Add Change Request** button.

Add a Change Request Page



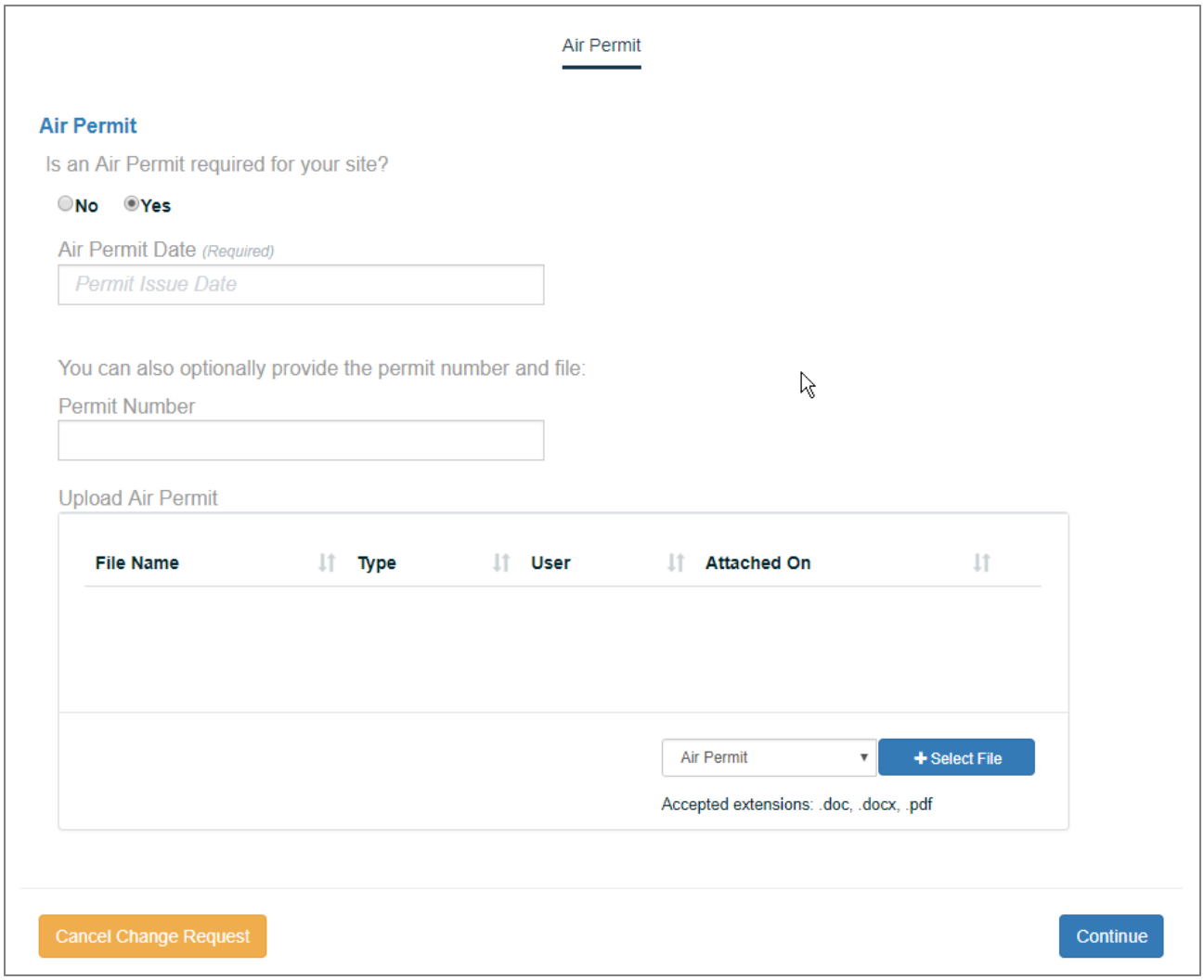
2 Click the **Update My INR** button. The page expands with the appropriate options.

Add a Change Request Page With Options



3 Click the **Add Air Permit** button.

Air Permit Page



4. Click the **Yes** option.

5. Type in the mm-dd-yy when the permit was issued.

6. Type in the number of the Air Permit.

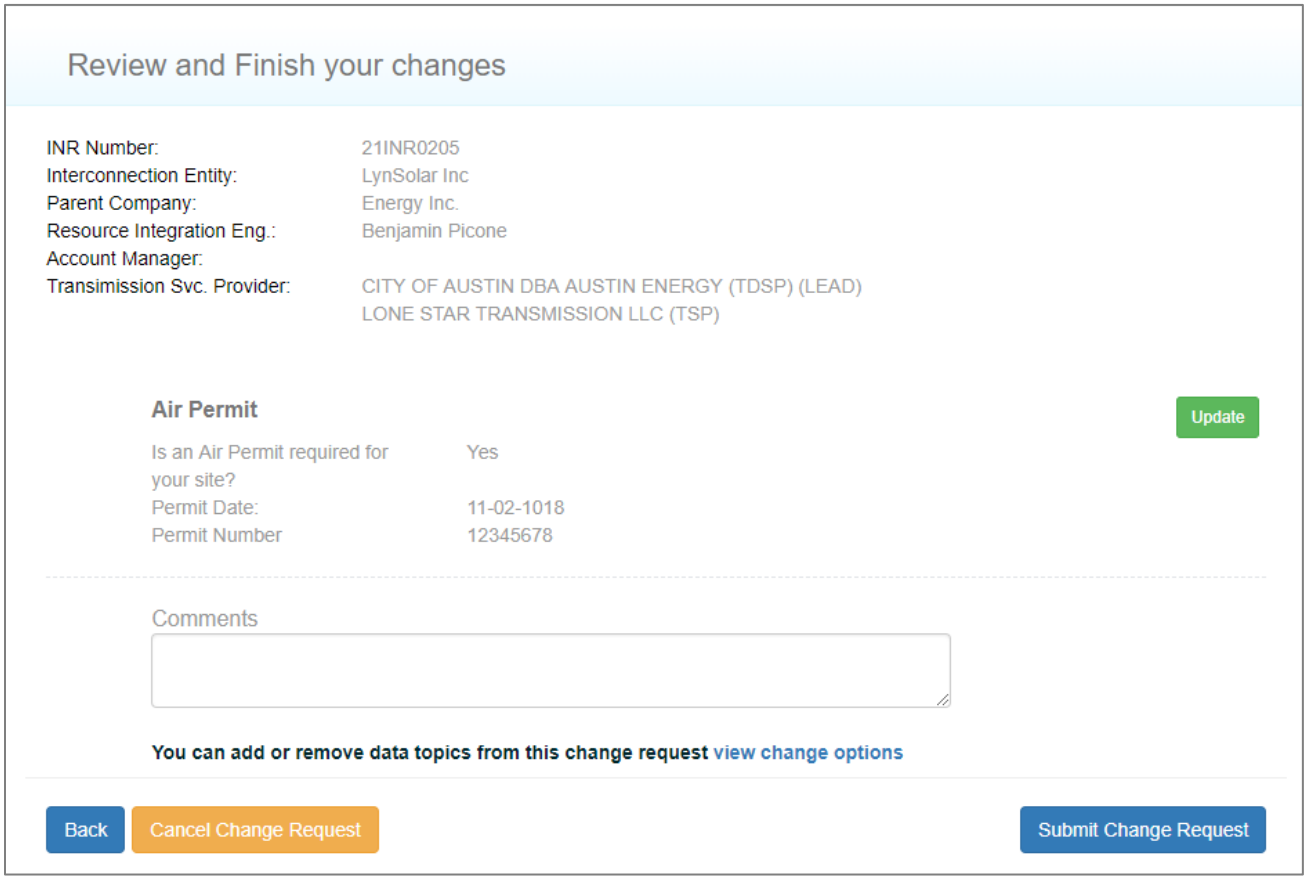
7. Optionally, upload a pdf file containing the Air Permit to display in the Attachments area on your account.

    A. Click the **Select file type** dropdown and click the type of file you plan to upload.

    B. Click the **Choose File** button, navigate to the file on your computer, and select it.

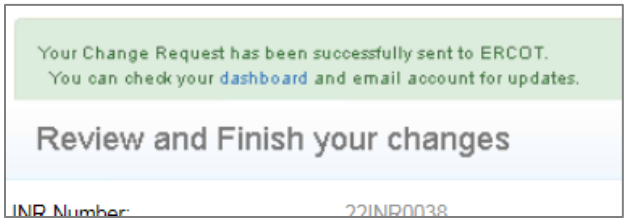
8. Click the **Continue** button.

Review and Finish your changes Page



9 Click the **Submit Change Request** button.

Change Request Successfully Sent Message



To close this page and return to the Interconnection Requests List, click the link in this message or the ercot logo at the top left of the page.

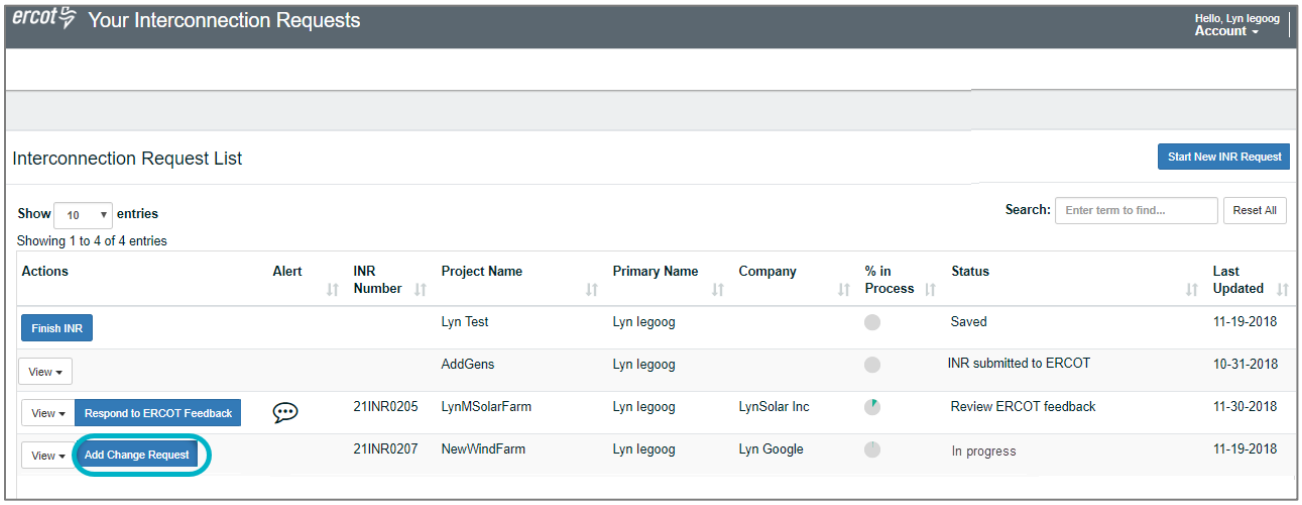
The *Review and Finish your changes* page displays next unless you have clicked multiple **Change My INR** options. If you also clicked Adding a GHG permit, the GHG Permit page on page 72 displays.

After you complete the options page, then a *Review and Finish your changes* page displays with all of the options you have changed listed.

Adding a Green House Gas Permit

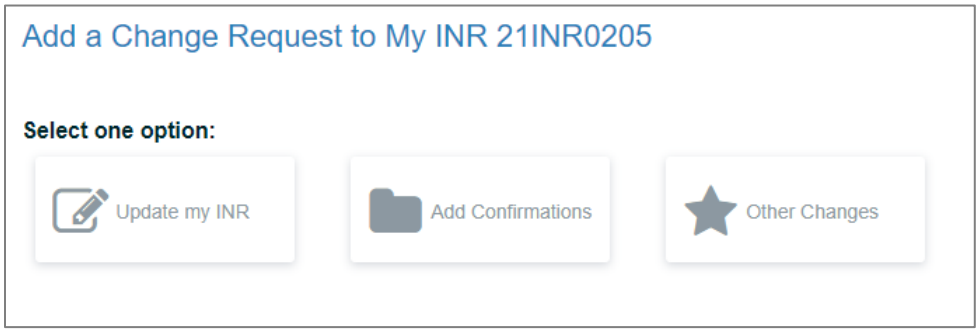
If your project requires a GHG permit, you must enter the date it was issued. You can optionally upload a file containing a copy of the permit.

Interconnection Requests List Page



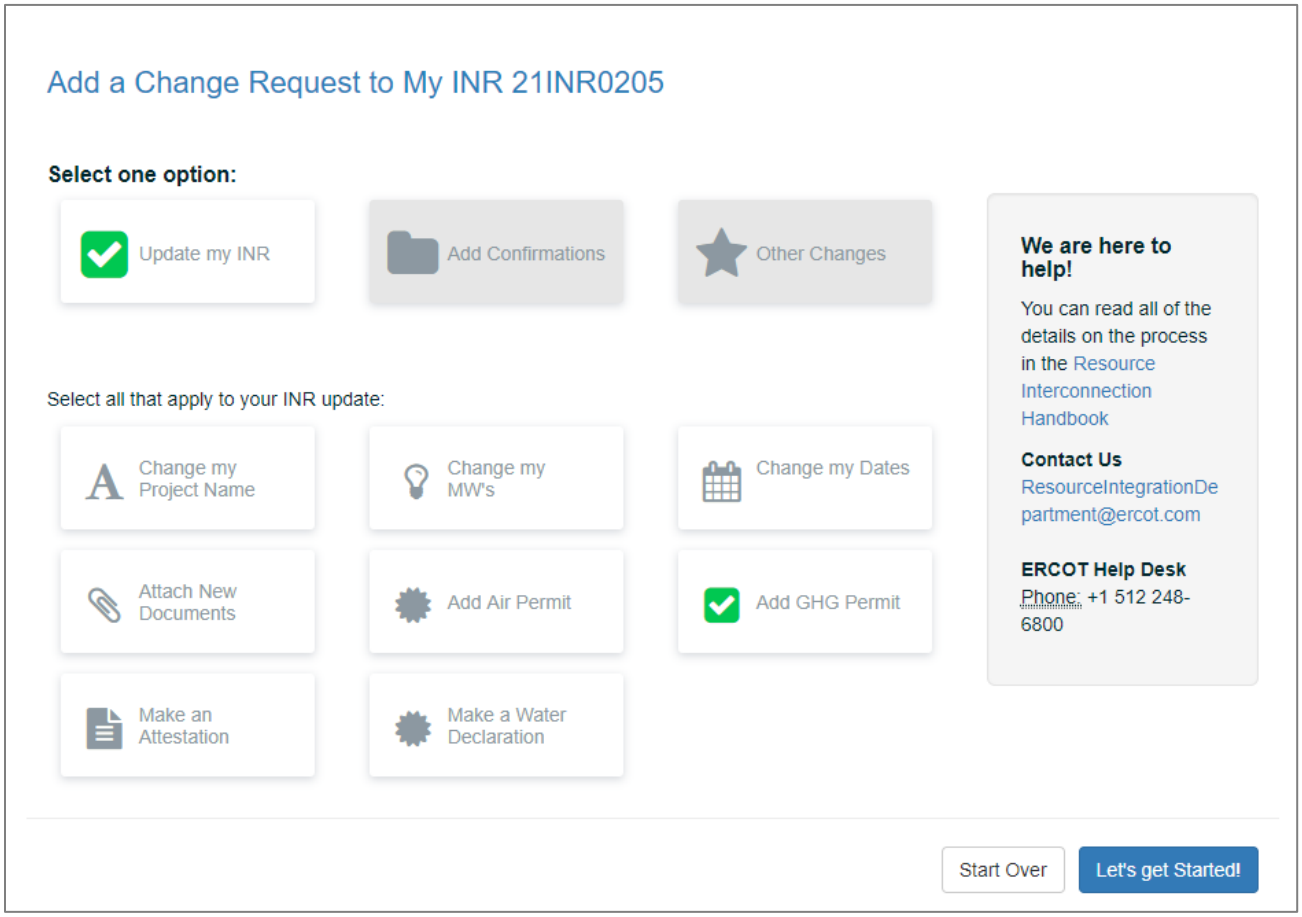
1. Click the **Add Change Request** button.

Add a Change Request Page



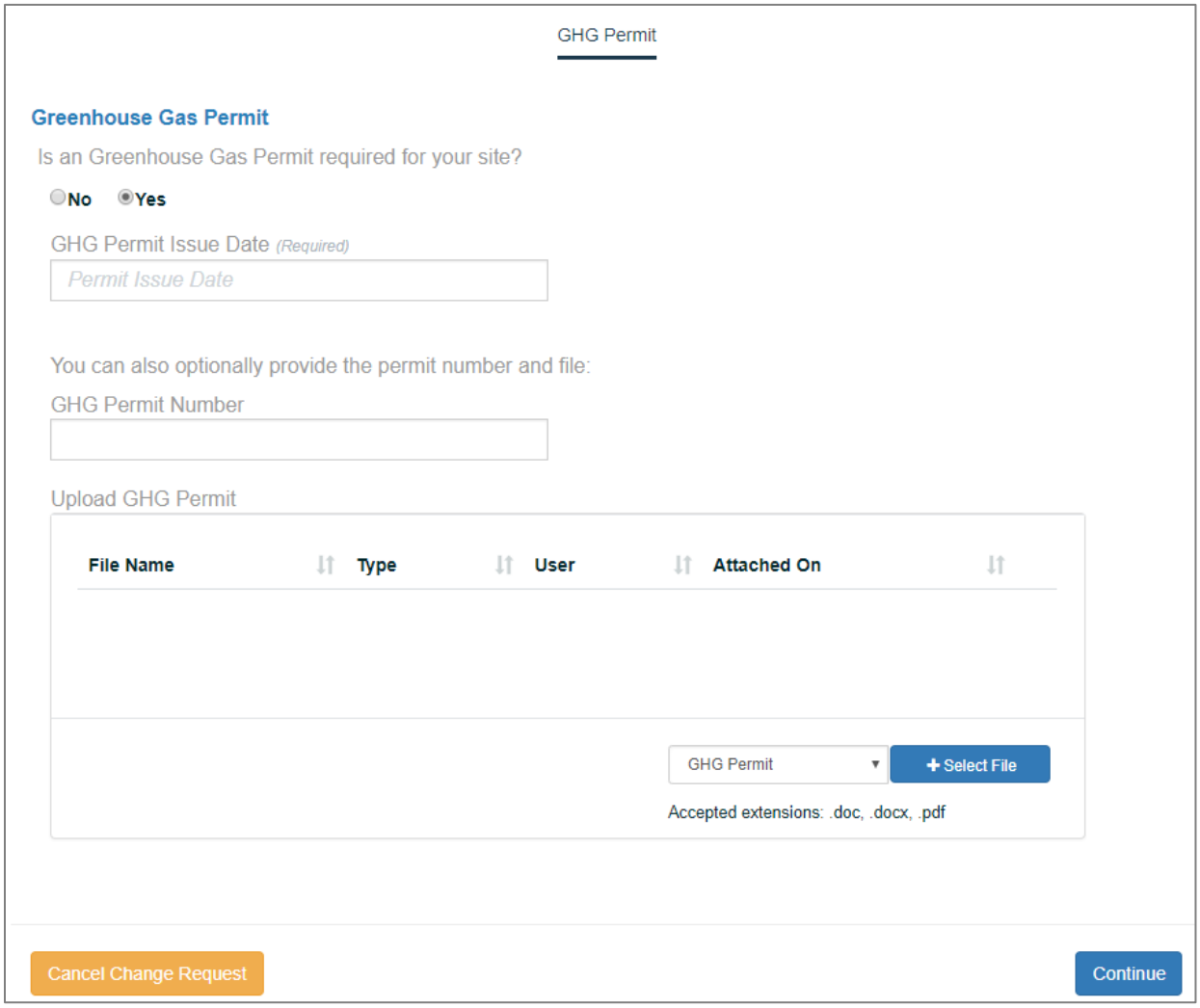
2. Click the **Update My INR** button. The page expands with the appropriate options.

Add a Change Request Page With Options



3 Click the **Add GHG Permit** button.

Greenhouse Gas Permit Page



4. Click the **Yes** option.

5. Type in the mm-dd-yy when the permit was issued.

6. Type in the number of the Air Permit.

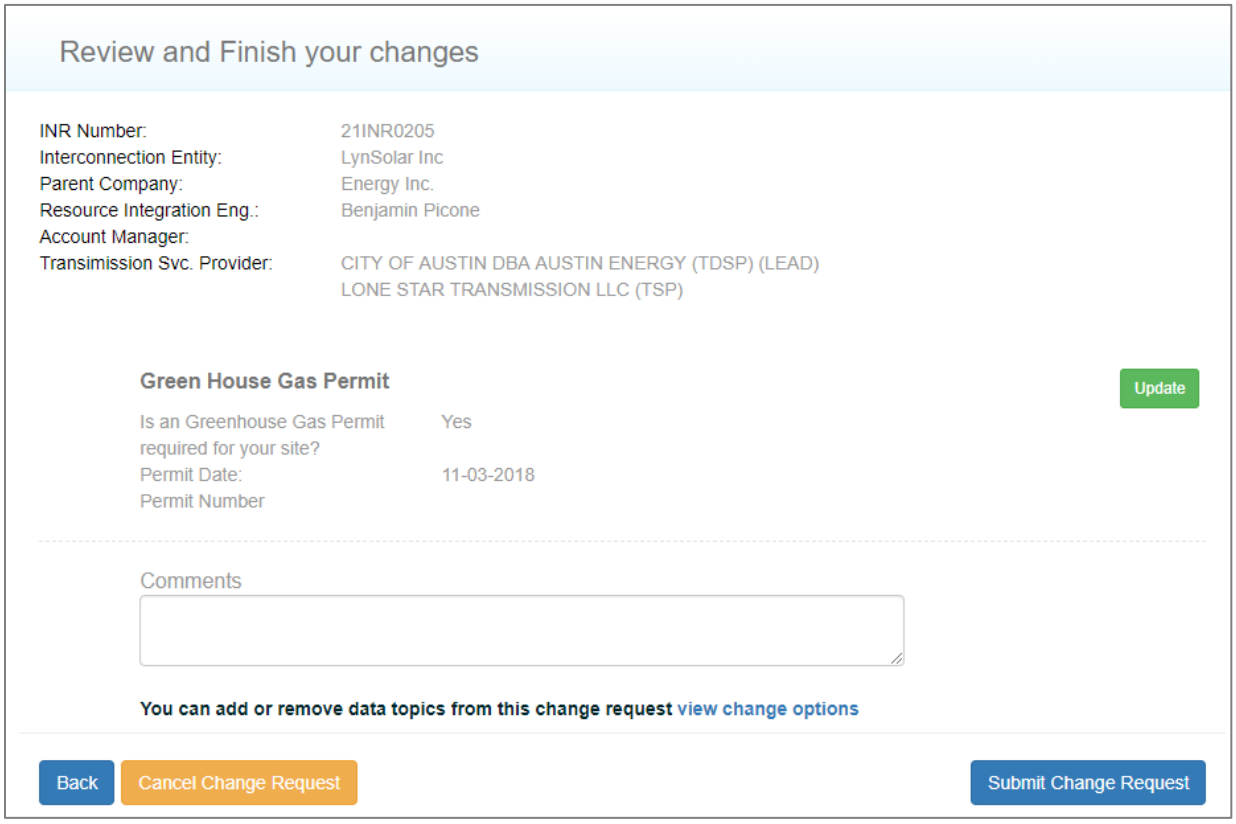
7. Optionally, upload a pdf file containing the Air Permit to display in the Attachments area on your account.

    A. Click the **Select file type** dropdown and click the type of file you plan to upload.

    B. Click the **Choose File** button, navigate to the file on your computer, and select it.

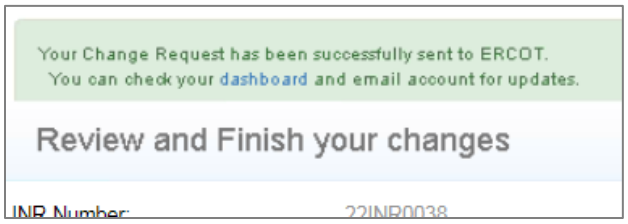
8. Click the **Continue** button.

Review and Finish your changes Page



9 Click the **Submit Change Request** button.

Change Request Successfully Sent Message

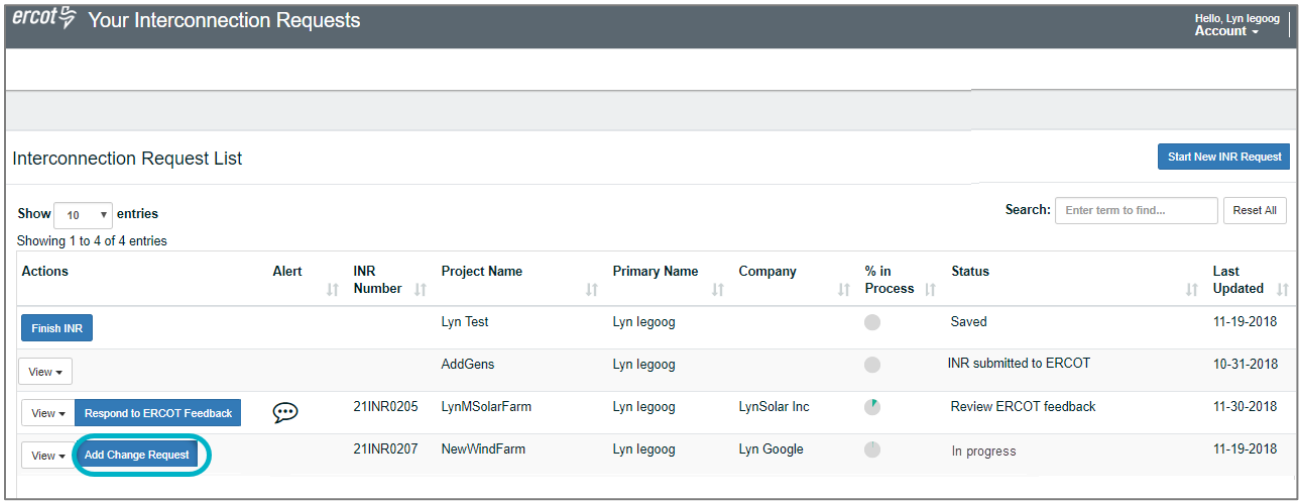


To close this page and return to the Interconnection Requests List, click the link in this message or the ercot logo at the top left of the page.

Adding a Water Rights Declaration

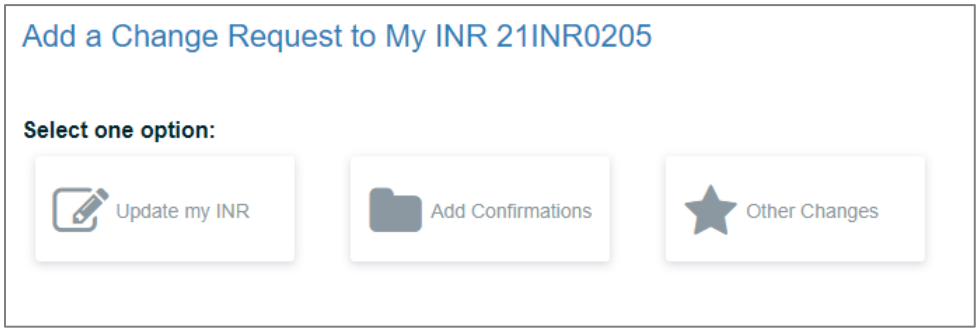
You must submit a change request that confirms either you do not need water rights, contracts or groundwater supplies in order to generate electricity at your site or that you have secured these rights.You can attach copies of any contracts, permits and ground water adequacy studies to this declaration.

Interconnection Requests List Page



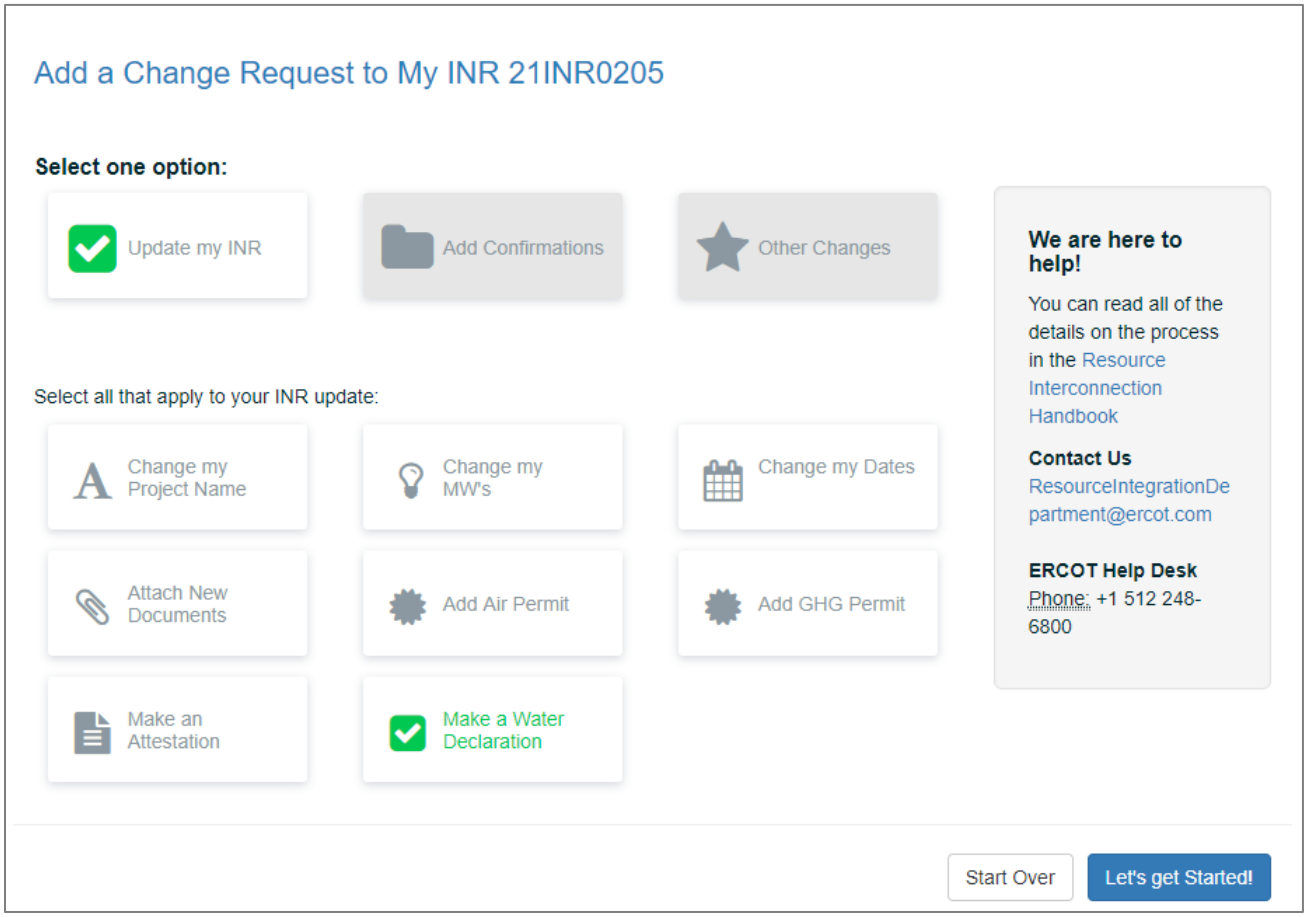
1 Click the **Add Change Request** button.

Add a Change Request Page



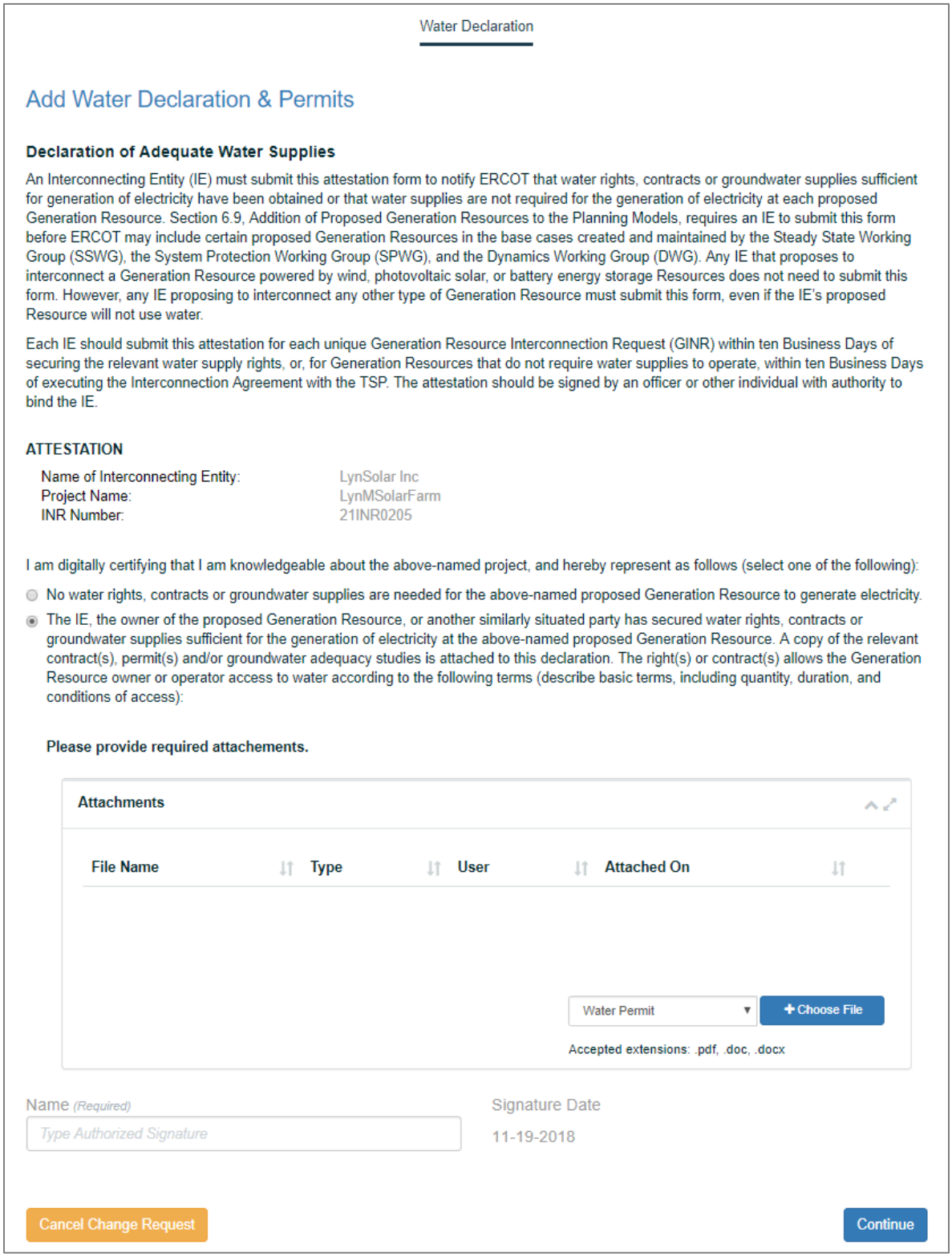
2 Click the **Update My INR** button. The page expands with the appropriate options.

Add a Change Request Page With Options



3 Click the **Make a Water Declaration** button and then click the **Let's get Started** button.

Water Declaration Page



4 Click the **Yes** option. The page will expand.

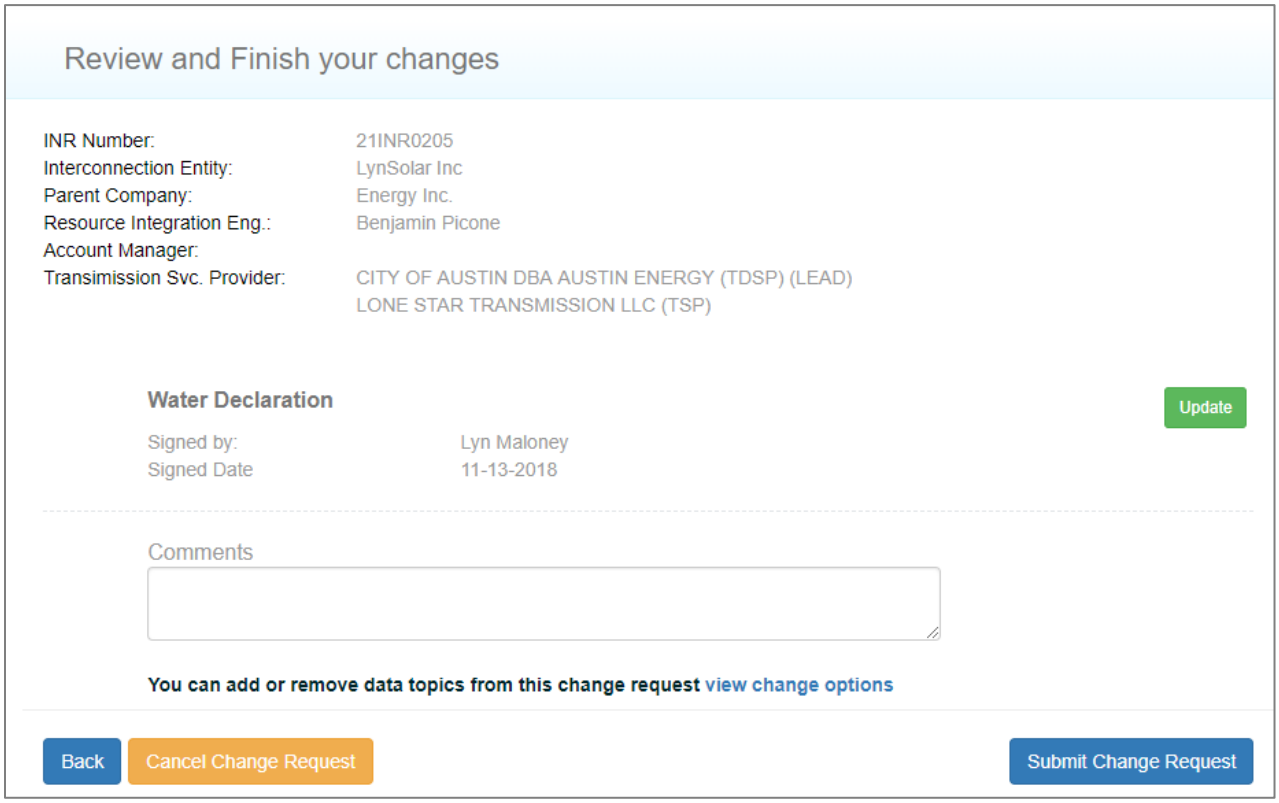
5. To attach files containing the permit, contracts, or ground water adequacy:

   A. Click the **Select file type** dropdown and click the type of file.

   B. Click the **Choose File** button, navigate to the file on your computer, and select it.

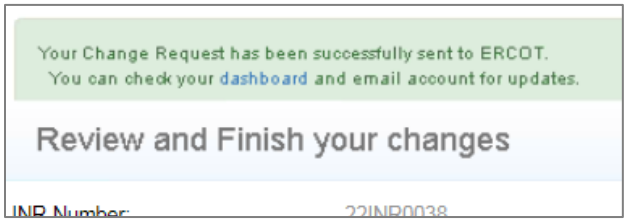
6. Click the **Continue** button.

Review and Finish your changes Page



7. Click the **Submit Change Request** button.

Change Request Successfully Sent Message



To close this page and return to the Interconnection Requests List, click the link in this message or the ercot logo at the top left of the page.

Adding Confirmations

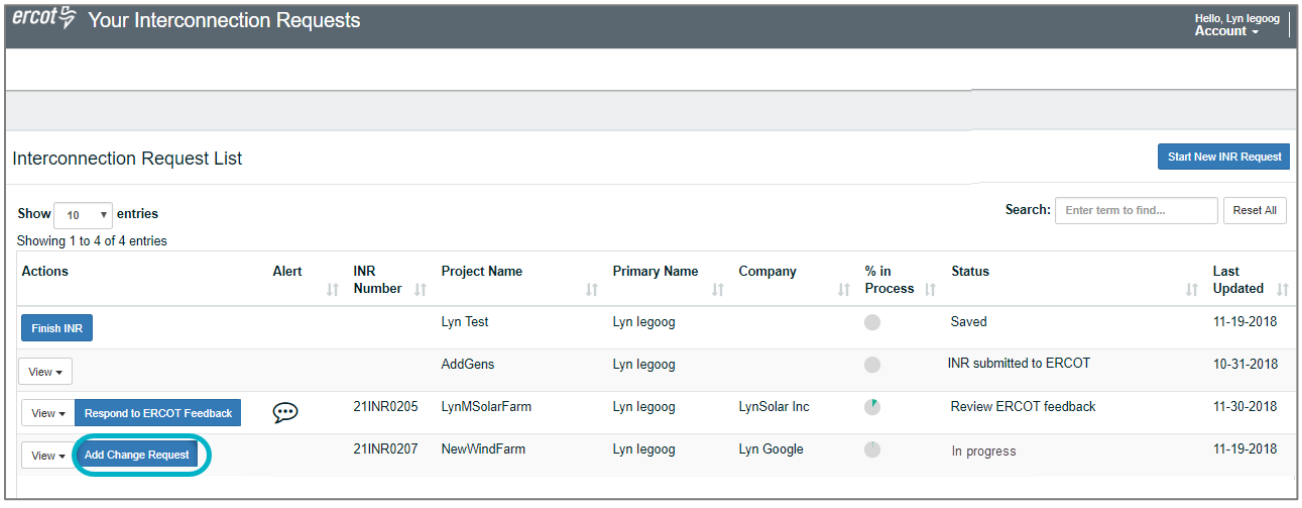
By electronically signing the following web pages, you can confirm the following required Nodal Protocols have been met for your project:

- Mitigation plans for system improvements identified in the FIS and Reactive Power Study are complete (on this page)
- Dynamic voltage regulators and automatic voltage regulators (AVRs) will be installed as required (page 81)
- Primary Frequency Response capability is met (page 85)
- Power System Stabilizer (PSS) will be in service (page 88)
- Interrupting capability of the main breaker is on the high side of the generator step up unit transformer (page 91)
- Subsyschronouse Resounance (SRS) mitigation equipment will be functional prior to intial Synchronization (page 94)
- Phase measurement unit (PMU) will be installed (page 97)

Confirming Study Mitigation Plans are Complete

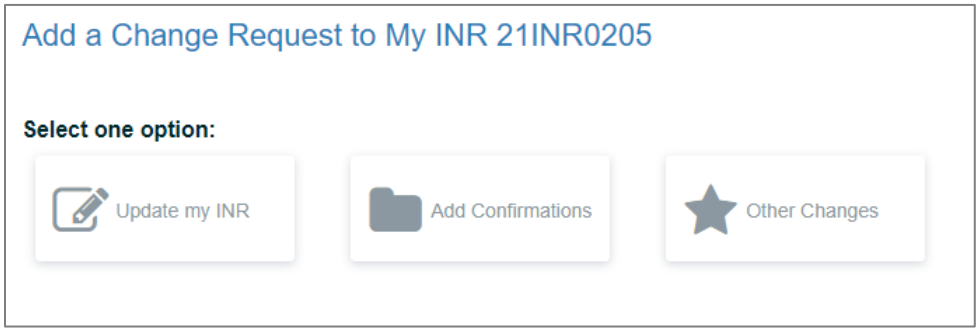
By typing your full name and date on the Mitigation Plans page, you are digitally signing and confirming that the project will have system improvements or mitigation plans installed prior to synchronization as identified in the completed FIS Studies and an Reactive Power Study.

Your Interconnection Requests List



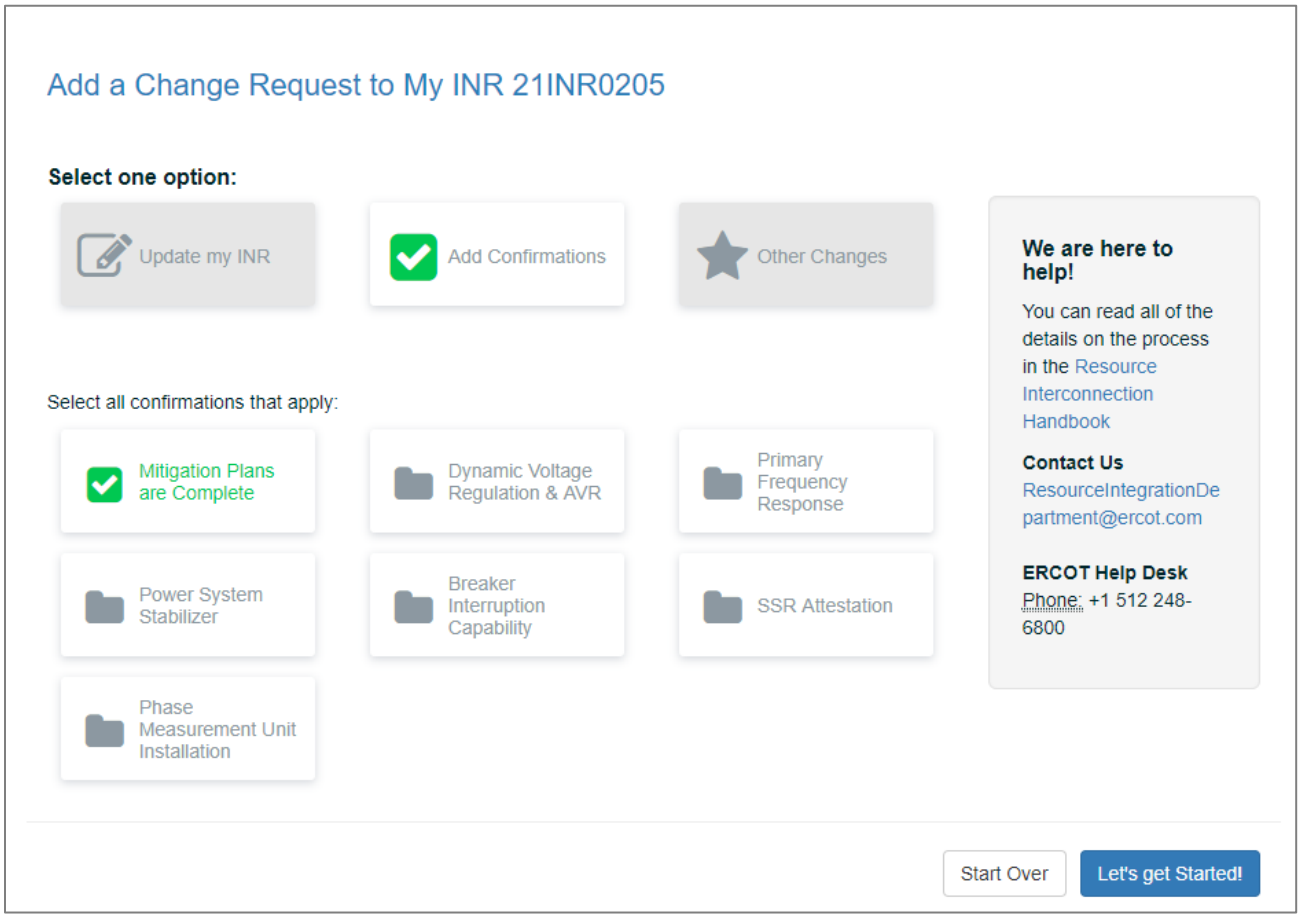
1 Click the **Add Change Request** button.

Add a Change Request Page



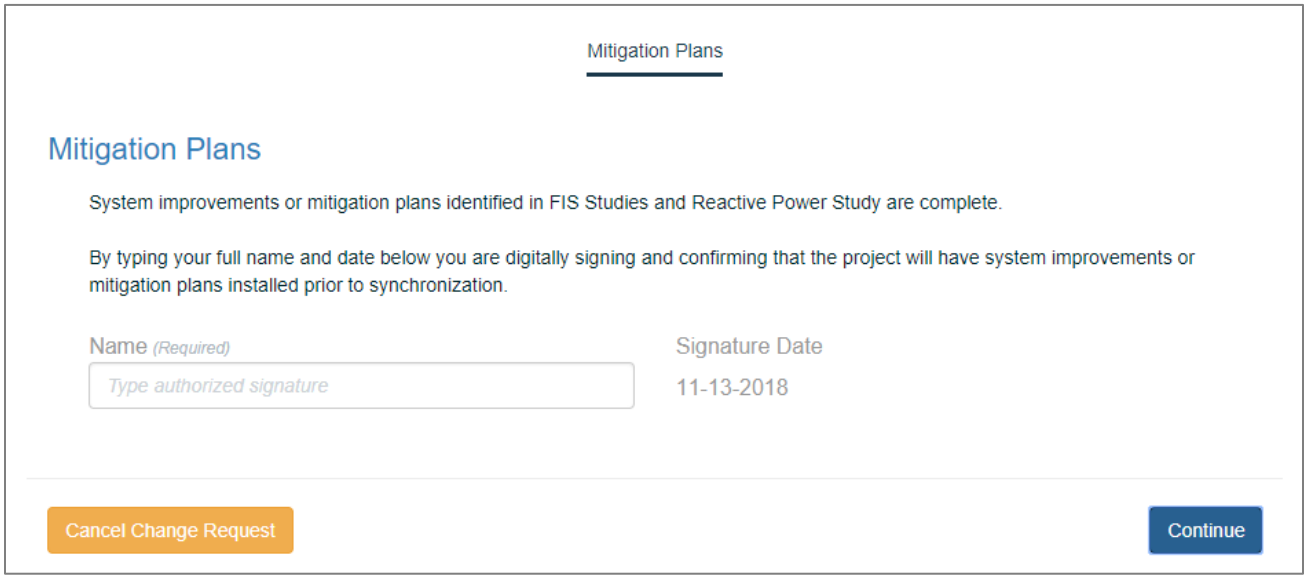
2 Click the **Add Confirmations** button. The page expands with the appropriate options.

Add a Change Request Page With Options



3 Click the **Mitigation Plans are Complete** button and then click the **Let's get Started** button.

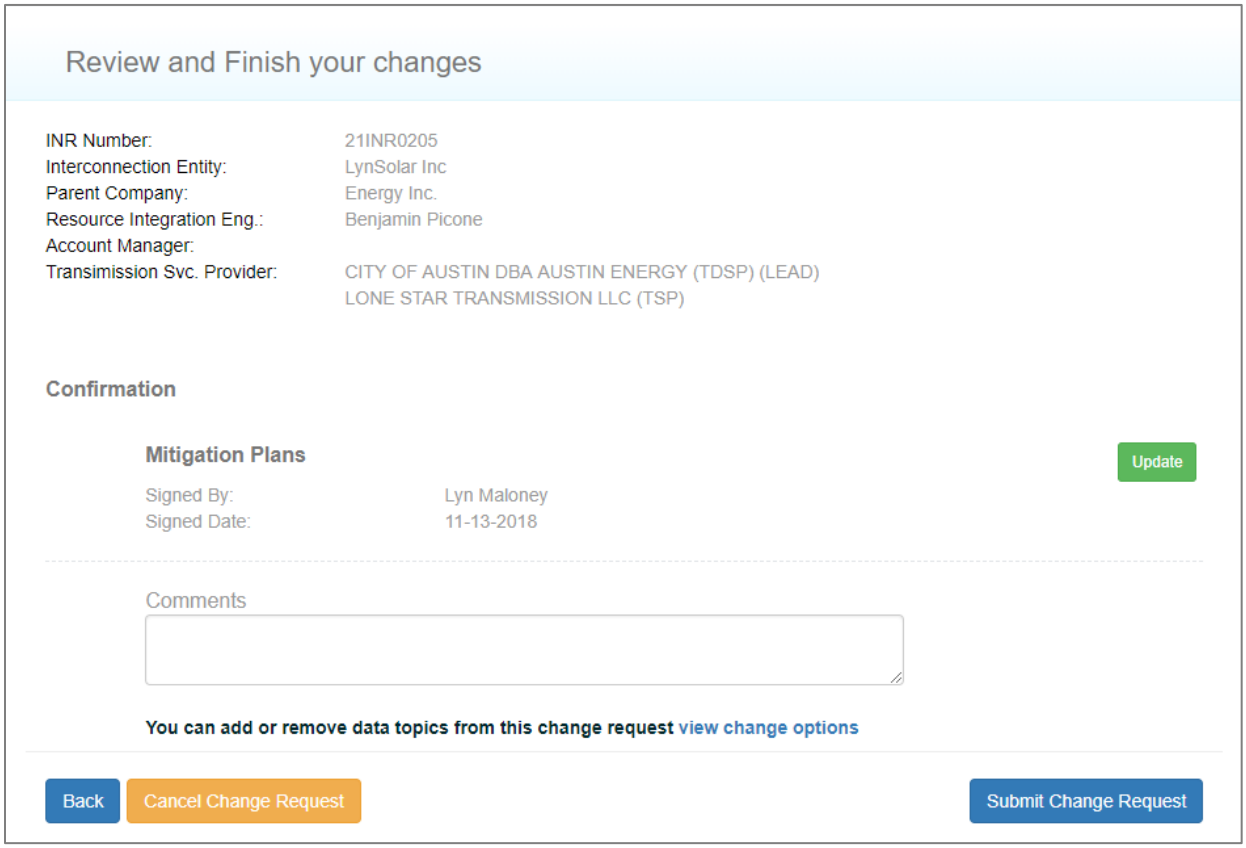
Mitigation Plans Page



4. After reading the page, type in your signature.

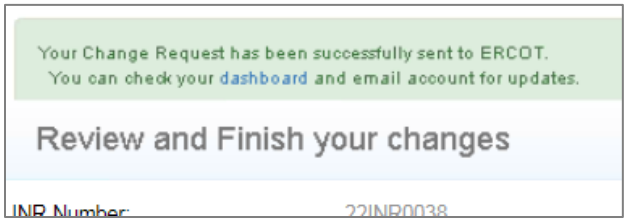
5. Click the **Continue** button.

Review and Finish your changes Page



6 Click the **Submit Change Request** button.

Change Request Successfully Sent Message

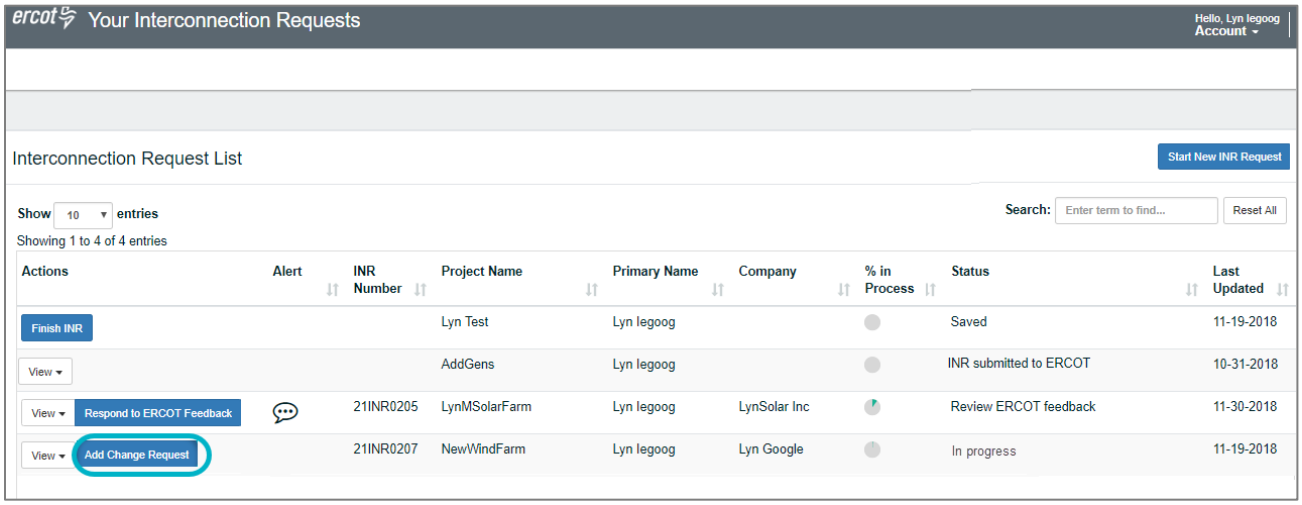


To close this page and return to the Interconnection Requests List, click the link in this message or the ercot logo at the top left of the page.

Confirming the Voltage Regulations Are Met

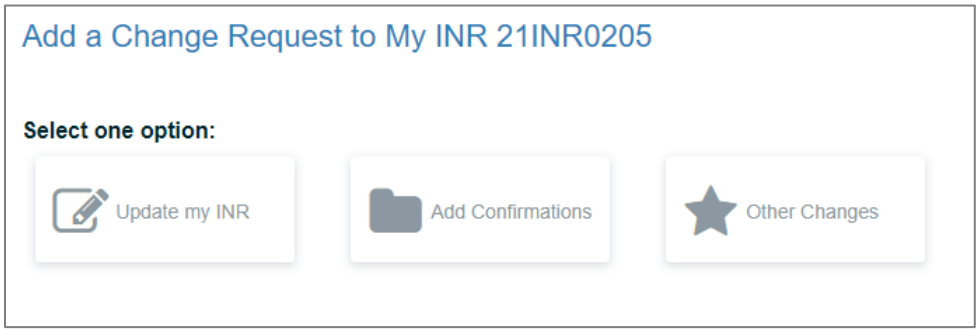
By typing your full name and date on the DVR and AVR page, you are digitally signing and confirming that the project will have the voltage regulations as required by Nodal Protocols,

Your Interconnection Requests List



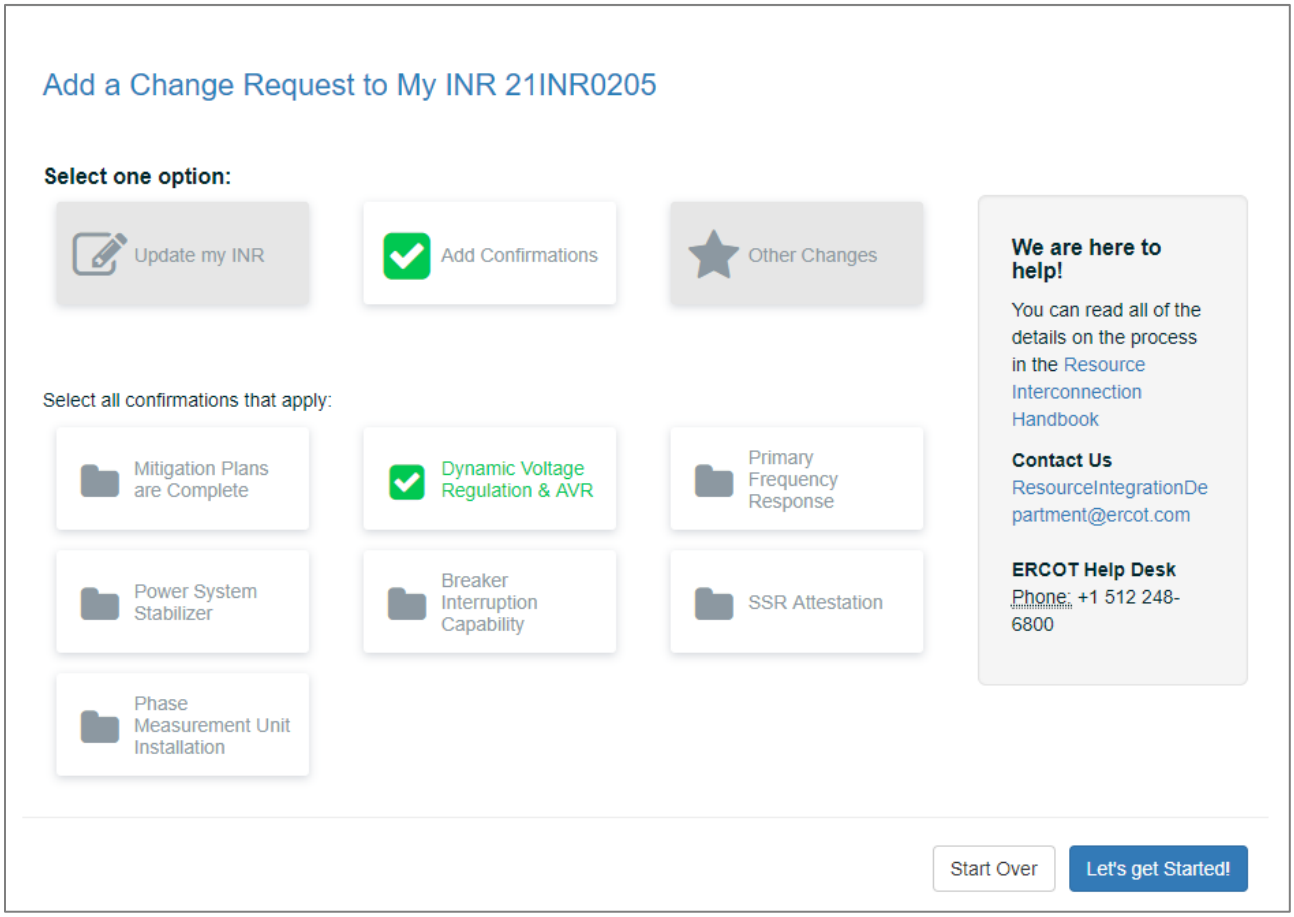
1. Click the **Add Change Request** button.

Add a Change Request Page



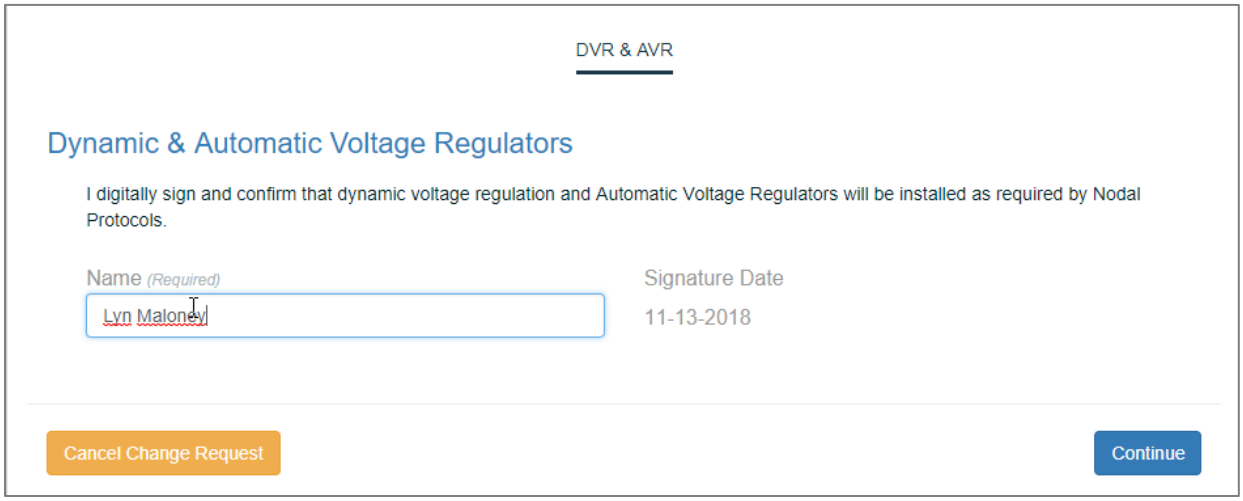
2. Click the **Add Confirmations** button. The page expands with the appropriate options.

Add a Change Request Page With Options



3 Click the **Dynamic Voltage Regulation & AVR** button and then click the **Let's get Started** button.

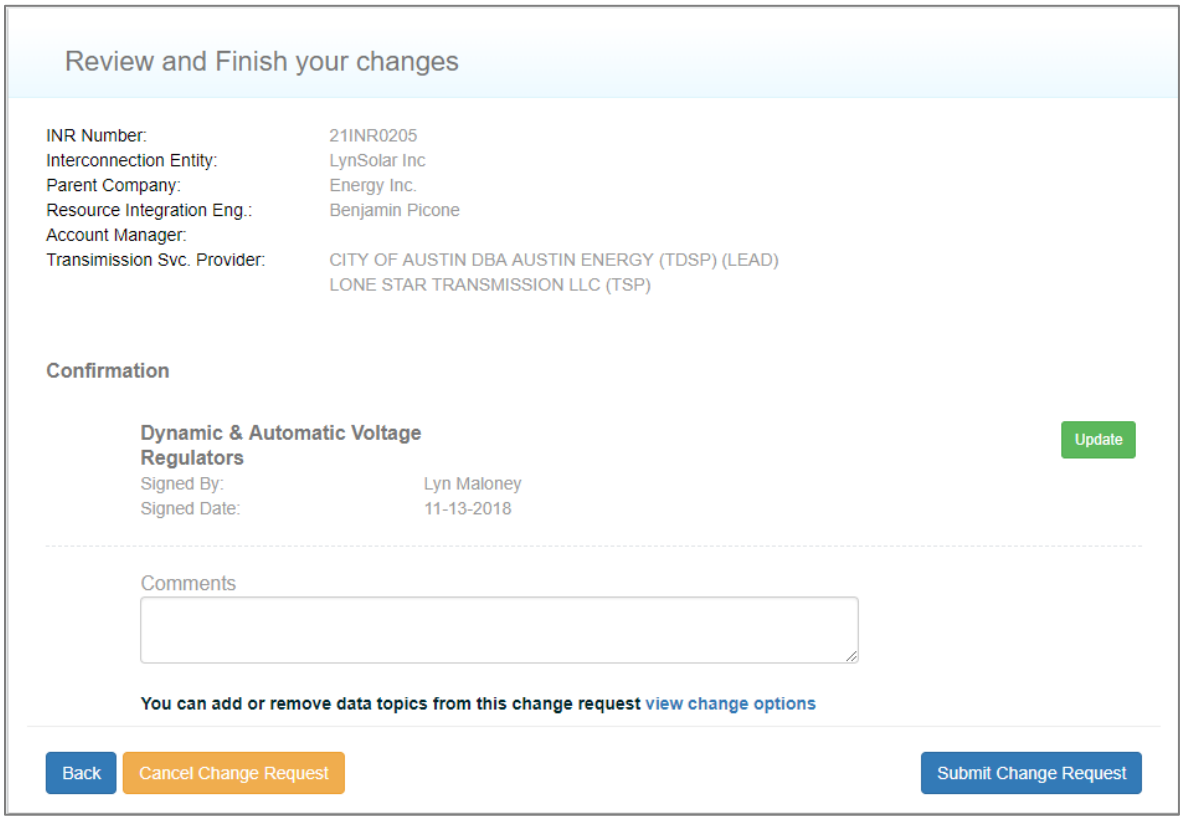
DVR & AVR Page



4 After reading the page, type in your signature.

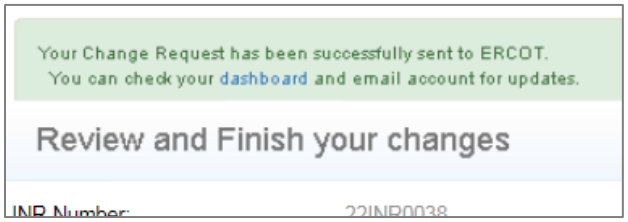
5 Click the **Continue** button.

Review and Finish your changes Page



6 Click the **Submit Change Request** button.

Change Request Successfully Sent Message

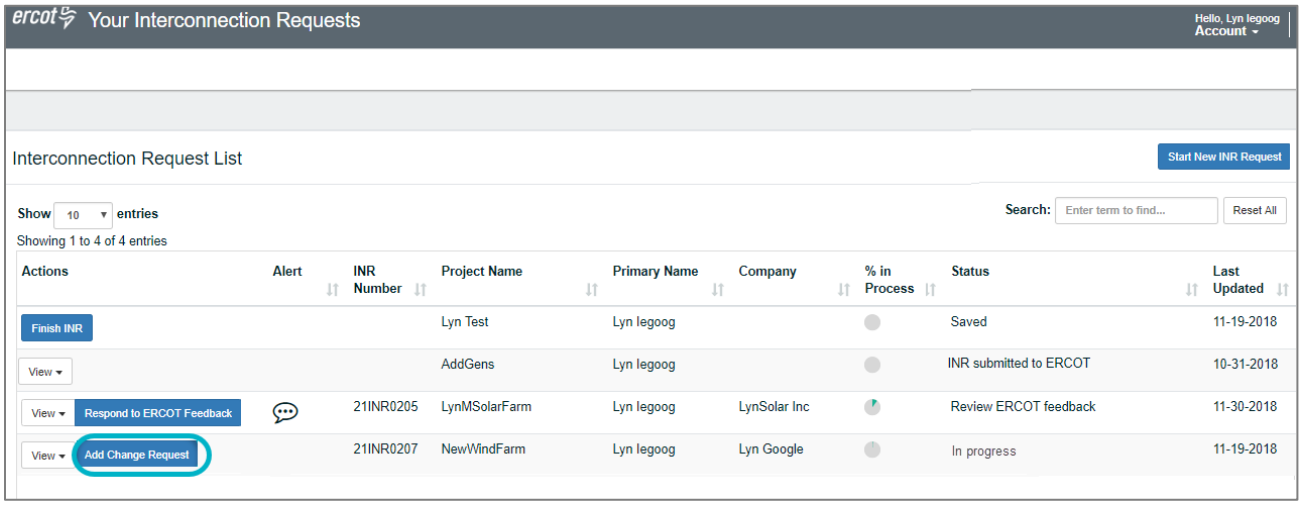


To close this page and return to the Interconnection Requests List, click the link in this message or the ercot logo at the top left of the page.

Confirming the Primary Frequency Response Capablity

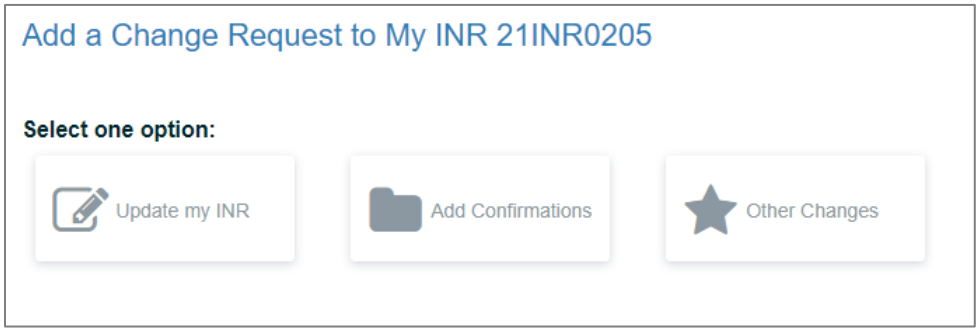
By typing your full name and date on the Frequency Response Page, you are digitally signing and confirming that the project will be capable of Primary Frequency Response as required by Nodal Protocols.

Your Interconnection Requests List



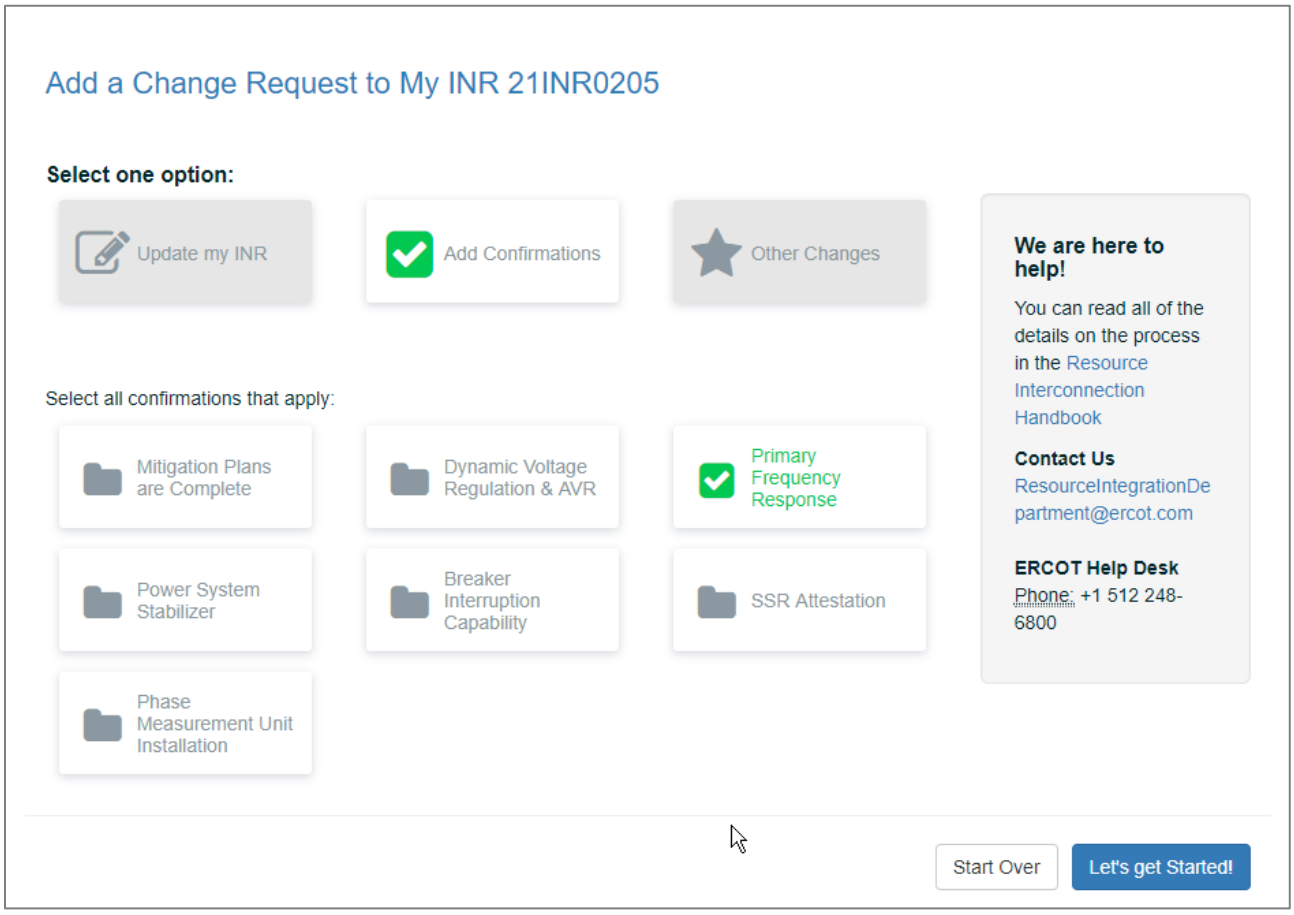
1. Click the **Add Change Request** button.

Add a Change Request Page



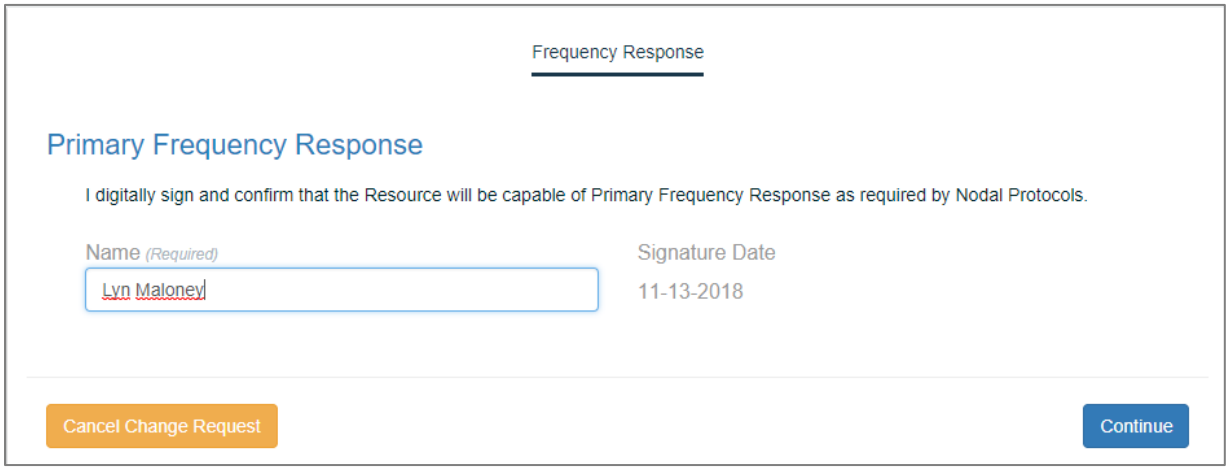
2 Click the **Add Confirmations** button. The page expands with the appropriate options.

Add a Change Request Page With Options



3 Click the **Primary Frequency Response** button and then click the **Let's get Started** button.

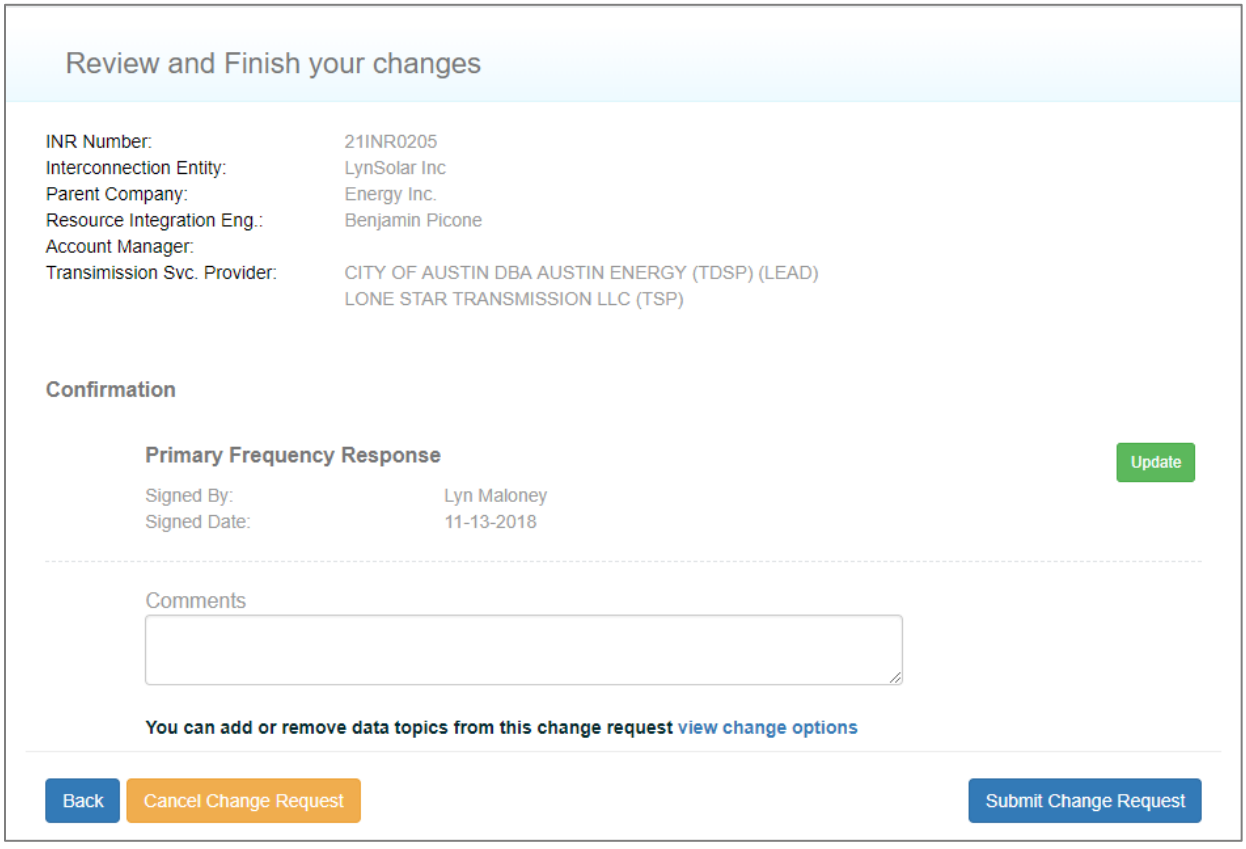
Primary Frequency Response Page



4 After reading the page, type in your signature.

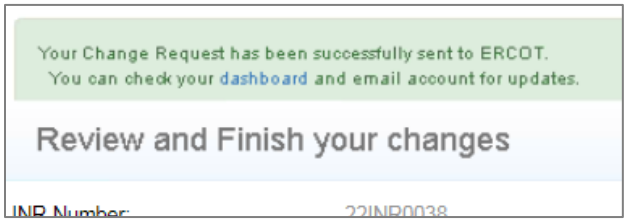
5 Click the **Continue** button.

Review and Finish your changes Page



6 Click the **Submit Change Request** button.

Change Request Successfully Sent Message

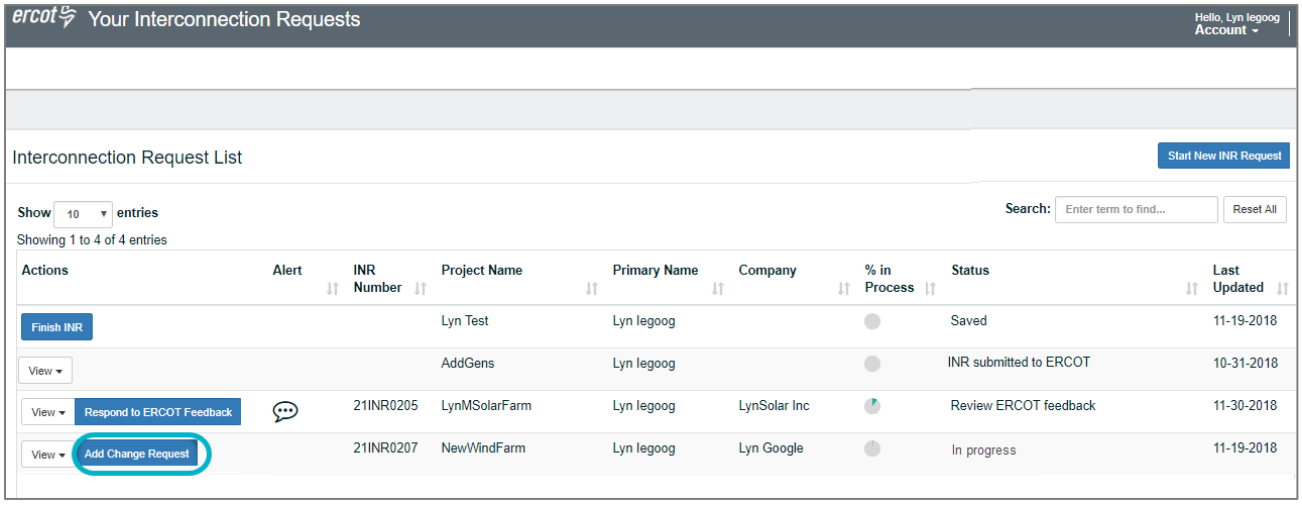


To close this page and return to the Interconnection Requests List, click the link in this message or the ercot logo at the top left of the page.

Confirming that the Power System Stabilizer is In Service

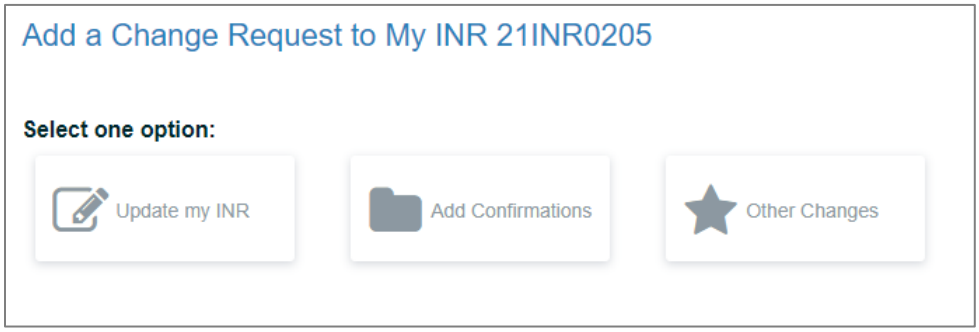
By typing your full name and date on the PSS page, you are digitally signing and confirming that the resource will have a PSS in-service as required by Nodal Protocols.

Your Interconnection Requests List



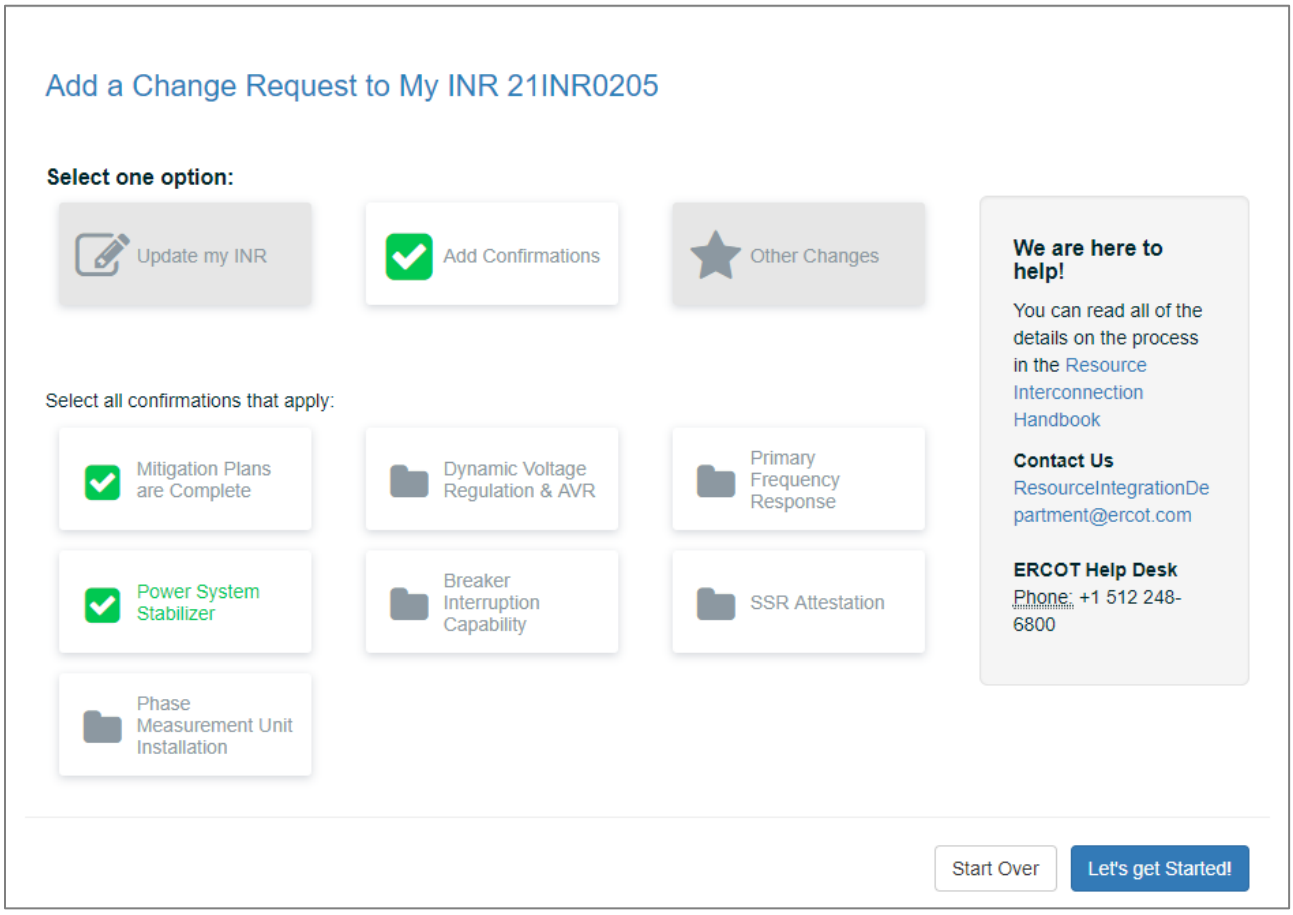
1. Click the **Add Change Request** button.

Add a Change Request Page



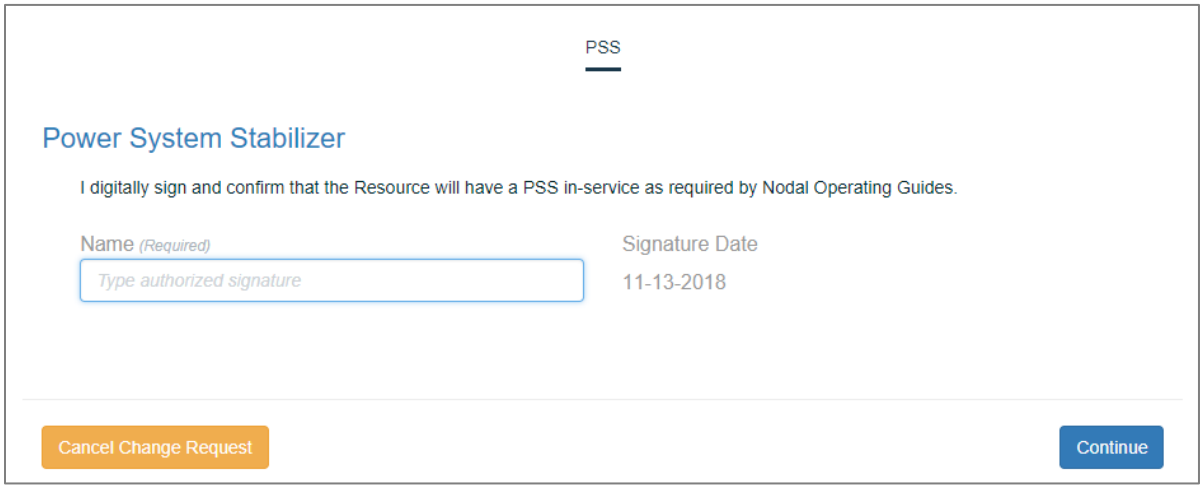
2 Click the **Add Confirmations** button. The page expands with the appropriate options.

Add a Change Request Page With Options



3 Click the **Primary Frequency Response** button and then click the **Let's get Started** button.

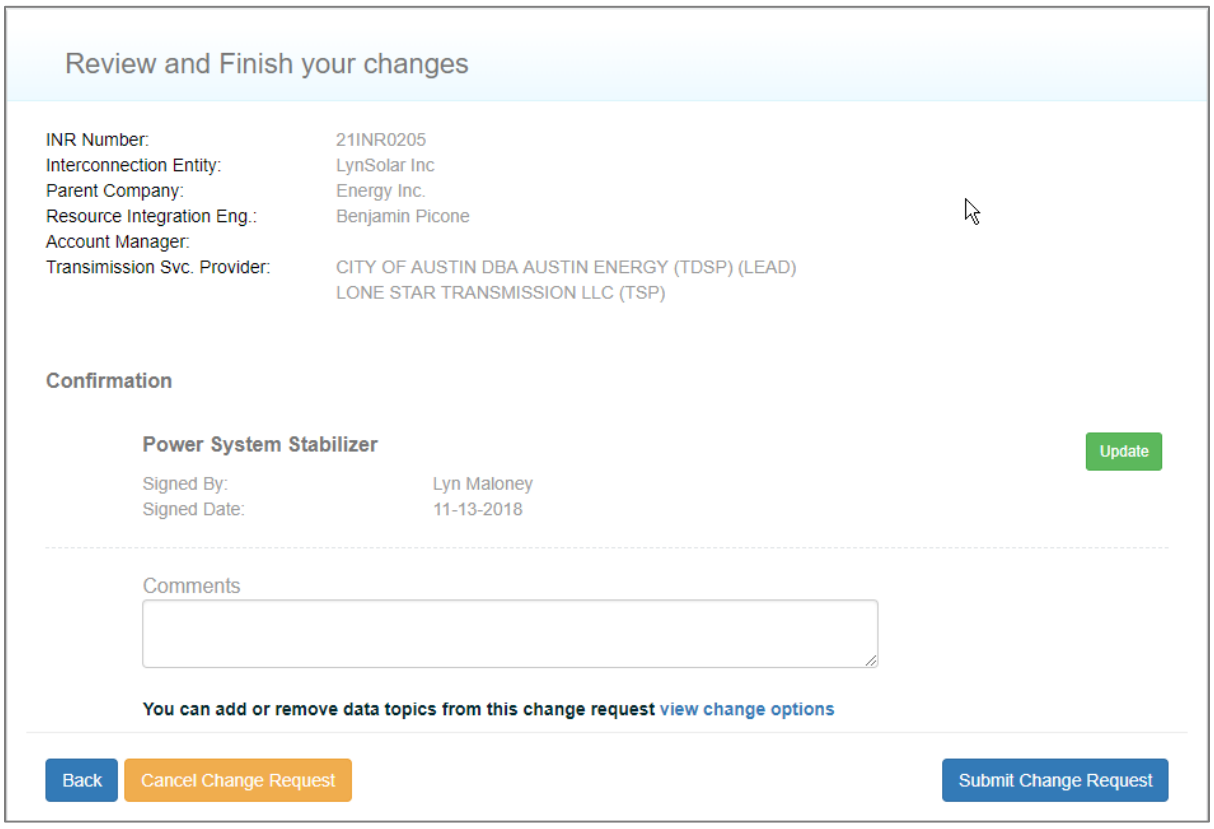
Power System Stabilizer Page



4 After reading the page, type in your signature.

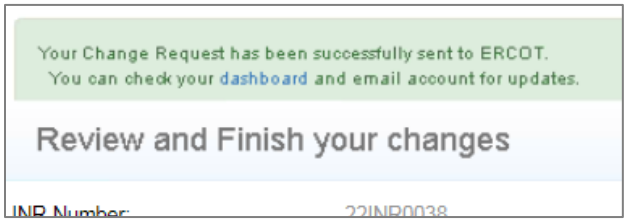
5 Click the **Continue** button.

Review and Finish your changes Page



6 Click the **Submit Change Request** button.

Change Request Successfully Sent Message

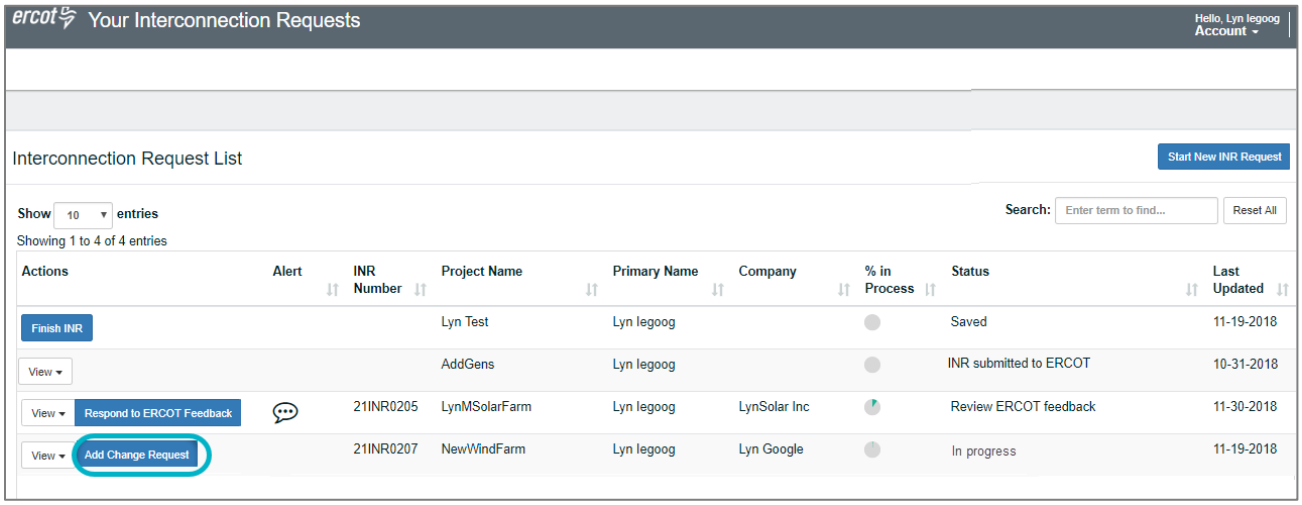


To close this page and return to the Interconnection Requests List, click the link in this message or the ercot logo at the top left of the page.

Confirming Breaker Interruption Capability

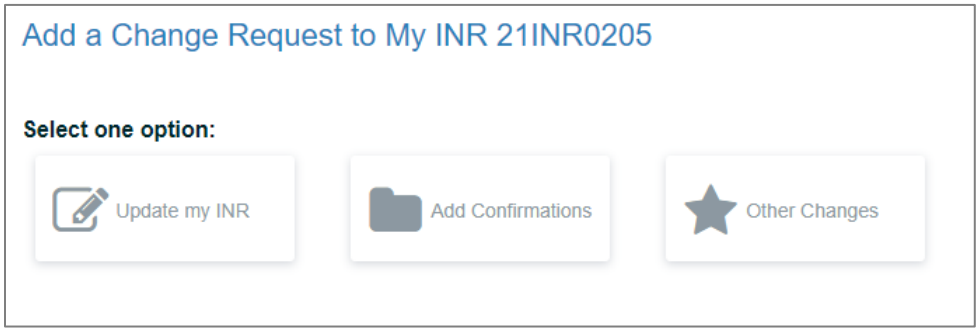
By typing your full name and date on the Breaker page, you are digitally signing and confirming that the resource is capable of informing ERCOT of the interrupting capability of the main breaker on the high side of the generator step up unit transformer.

Your Interconnection Requests List



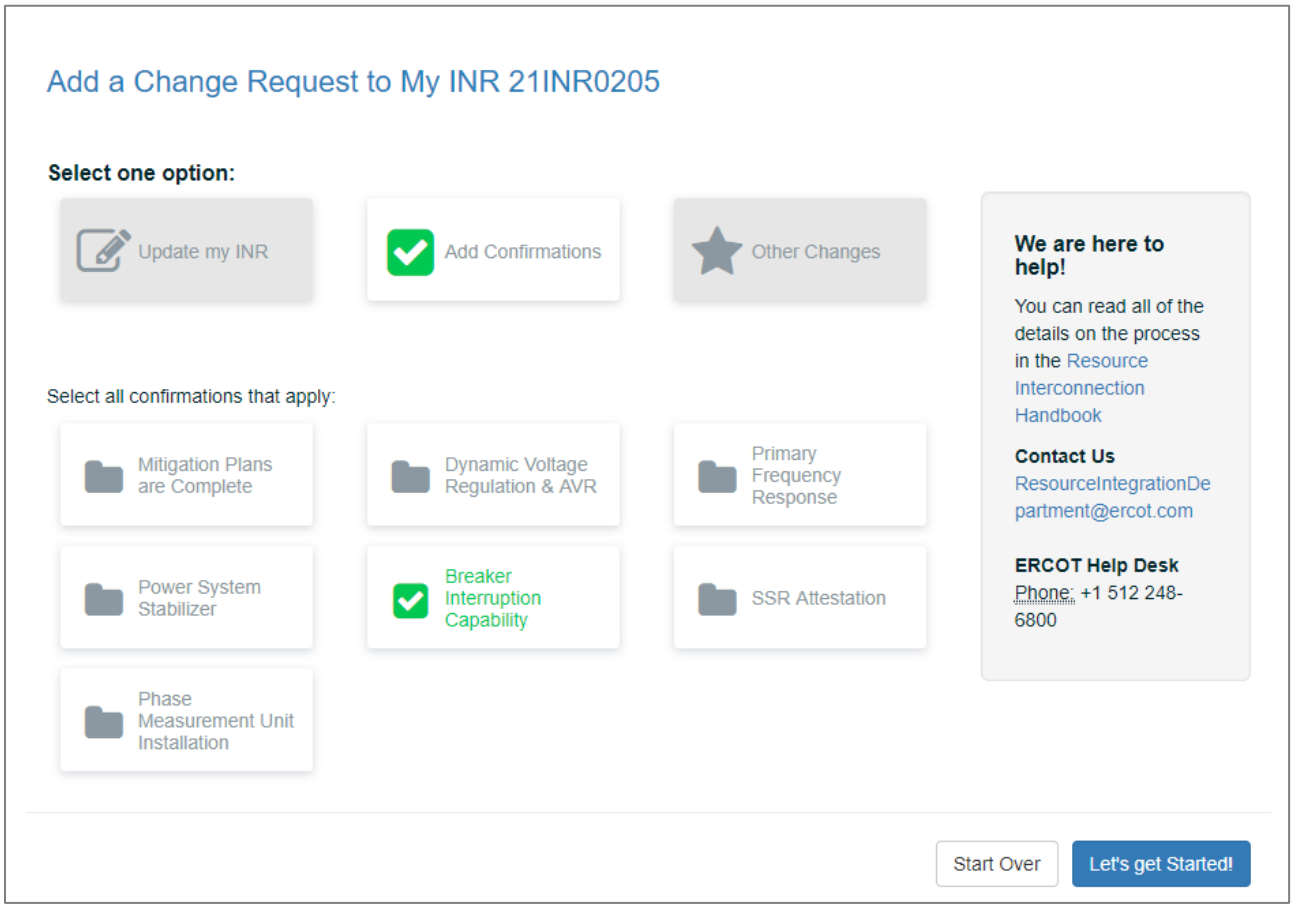
1. Click the **Add Change Request** button.

Add a Change Request Page



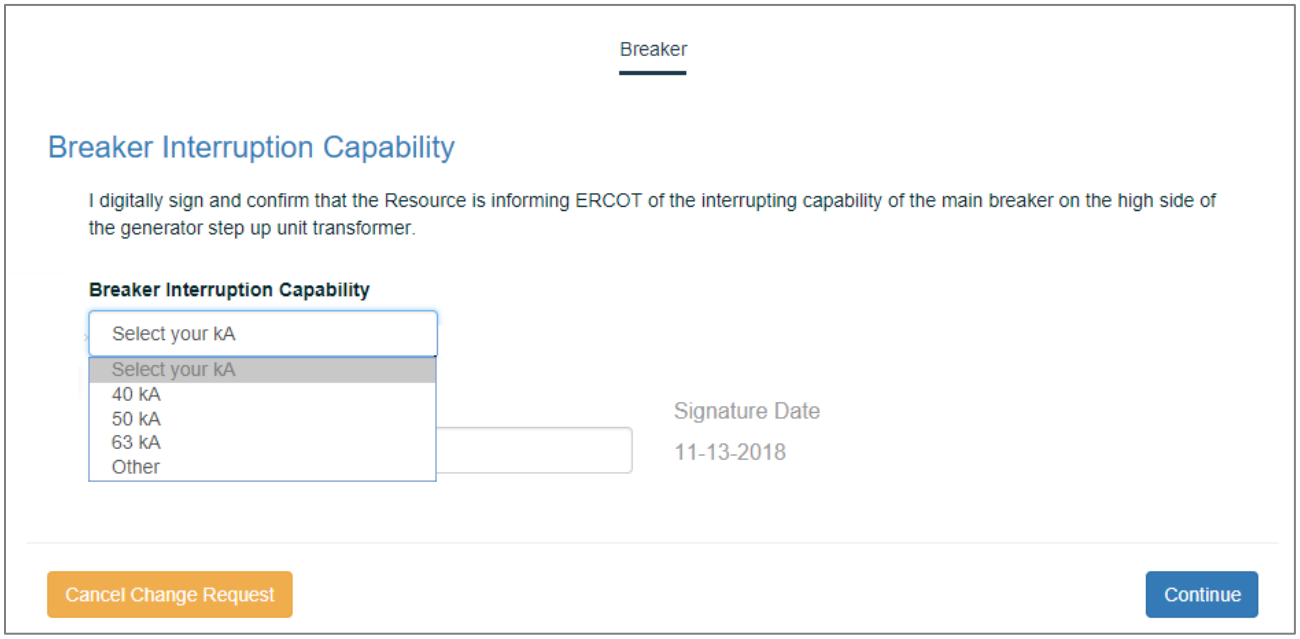
2 Click the **Add Confirmations** button. The page expands with the appropriate options.

Add a Change Request Page With Options



3 Click the **Breaker Interruption Capability** button and then click the **Let's get Started** button.

Breaker Interruption Capability Page



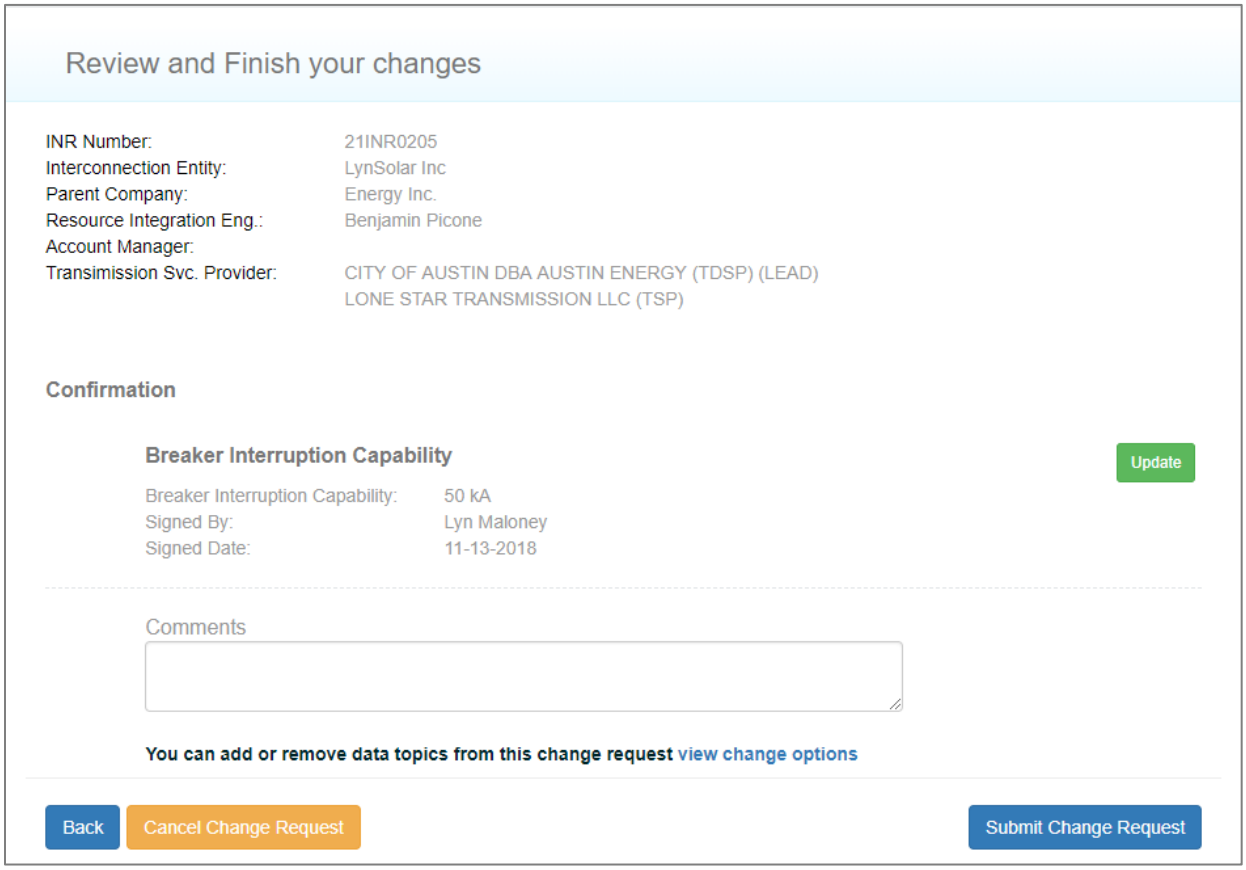
4 From the **Breaker Interruption Capability** dropdown, click the appropriate option:

- 40 kA
- 50 kA
- 63 kA
- Other, which displays the field to type in your kA

5 Type in your signature.

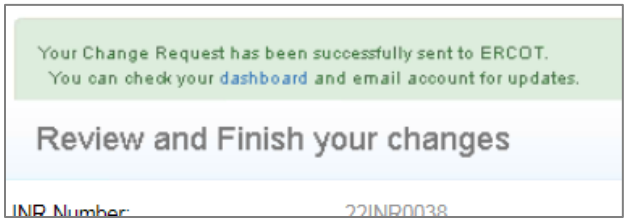
6 Click the **Continue** button.

Review and Finish your changes Page



7 Click the **Submit Change Request** button.

Change Request Successfully Sent Message

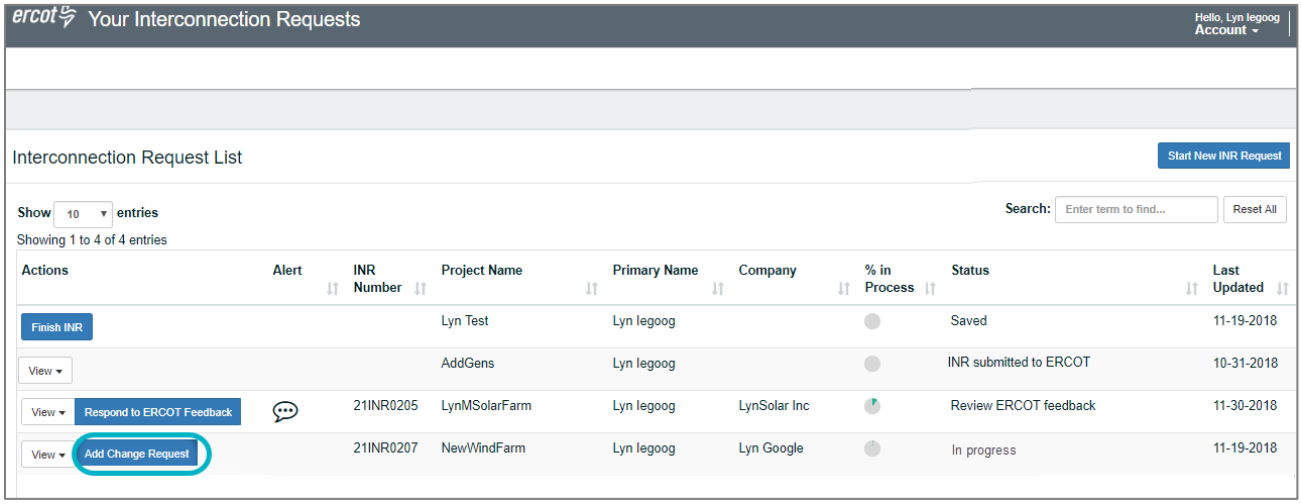


To close this page and return to the Interconnection Requests List, click the link in this message or the ercot logo at the top left of the page.

Confirming Subsynchronous Resonance Mitigation

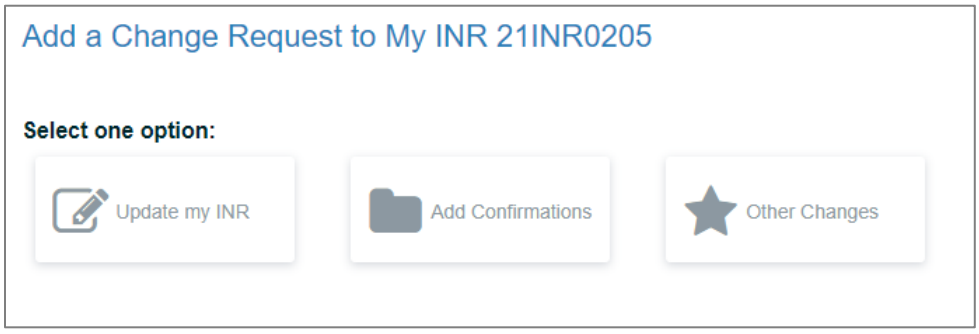
By typing your full name and date on the SSR page, you are digitally signing and confirming that any required SSR mitigation equipment will be functional prior to Initial Synchronization of the Resource as required by Nodal Protocols.

Your Interconnection Requests List



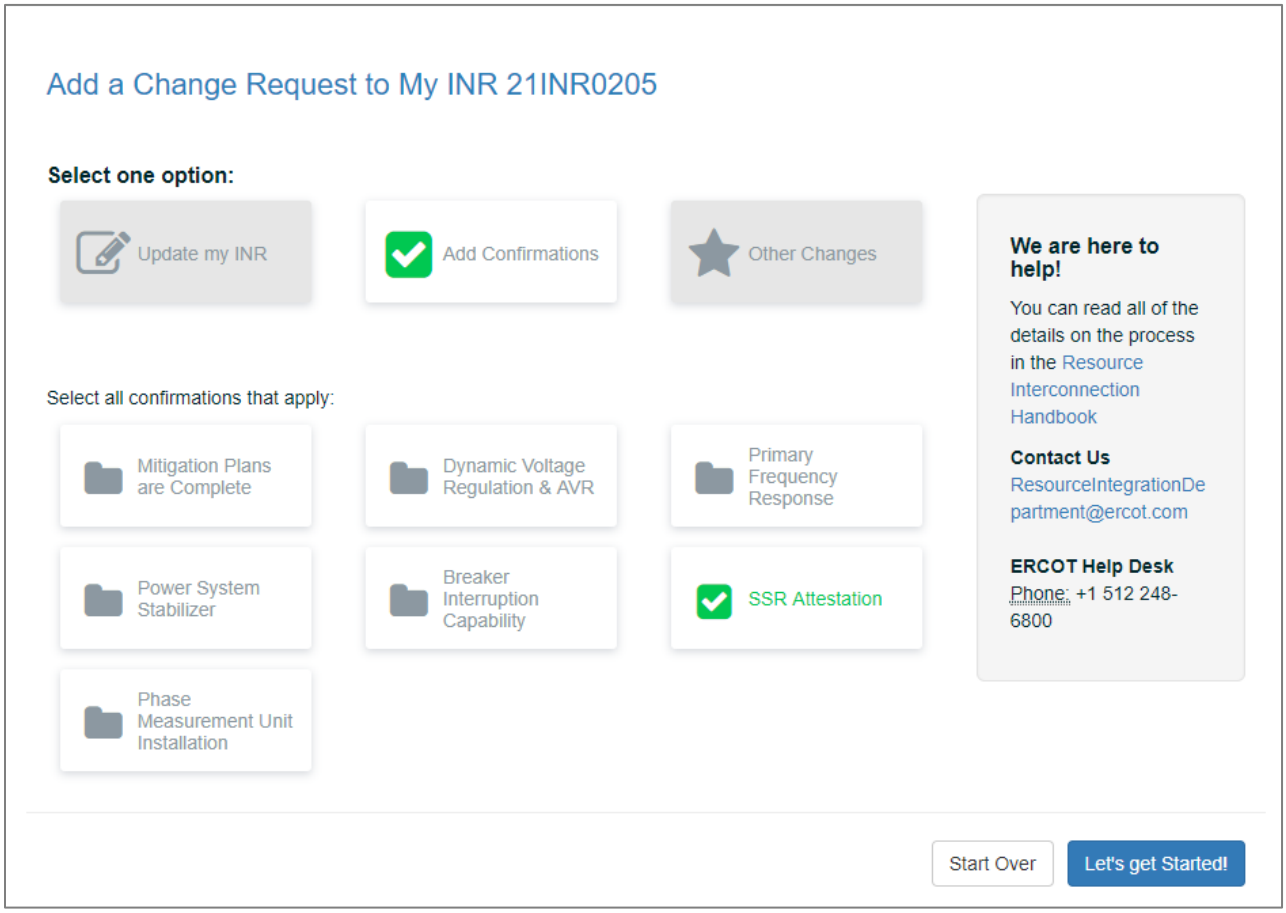
1 Click the **Add Change Request** button.

Add a Change Request Page



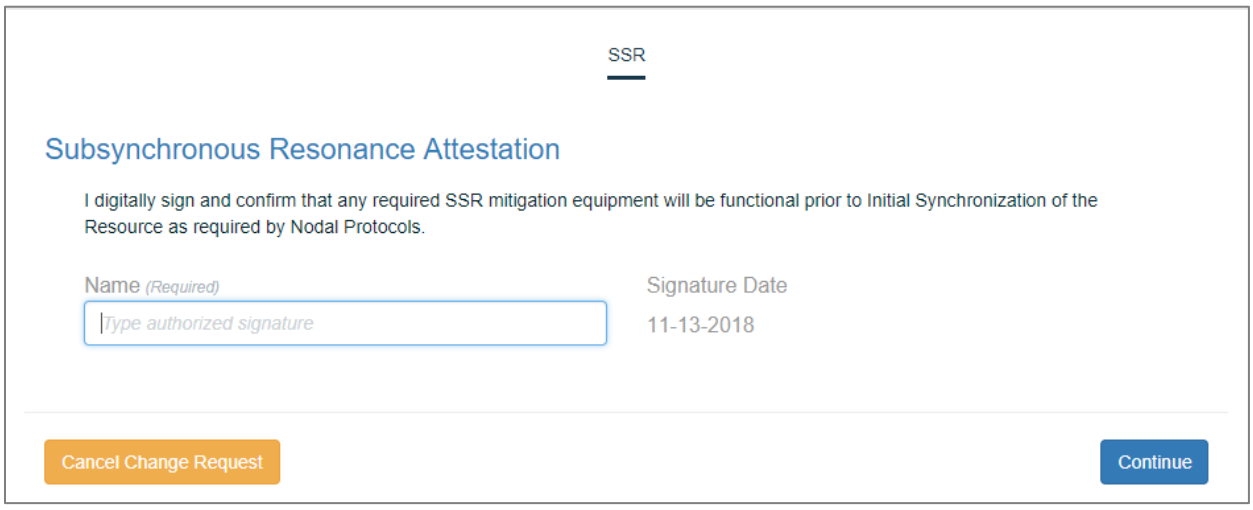
2 Click the **Add Confirmations** button. The page expands with the appropriate options.

Add a Change Request Page With Options



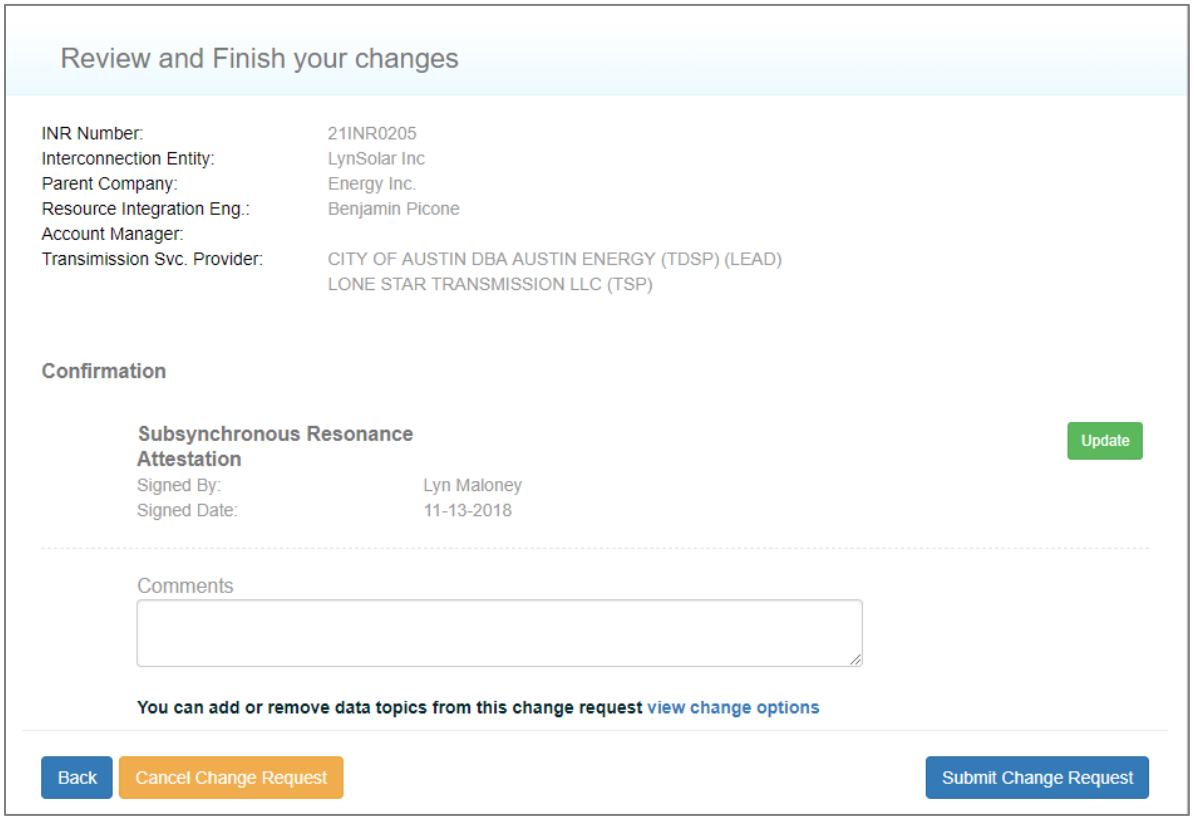
3 Click the **SSR Attestation** button and then click the **Let's get Started** button.

SSR Page



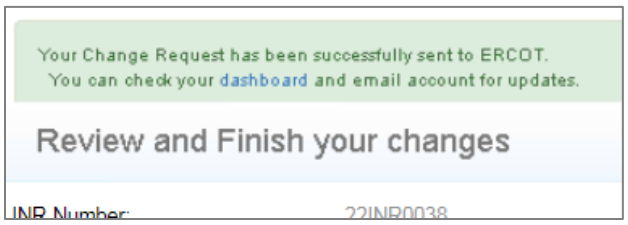
4 After reading the page, type in your signature and click the **Continue** button.

Review and Finish your changes Page



5 Click the **Submit Change Request** button.

Change Request Successfully Sent Message

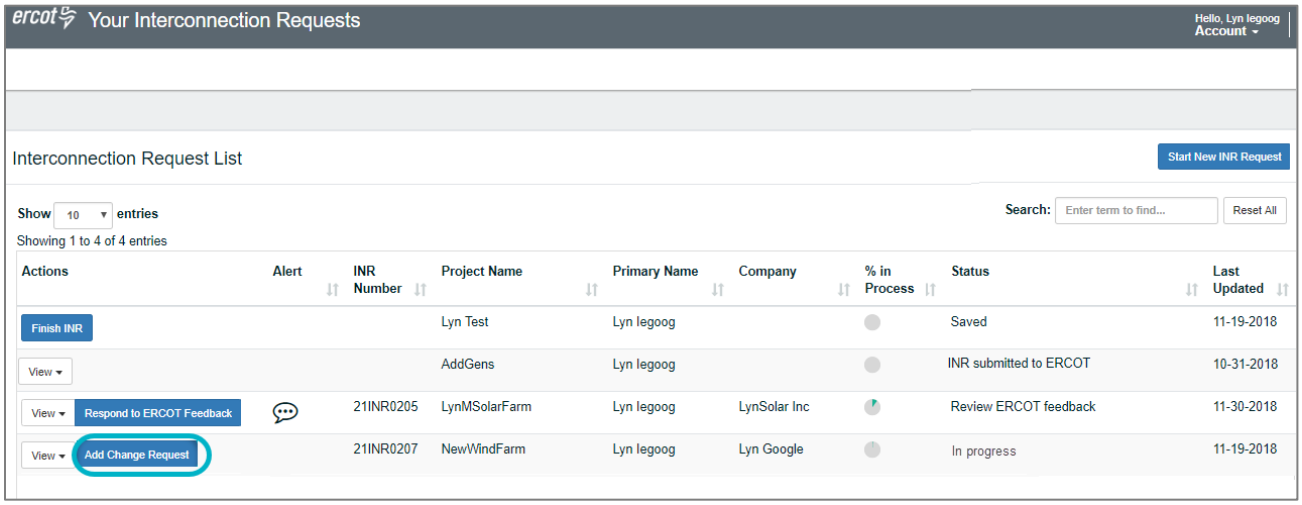


To close this page and return to the Interconnection Requests List, click the link in this message or the ercot logo at the top left of the page.

Confirming the Phase Measurement Unit Installation

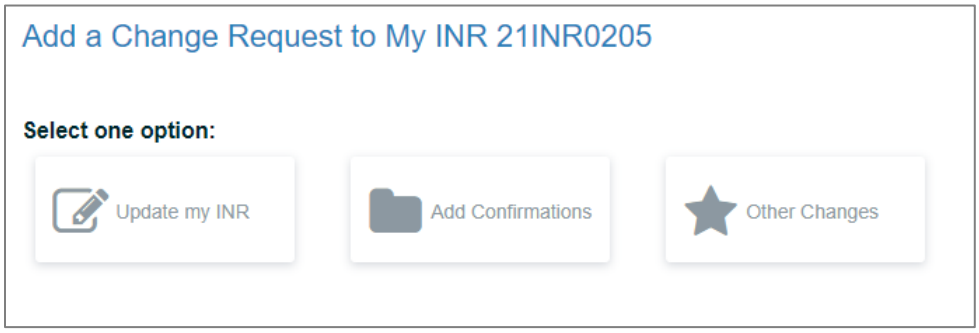
By typing your full name and date on the PMU page, you are digitally signing and confirming that the PMU will be installed as required by Nodal.

Your Interconnection Requests List



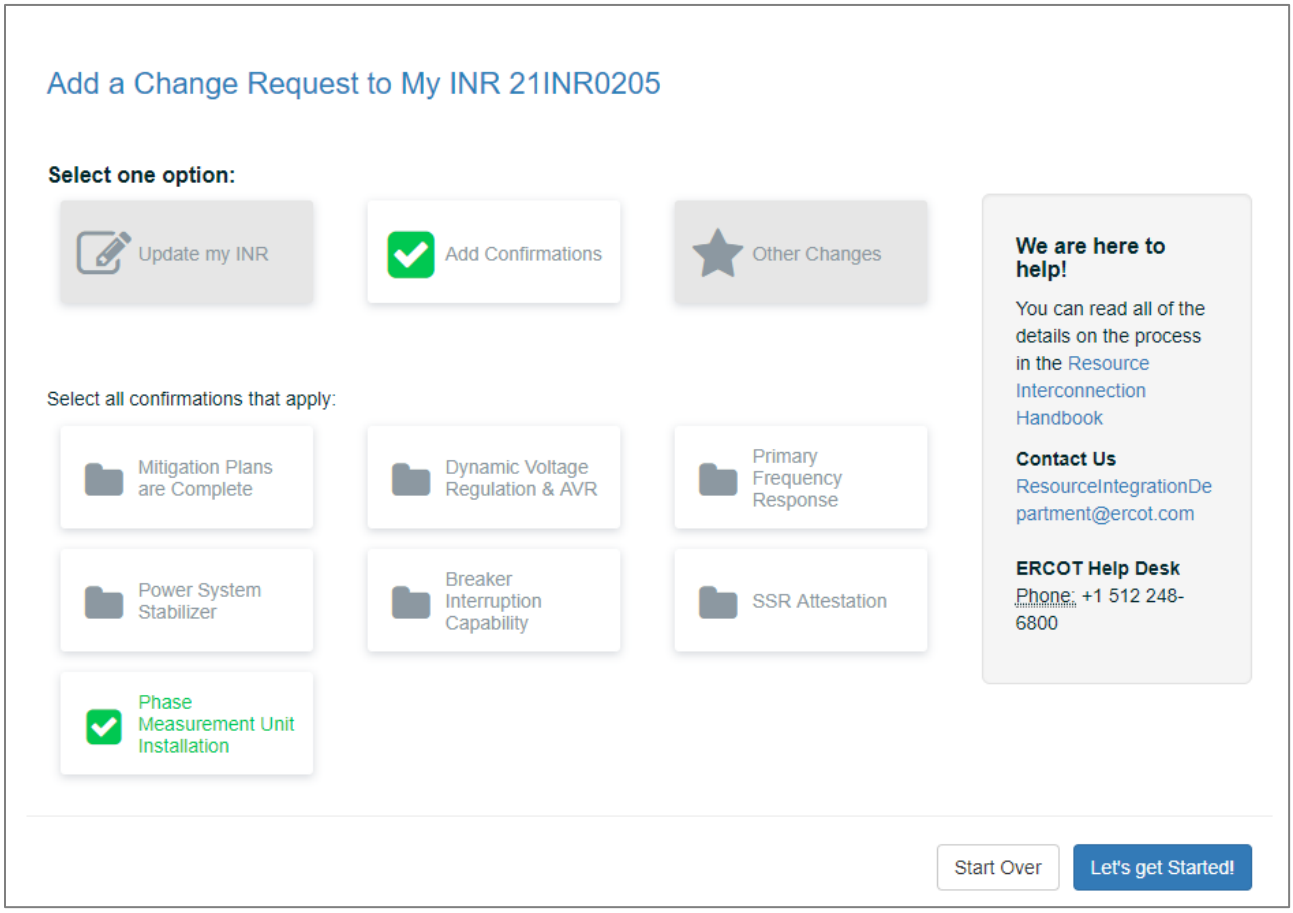
1. Click the **Add Change Request** button.

Add a Change Request Page



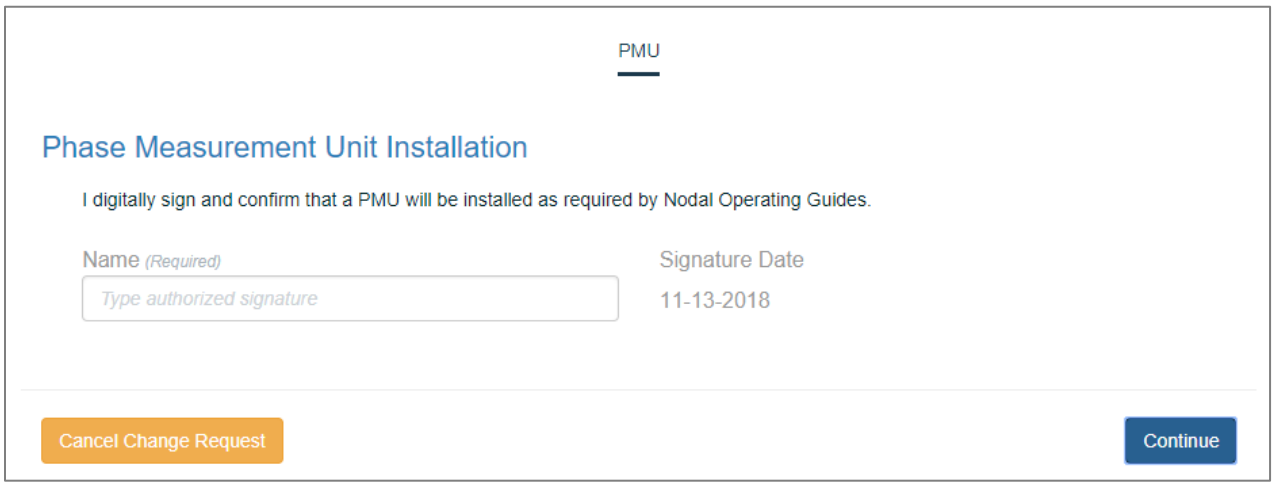
2. Click the **Add Confirmations** button. The page expands with the appropriate options.

Add a Change Request Page With Options



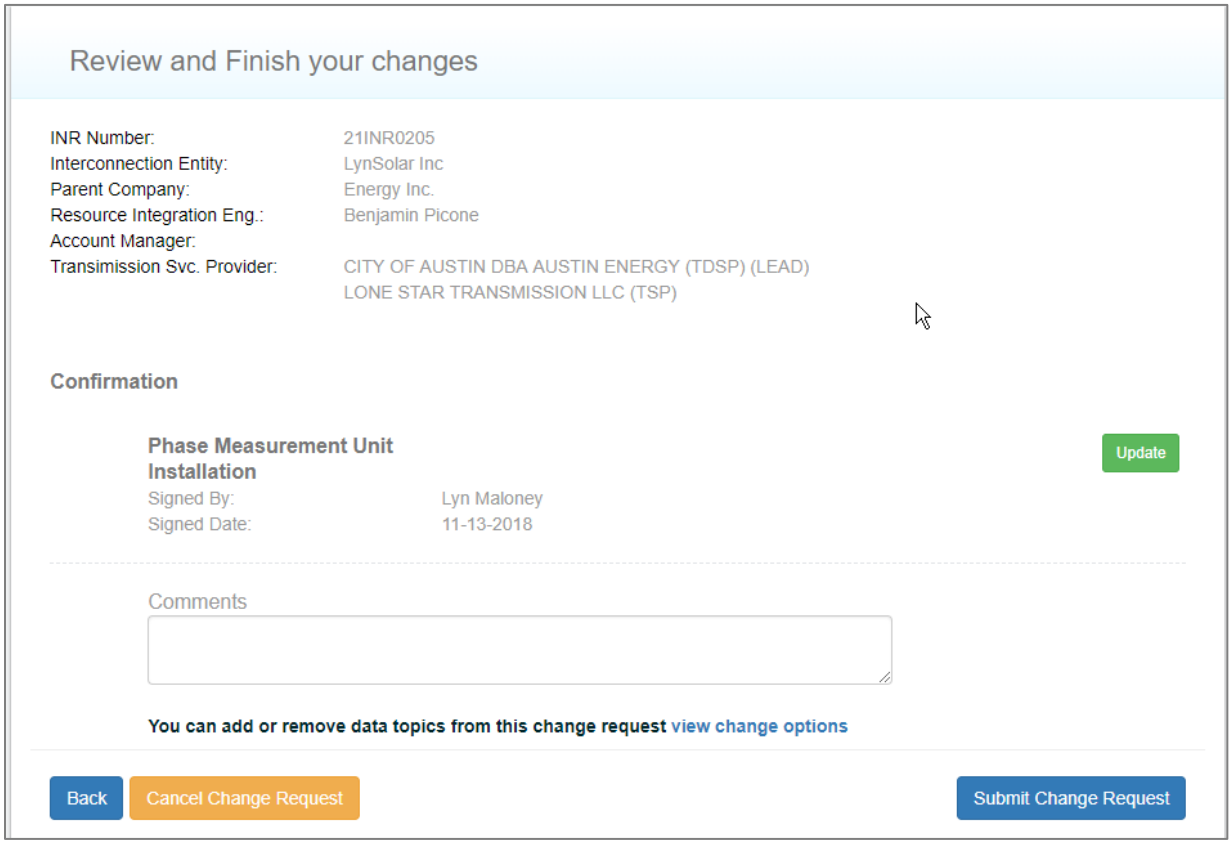
3 Click the **Primary Frequency Response** button and then click the **Let's get Started** button.

Phase Measurement Unit (PMU) Installation Page



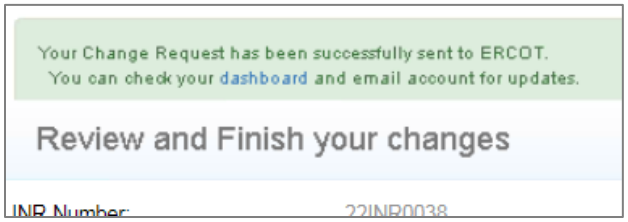
4 After reading the page, type in your signature and click the **Continue** button.

Review and Finish your changes Page



5 Click the **Submit Change Request** button.

Change Request Successfully Sent Message



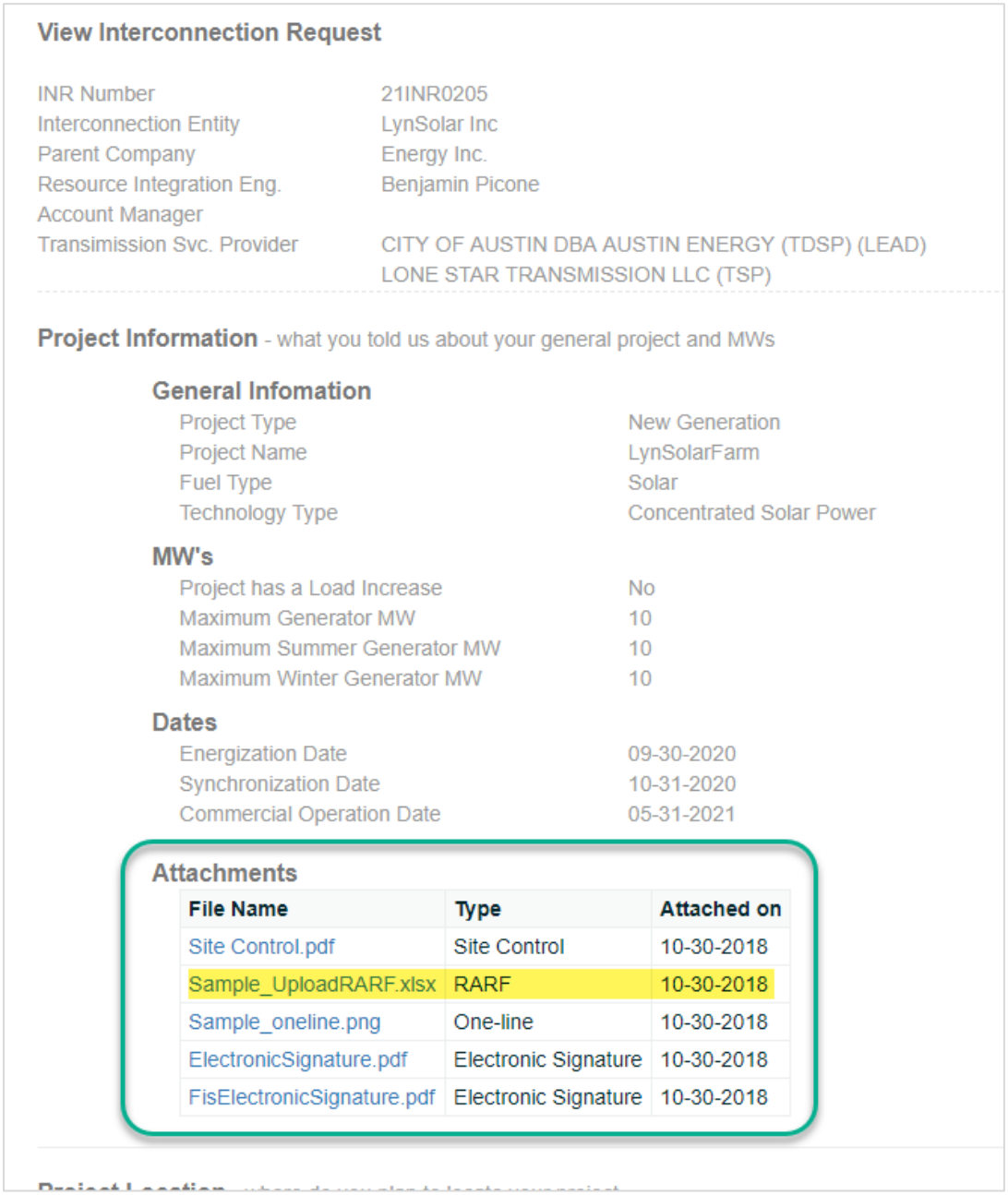
To close this page and return to the Interconnection Requests List, click the link in this message or the ercot logo at the top left of the page.

Attesting that Your RARF is Current

Twice a year (in February and August), you are required to attest to having the most current resource registration data RARF uploaded.

For assistance with accessing Interconnection Services and logging in, refer to page 9.

Before you sign the attestation, you can check the date when the RARF was attached to your project file by logging into your account and clicking the View button for your INR,and then scrolling to the Attachments section that displays your RARF file and when it was attached.



View Interconnection Request

INR Number	21INR0205
Interconnection Entity	LynSolar Inc
Parent Company	Energy Inc.
Resource Integration Eng.	Benjamin Picone
Account Manager	
Transimission Svc. Provider	CITY OF AUSTIN DBA AUSTIN ENERGY (TDSP) (LEAD) LONE STAR TRANSMISSION LLC (TSP)

Project Information - what you told us about your general project and MWs

General Infomation

Project Type	New Generation
Project Name	LynSolarFarm
Fuel Type	Solar
Technology Type	Concentrated Solar Power

MW's

Project has a Load Increase	No
Maximum Generator MW	10
Maximum Summer Generator MW	10
Maximum Winter Generator MW	10

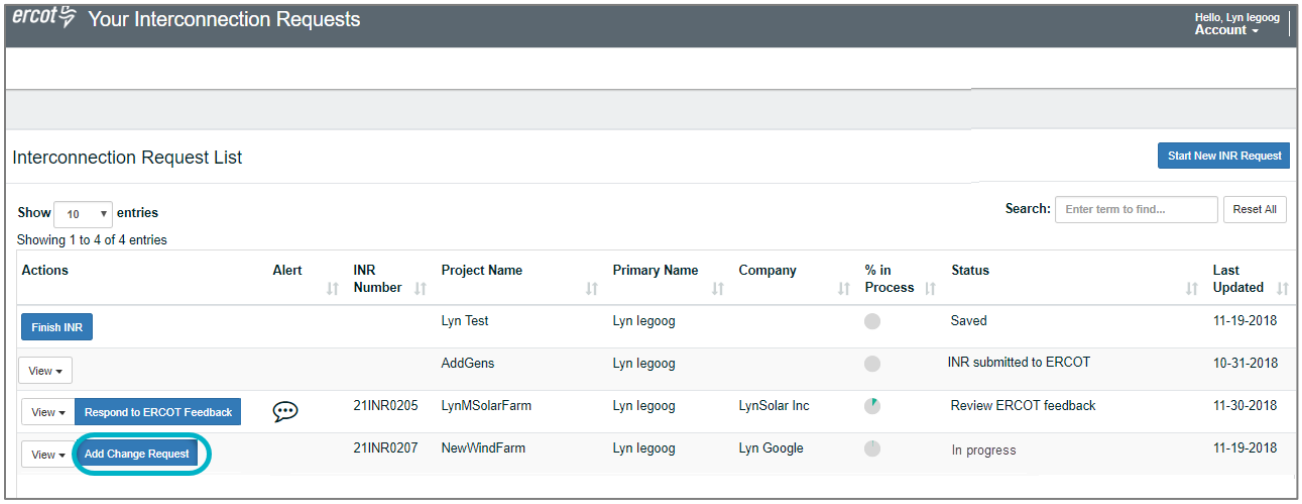
Dates

Energization Date	09-30-2020
Synchronization Date	10-31-2020
Commercial Operation Date	05-31-2021

Attachments

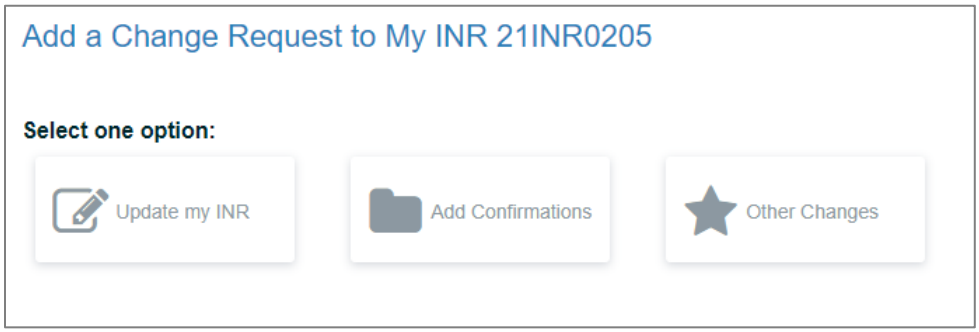
File Name	Type	Attached on
Site Control.pdf	Site Control	10-30-2018
Sample_UploadRARF.xlsx	RARF	10-30-2018
Sample_oneline.png	One-line	10-30-2018
ElectronicSignature.pdf	Electronic Signature	10-30-2018
FisElectronicSignature.pdf	Electronic Signature	10-30-2018

Interconnection Requests List Page



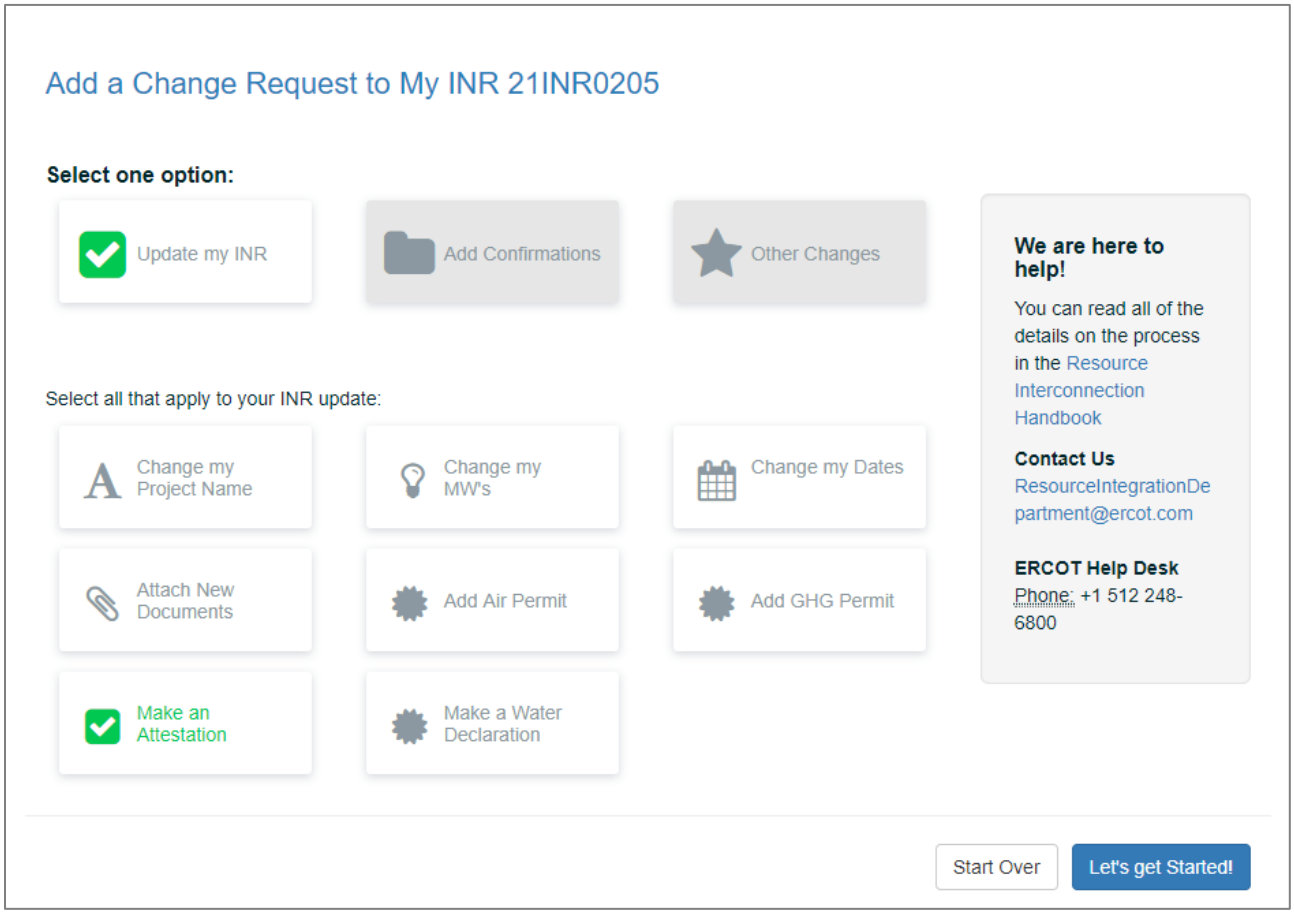
1 Click the **Add Change Request** button.

Add a Change Request Page



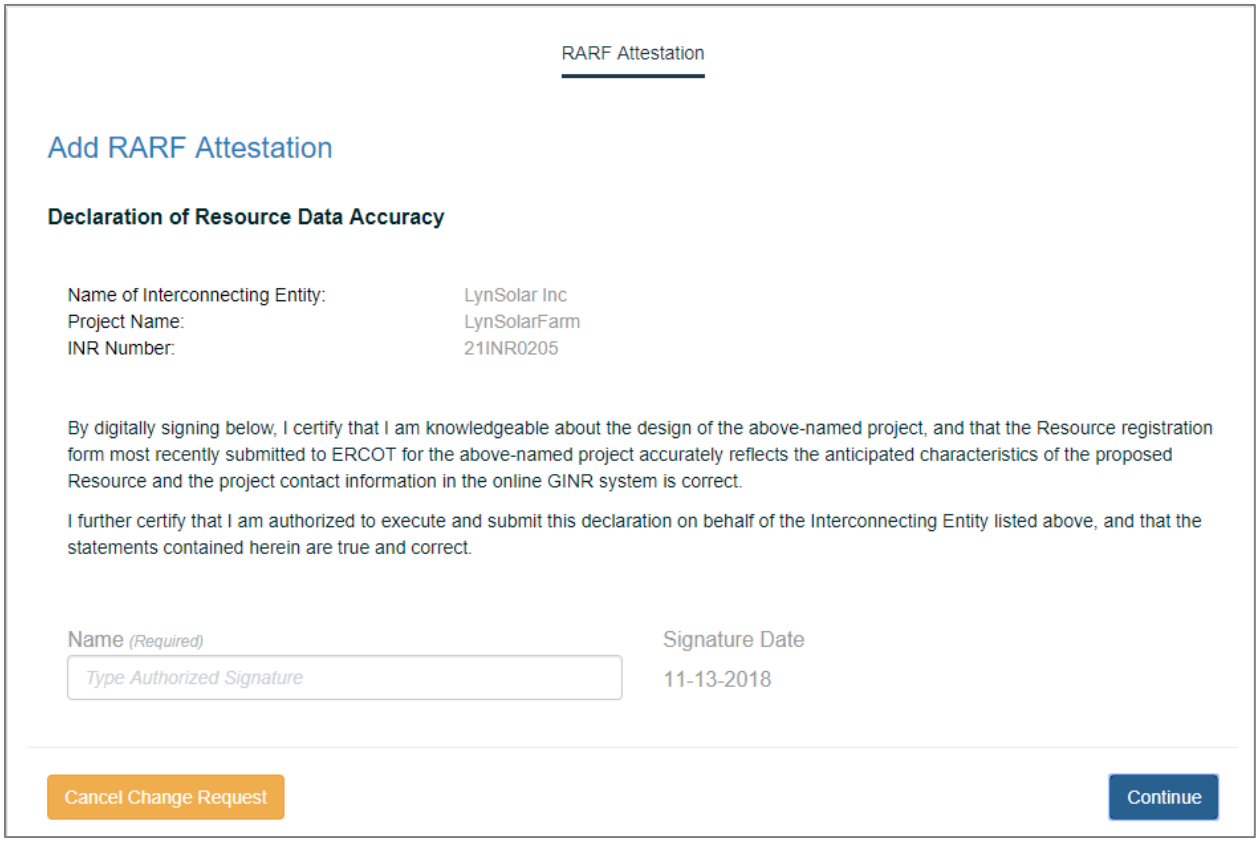
2 Click the **Update My INR** button. The page expands with the appropriate options.

Add a Change Request Page With Options



3 Click the **Make an Attestation** button and then click the **Let's get Started** button.

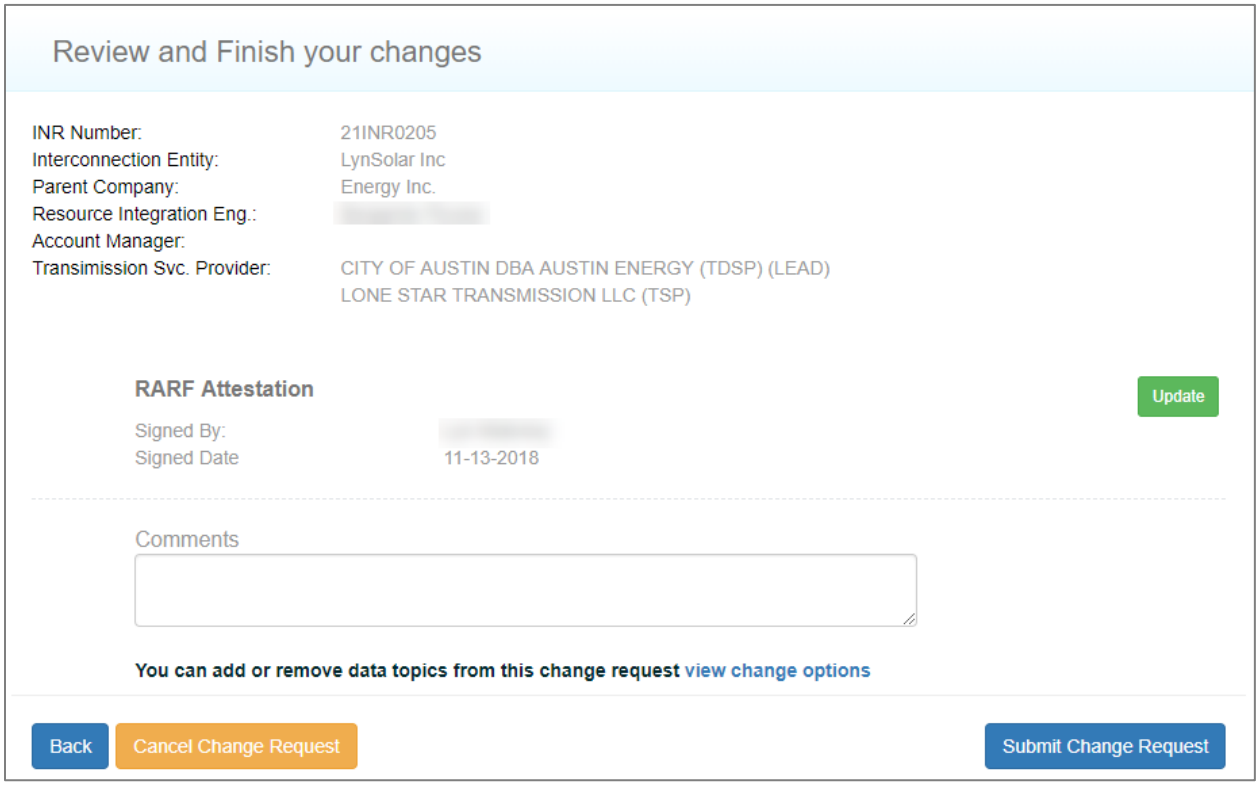
Add RARF Attestation Page



4. After reading the page, type in your signature.

5. Click the **Continue** button.

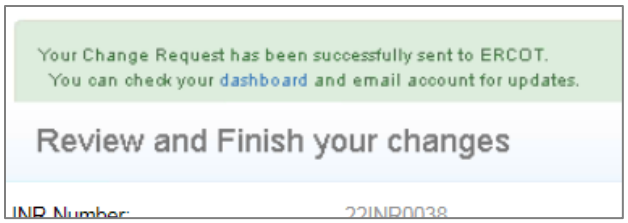
Review and Finish your changes Page



6 Use the **Comments** section to type in any notes for ERCOT or your TSP.

7 Click the **Submit Change Request** button.

Change Request Successfully Sent Message



To close this page and return to the Interconnection Requests List, click the link in this message or the ercot logo at the top left of the page.

Requesting an FIS

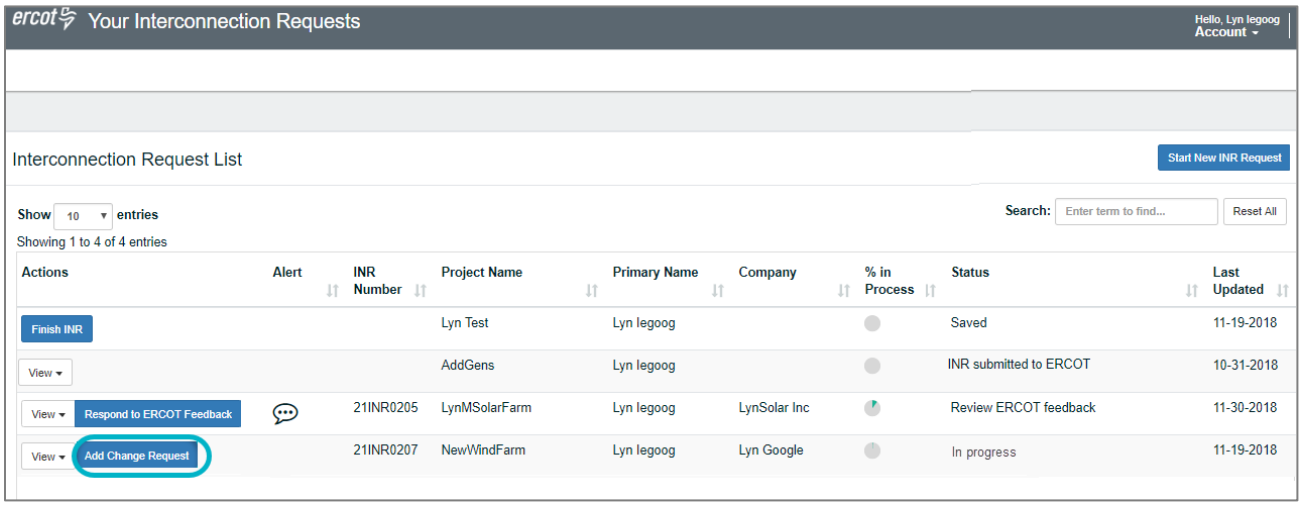
You can request a full interconnection study (FIS) on your project through a change request.

In the FIS change request, you can also update the COD, add the Synchronization and Energization dates, and attach required documents, such as an updated one line diagram and current RARF.

After you complete these tasks, you can review what you provided and electronically sign a Declaration of Department of Defense (DoD) Notification, and then pay the requested FIS fees.

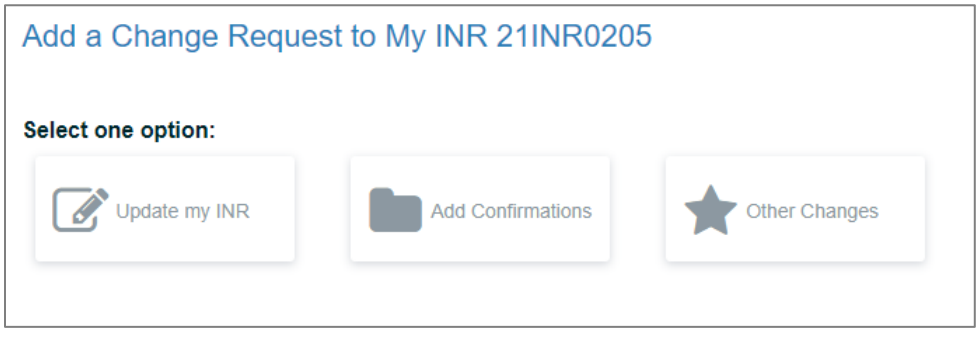
ERCOT will send you an email when the FIS is completed.

Interconnection Requests List Page



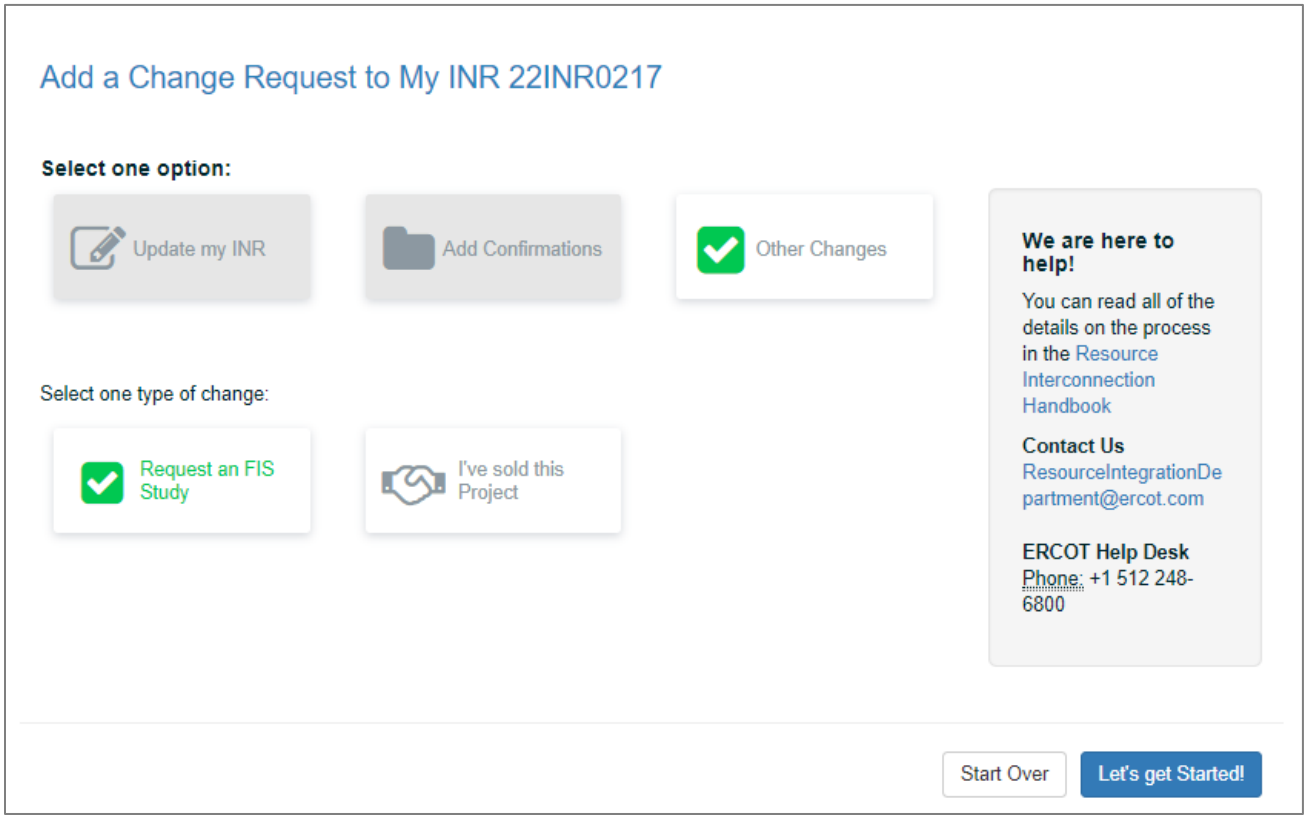
1. Click the **Add Change Request** button.

Add a Change Request Page



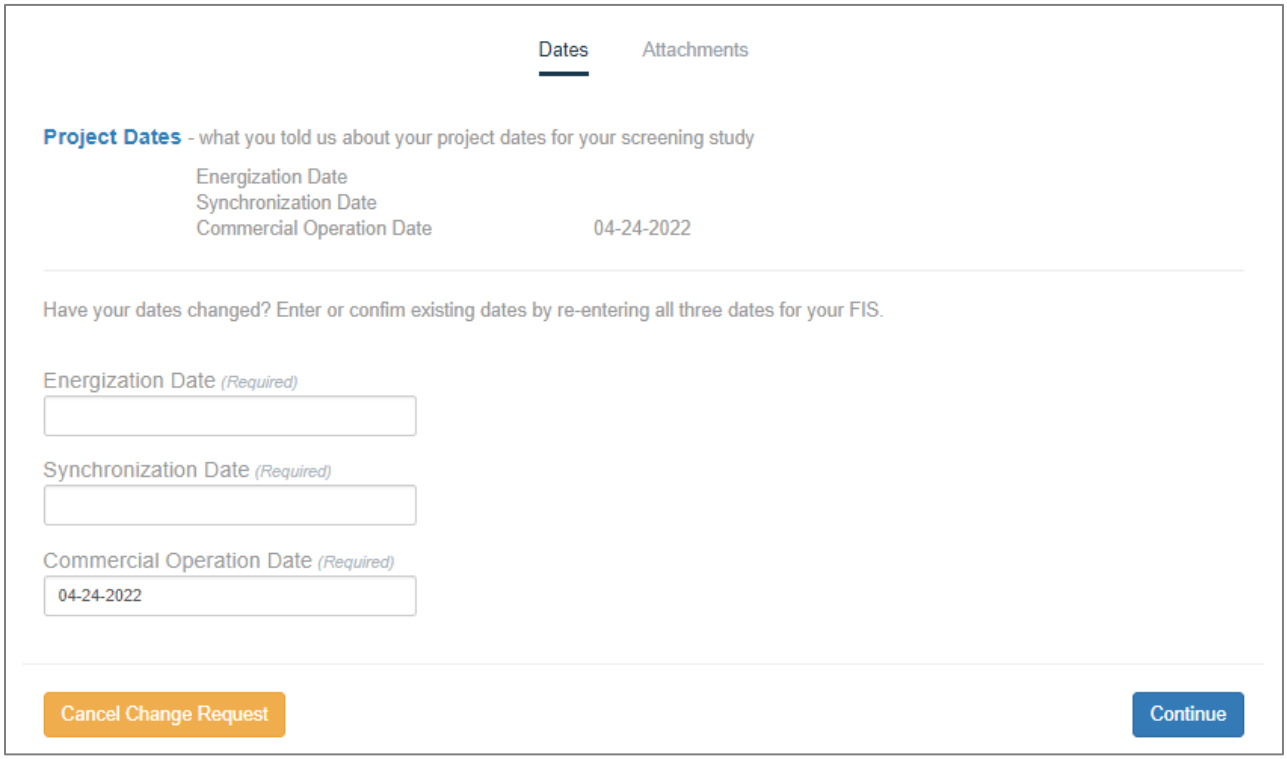
2. Click the **Other Changes** button. The page expands with the appropriate options.

Add a Change Request Page With Options



3 Click the **Request an FIS Study** button.

Project Dates Page



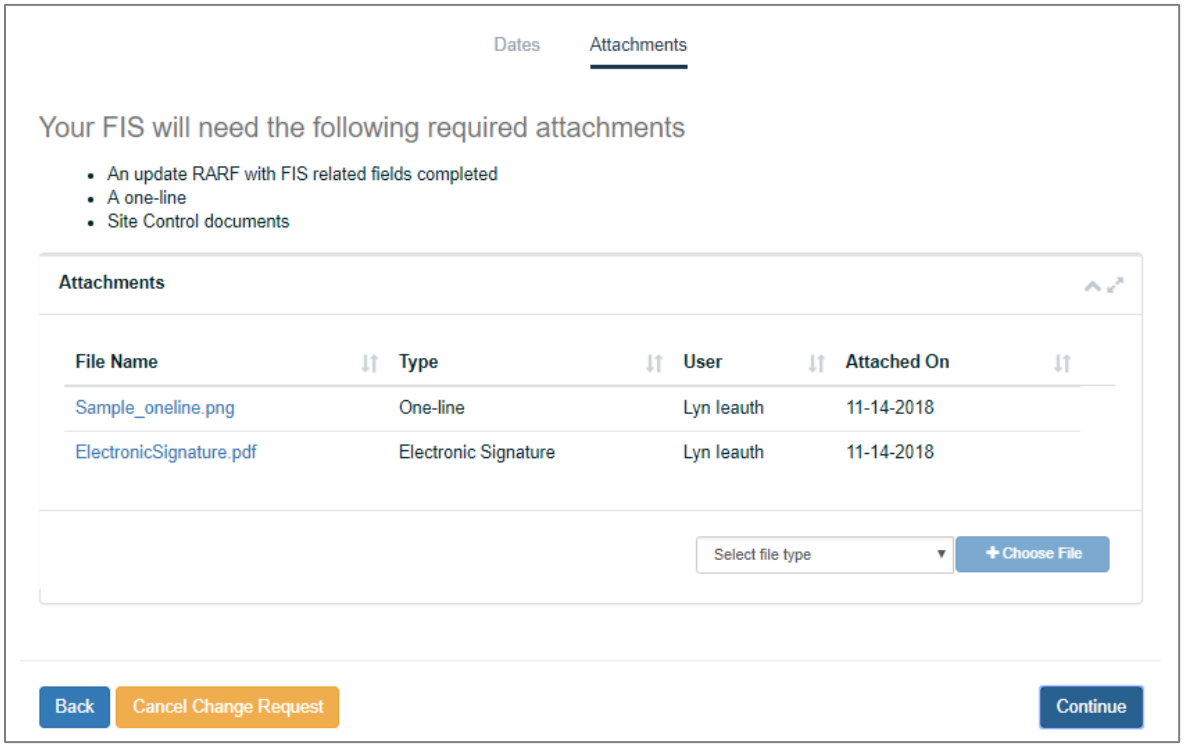
4. Type in the mm-dd-yy of the Energenization date. This date must be at least 10 days before the Synchronization date.

5. Type in the mm-dd-yy of the Synchronization date.

6. If you need to modify the **Commercial Operation Date**, type in your change.

7. Click the **Continue** button.

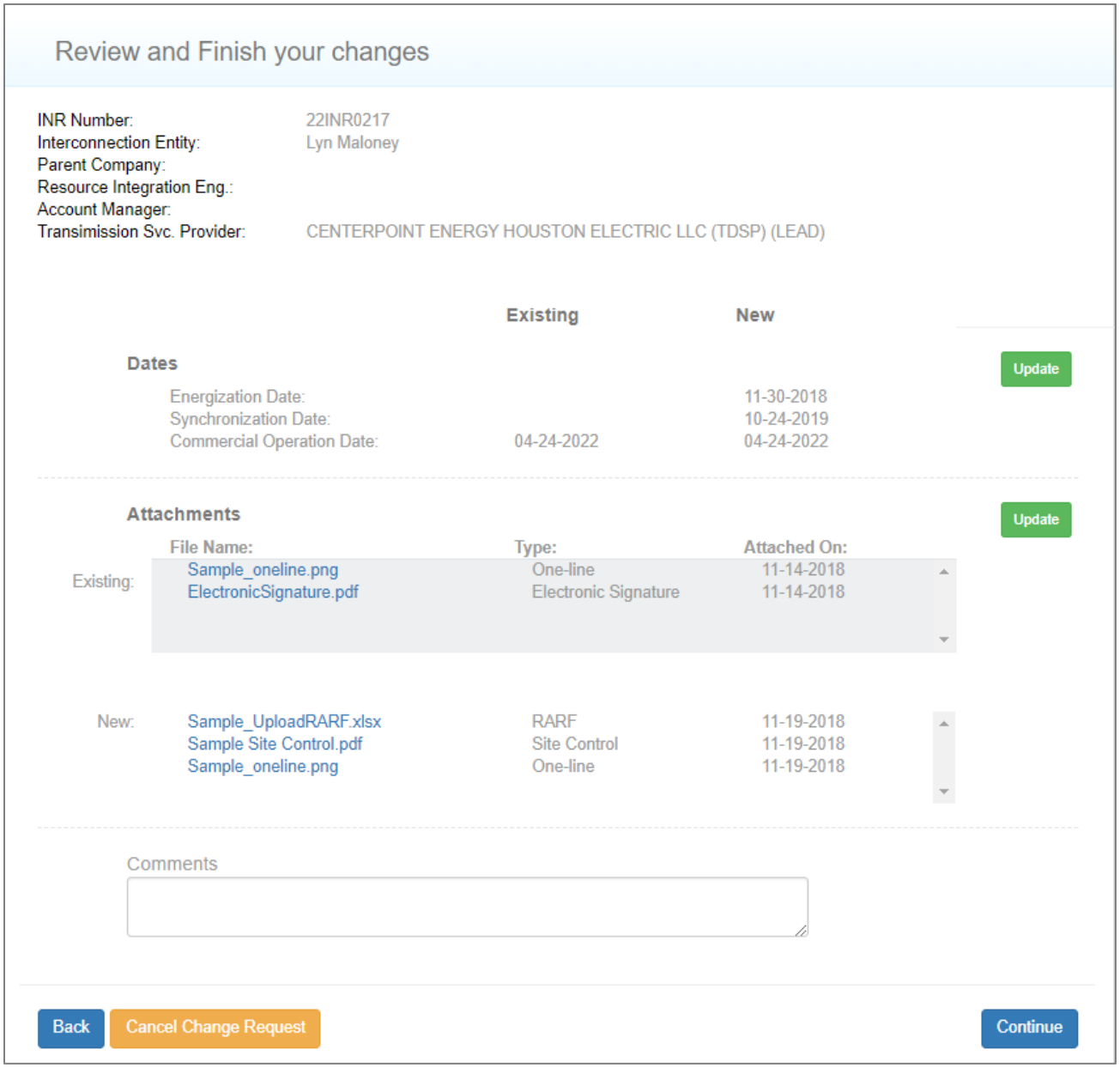
Attach FIS Documents



8. For each document you need to upload and attach (RARF and one-line):
   - A. Click the **Select file type** dropdown and click the type of file you plan to upload.
   - B. Click the **Choose File** button and navigate to the file on your computer.
   - C. Repeat the steps above for each file you want to upload.
9. Click the **Continue** button.

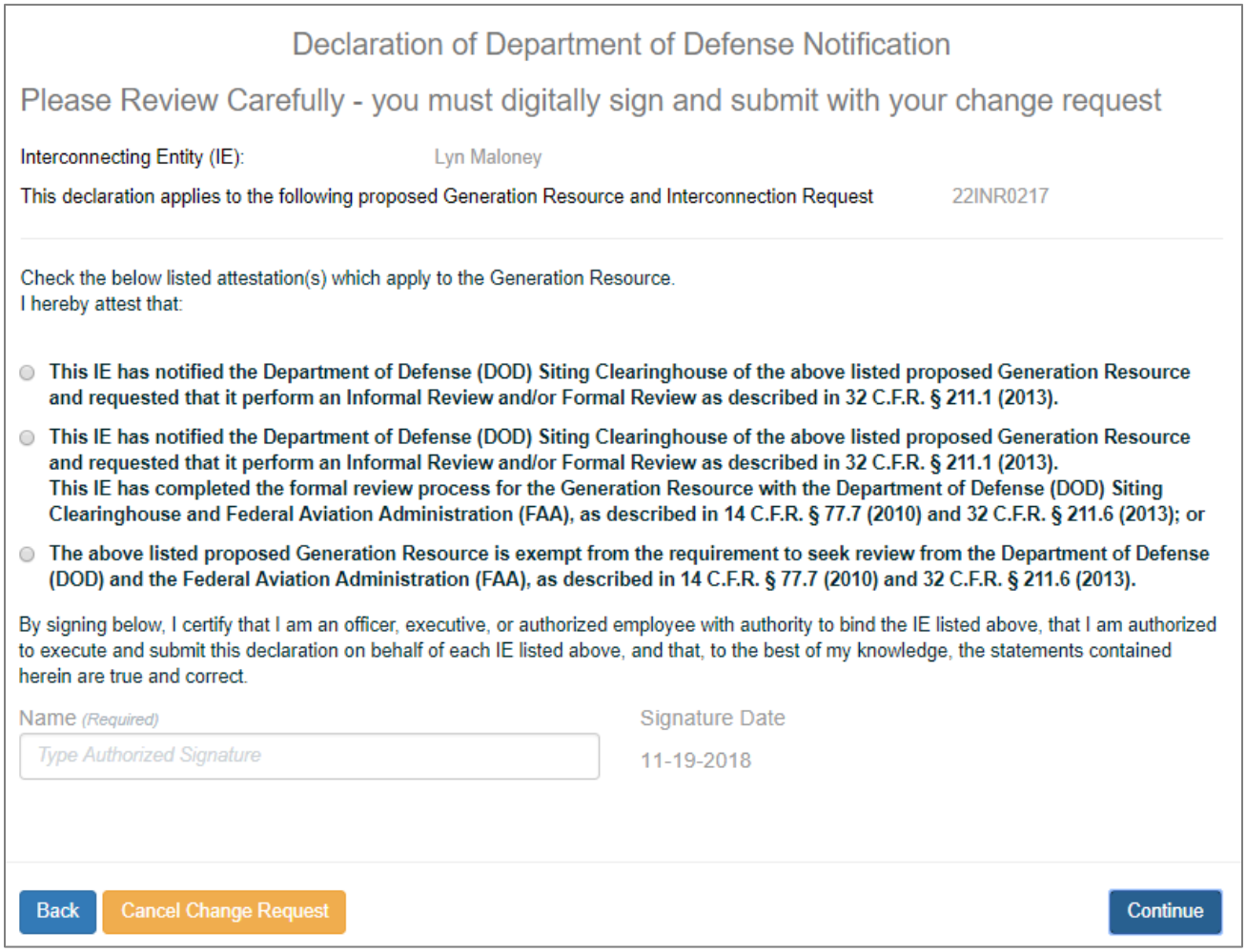
> Just uploaded the wrong file? Use the **Delete** button to remove it.
>
> Need to delete a submitted document? You can contact ERCOT at ginr@ercot.com

Review and Finish your Changes Page



10 Click the **Continue** button.

Declaration of Department of Defense Notification Page

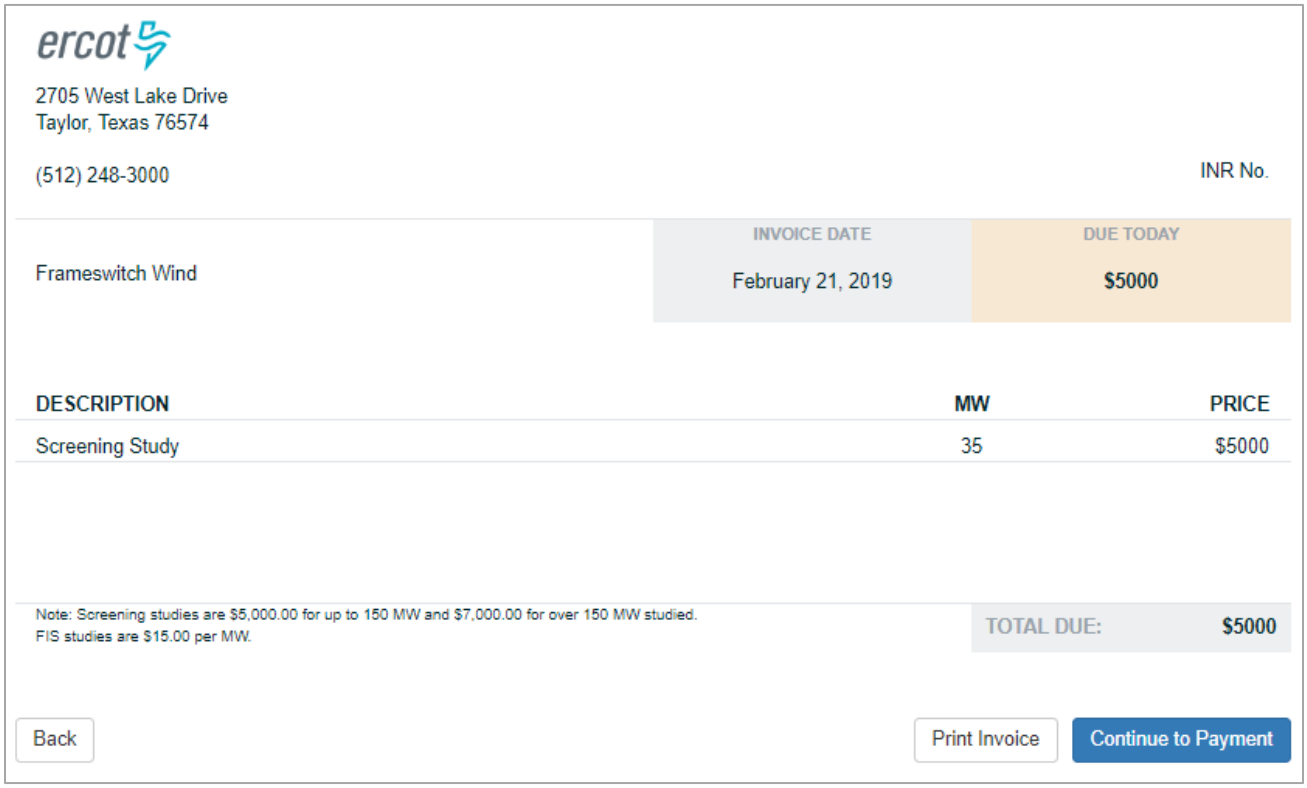


11 Click one of the 3 options.

12 Type in your authorized signature name.

13 Click the **Continue** button.

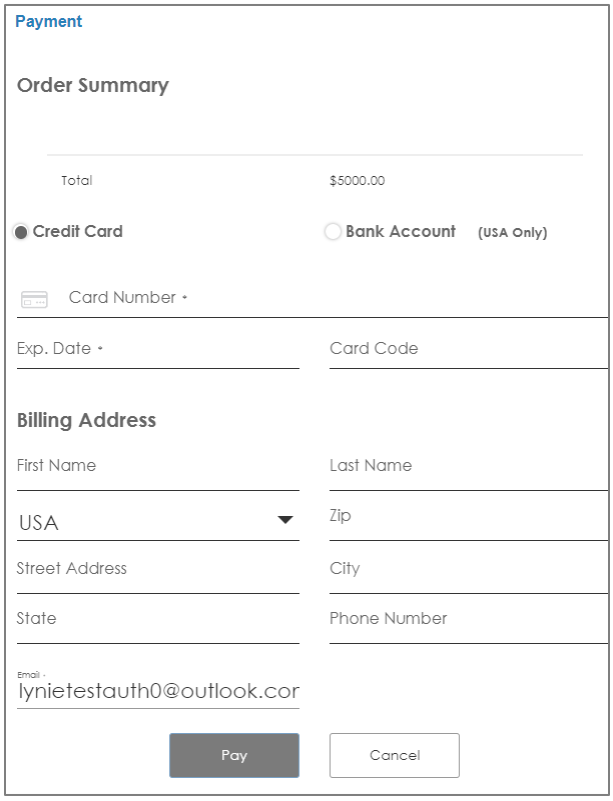
Invoice Page



14 After carefully reviewing the information, click the **Continue to Payment** button.

Payment Method Page

Paying by Credit Card



15 Click the **Credit Card** option.

16 Type in your card number.

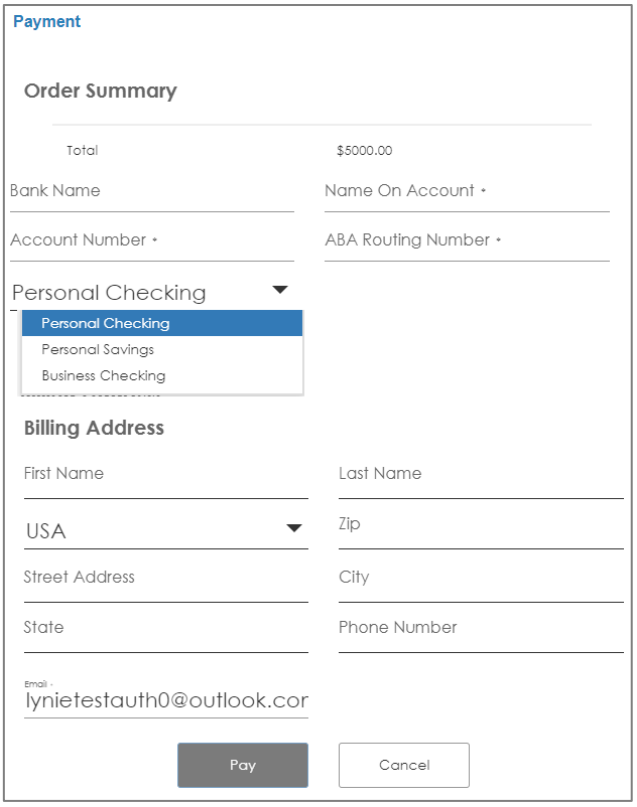
17 Type in the expiration date on your card.

18 Type in the CVV code from the back of the card.

19 Type in your **First Name** and **Last Name**, and then type in your address information (that corresponds to the billing address of the credit card

20 Click the **Pay** button.

Paying with electronic Check (ACH)



15 Click the **Bank Account** option.

16 Type in the name of the bank and then your name as it appears on the account.

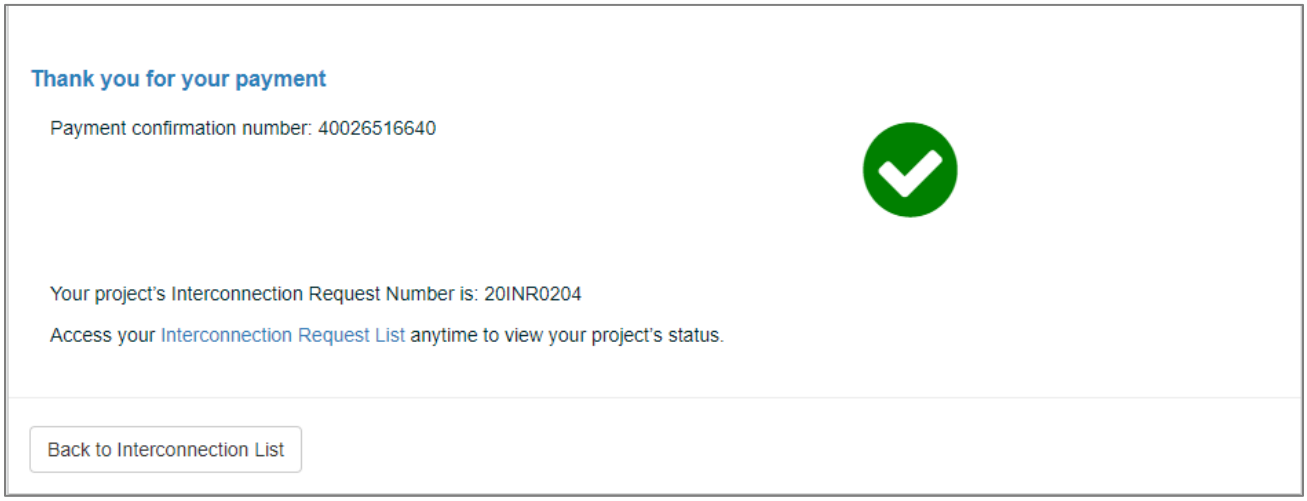
17 Type the number of the account you plan to use and the routing number of the bank.

18 Select the type of account from the dropdown.

19 Type in your **First Name** and **Last Name**, and then type in your address information (that corresponds to the address of the bank account you are using

20 Click the **Pay** button.

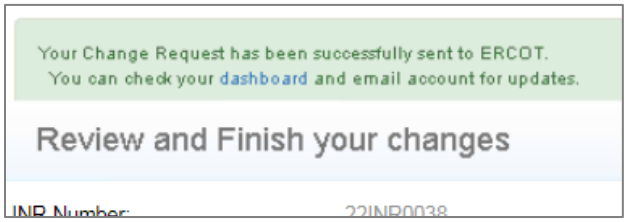
Payment Confirmation Page



21 Note your INR number. You will need it for all communications with ERCOT.

22 To close this page and continue to work in your Interconnection List, click the **Back to Interconnection List** button. Or, to exit RIOO IS, click the **Account** dropdown and click **Log Out**.

Change Request Successfully Sent Message

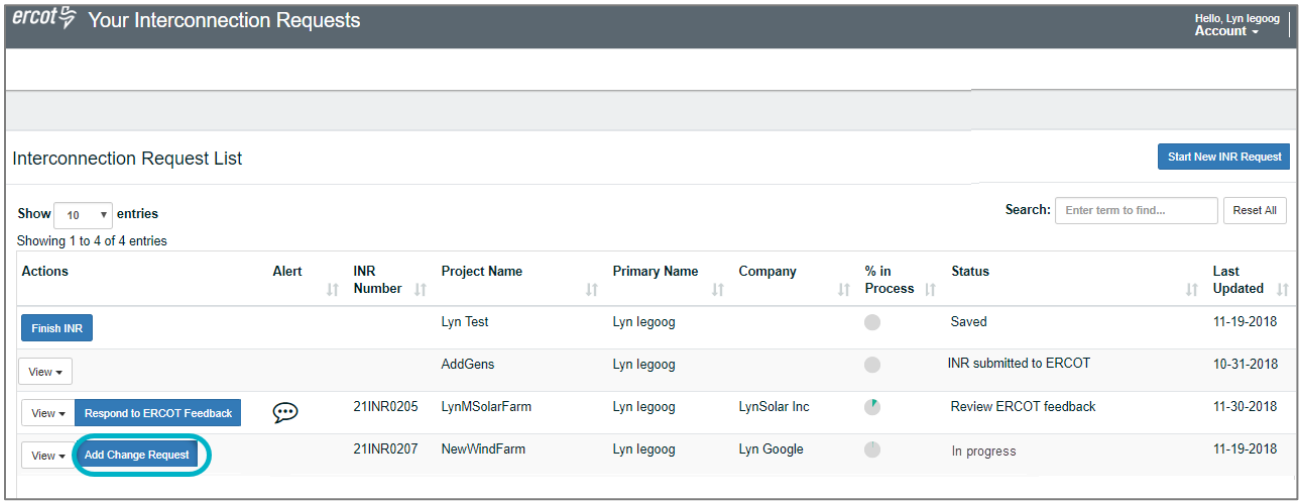


To close this page and return to the Interconnection Requests List, click the link in this message or the ercot logo at the top left of the page.

Reporting a Change of Ownership

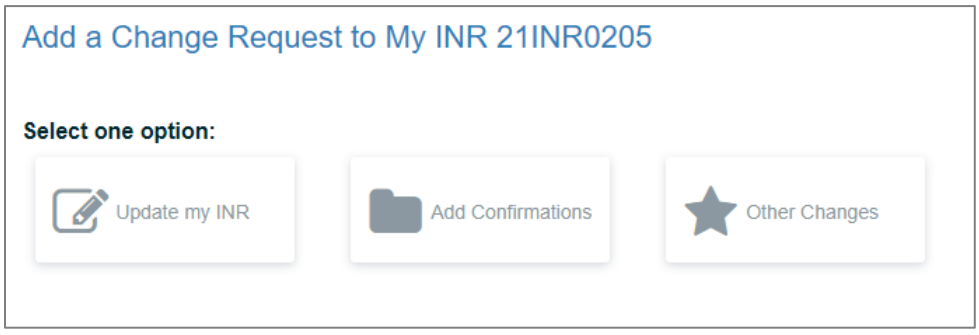
You can change the owner of the project through a change request where you assign the person you sold it to as the Primary Contact. You will add the email address and company information of the new primary owner or contact as well as attach required documents.

Interconnection Requests List Page



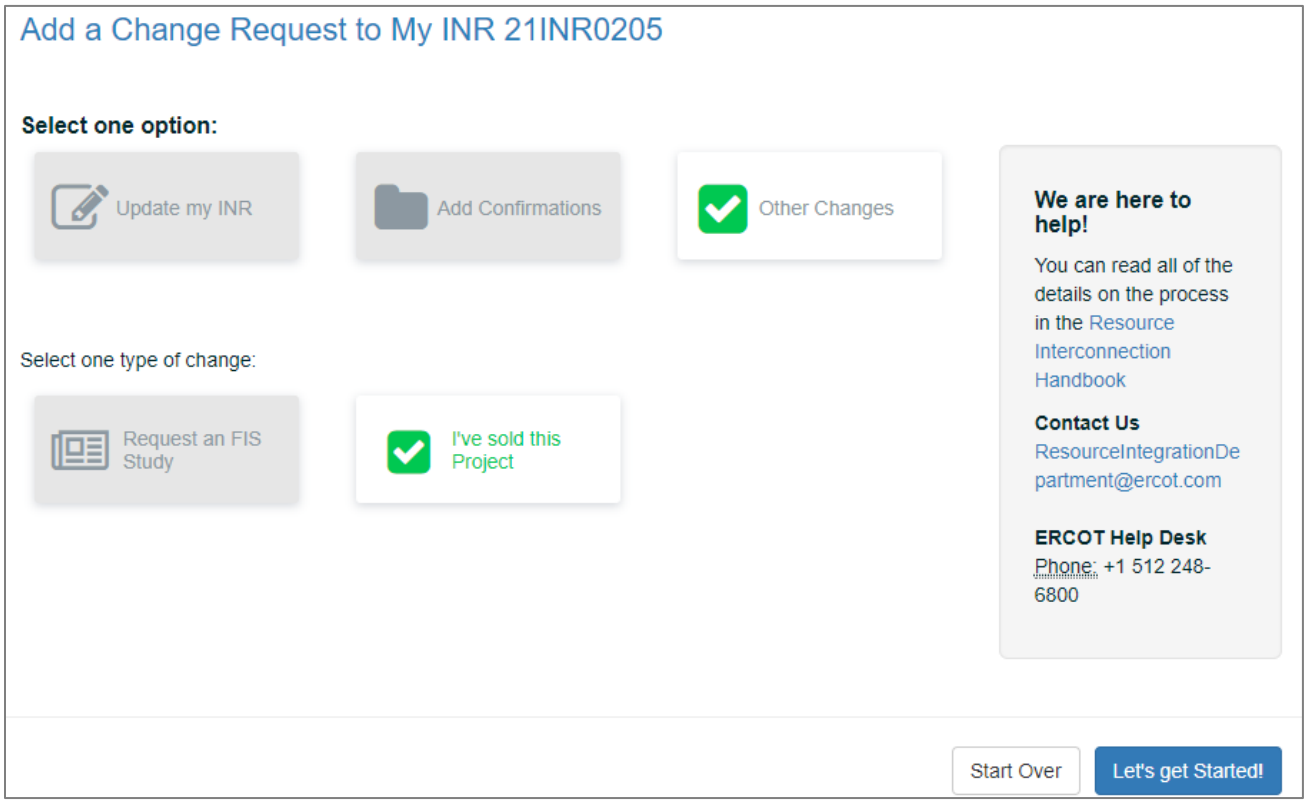
1 Click the **Add Change Request** button.

Add a Change Request Page



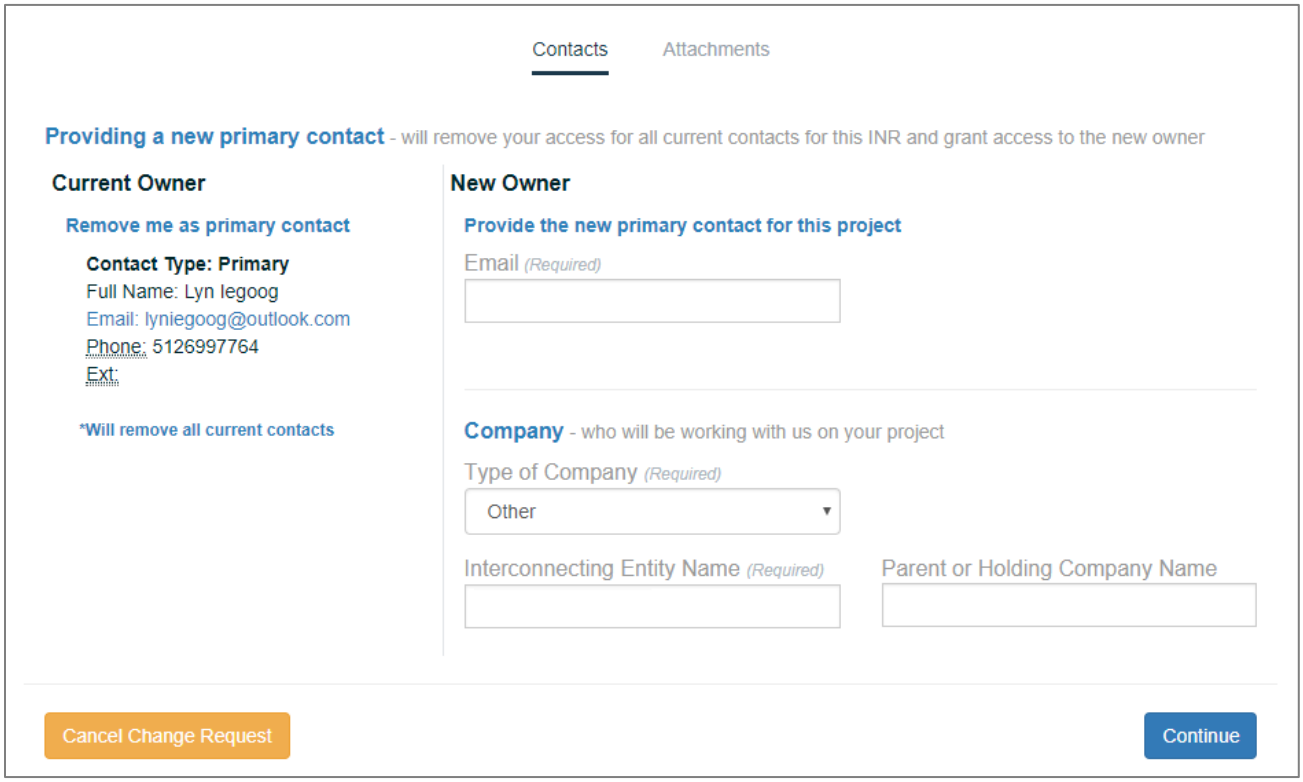
2 Click the **Other Changes** button. The page expands with the appropriate options.

Add a Change Request Page With Options



3 Click the **I've sold this Project** button and then click the **Let's get Started** button.

Contacts Page



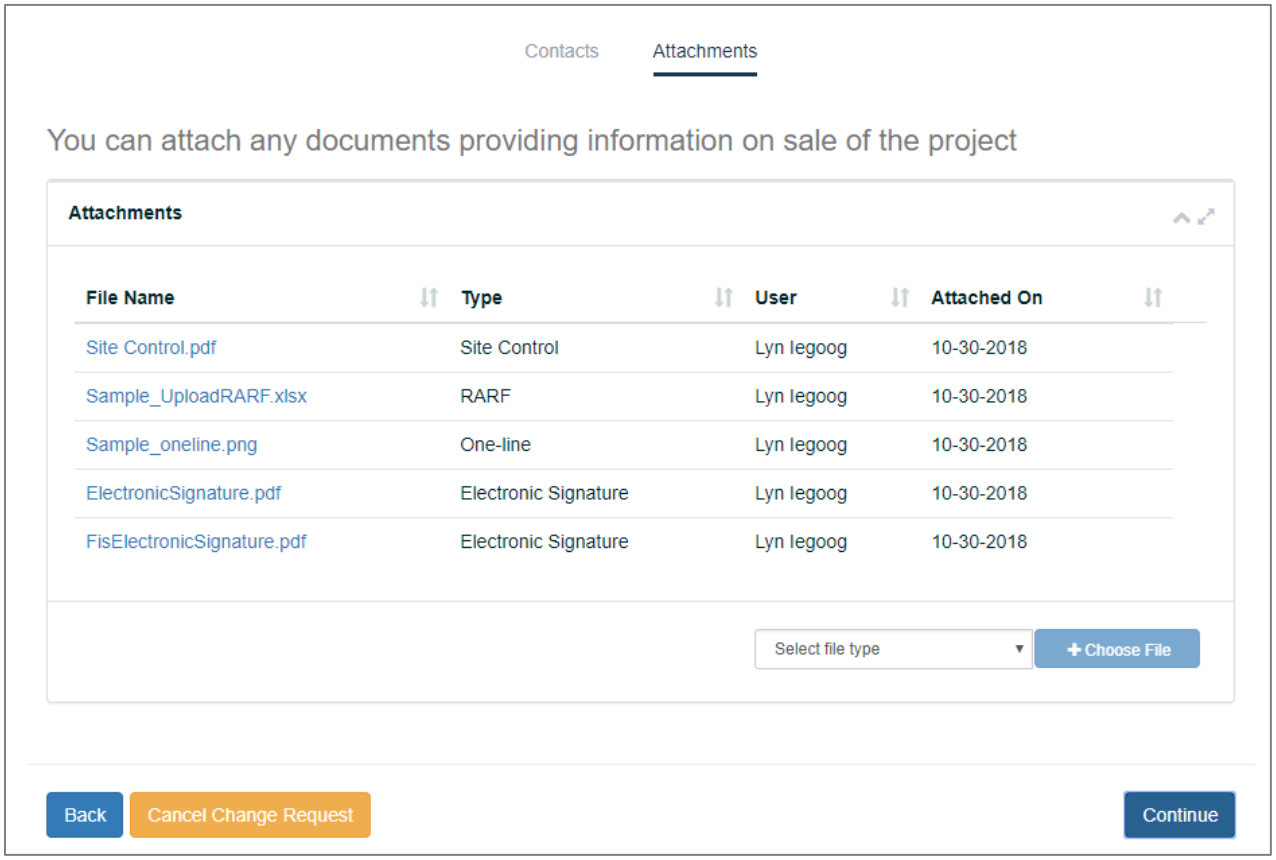
4. Type in the email address of the new owner.

> ERCOT sends the new owner an email with instructions on how to register and log in.

5. Fill in the **Company information**.

6. Click the **Continue** button.

Attachments Page



4. Click the **Select file type** dropdown and click the type of file you plan to upload.

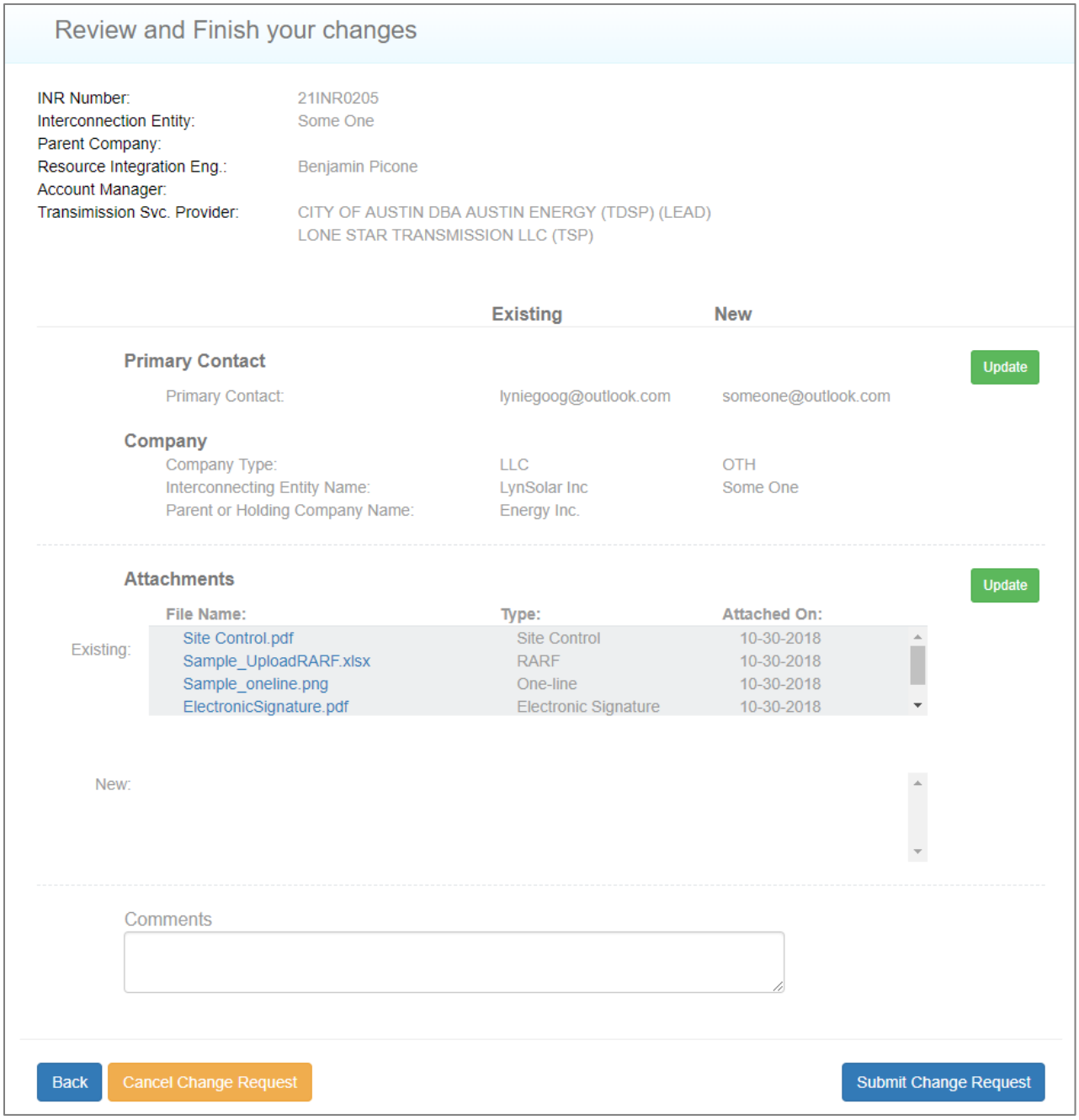
5. Click the **+Choose File** button, navigate to the file on your computer, and click the file.

6. Repeat the steps above for each file you want to upload.

7. When you are finished, click the **Continue** button.

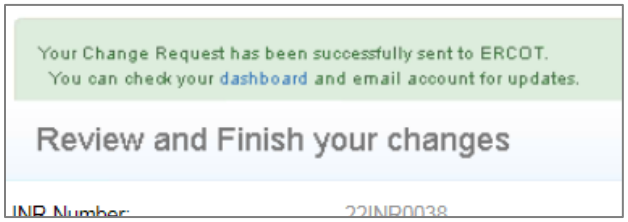
Uploaded the wrong file? Use the **Delete** button to remove it.

Review and Finish your changes Page



8 Click the **Submit Change Request** button.

Change Request Successfully Sent Message



To close this page and return to the Interconnection Requests List, click the link in this message or the ercot logo at the top left of the page.

Managing the Contacts On Your Project

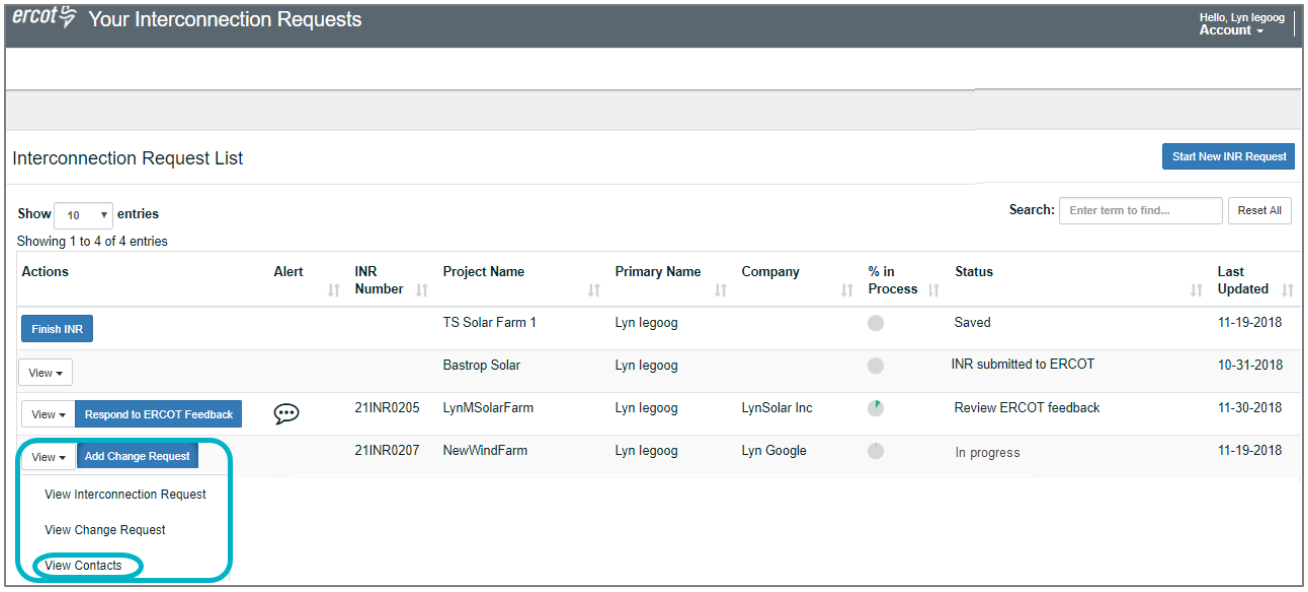
The project owner is the Primary Contact. Backups and other contacts that you have invited to join the project are displayed on cards on the All Contacts page.

If you need to change a contact to a Backup contact, you must delete the contact (refer to page 127) and add the contact again specifying that the person is a Backup contact (refer to page 122).

Viewing Project Contacts

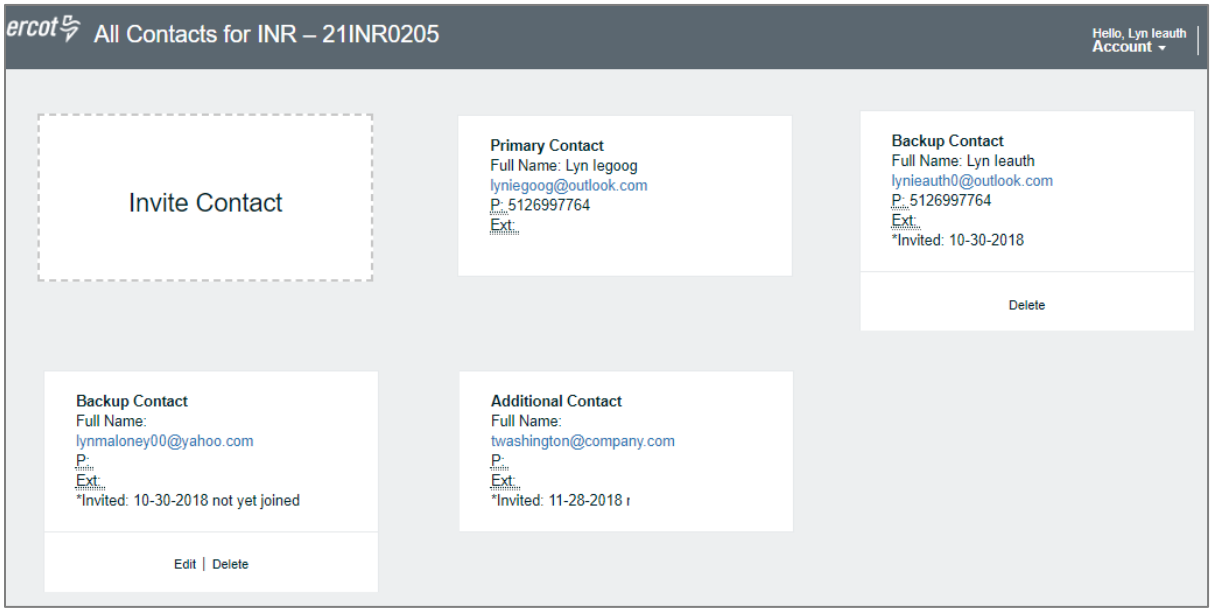
From the Interconnection Requests List, you can use the View menu button to display the contact cards of people you have added to your project. Viewing the cards can help you determine who has joined the project and who has yet to join.

Interconnection Requests List Page



1 Click the **View** dropdown and click **View Contacts**.

All Contacts Page

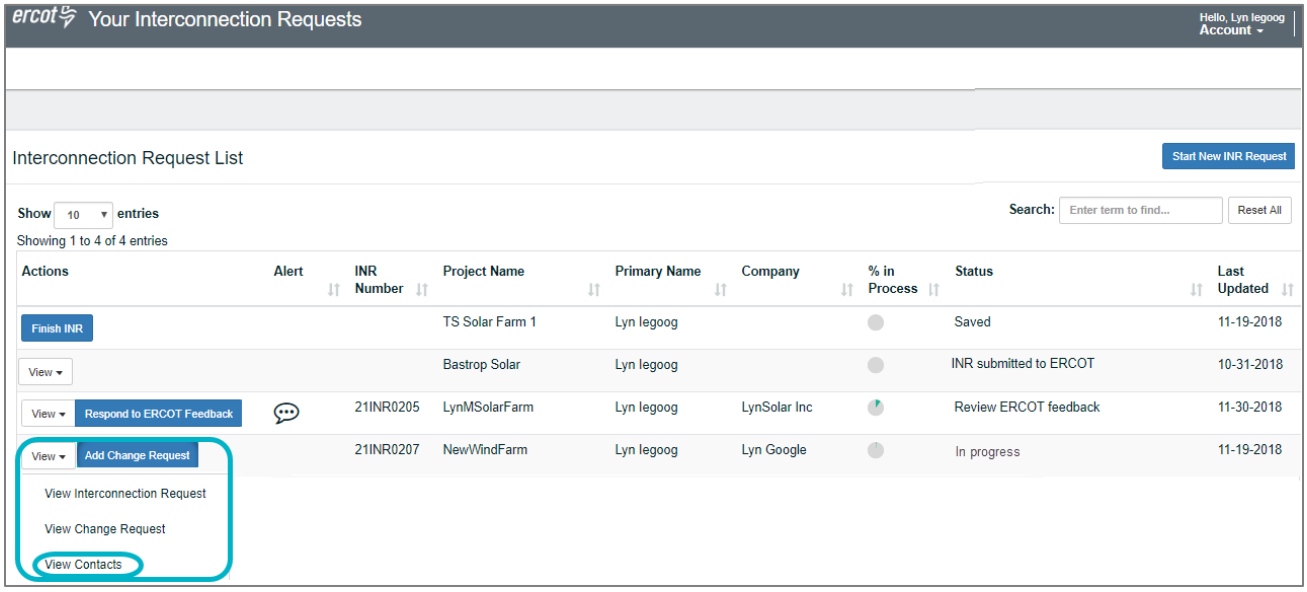


Inviting New Contacts or Backup Contacts

You can invite others to join the project and designate them as Backup Contacts who can view, edit, and invite others or Contacts who can view and edit the project request.

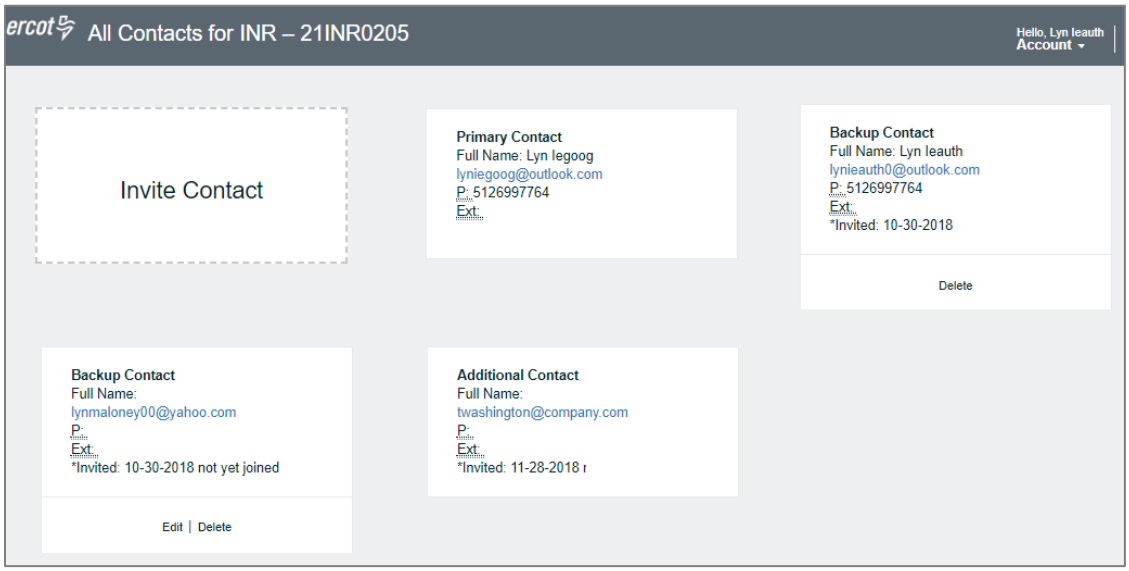
ERCOT sends the invited contact an email about your invitation to join with instructions on how to sign up and join the project. If contacts have already joined another INR project, ERCOT sends them an email informing them that they have been invited to join this project.

Interconnection Requests List Page



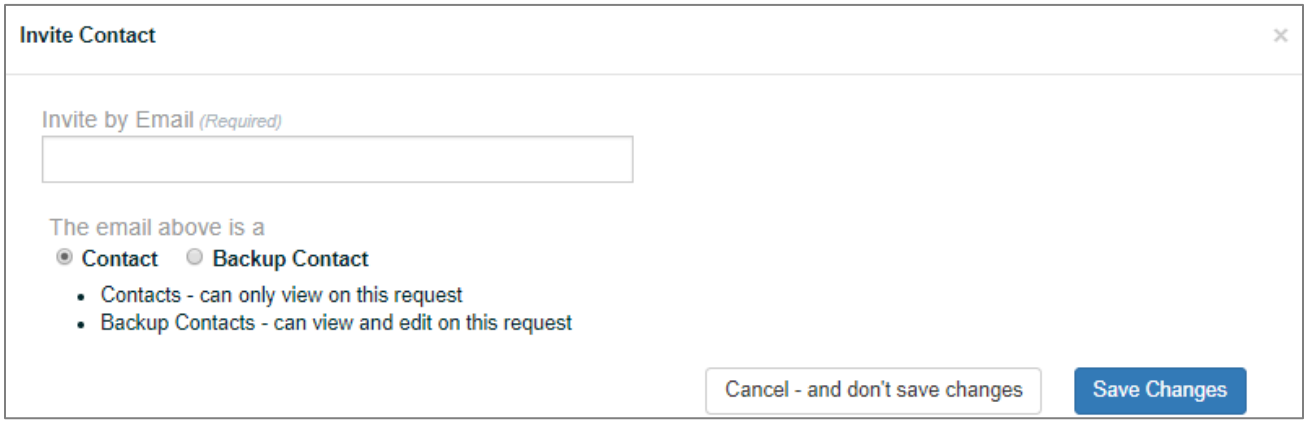
1 Click the **View** dropdown and click **View Contacts**.

All Contacts Page



2 To have another person join this project, click **Invite Contact**.

Invite Contact Popup

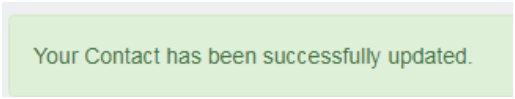


3. Type in the new contact email.

4. If this is a backup, click the **Backup Contact** option.

5. Click the **Save Changes** button.

Contact Successfully Updated Message

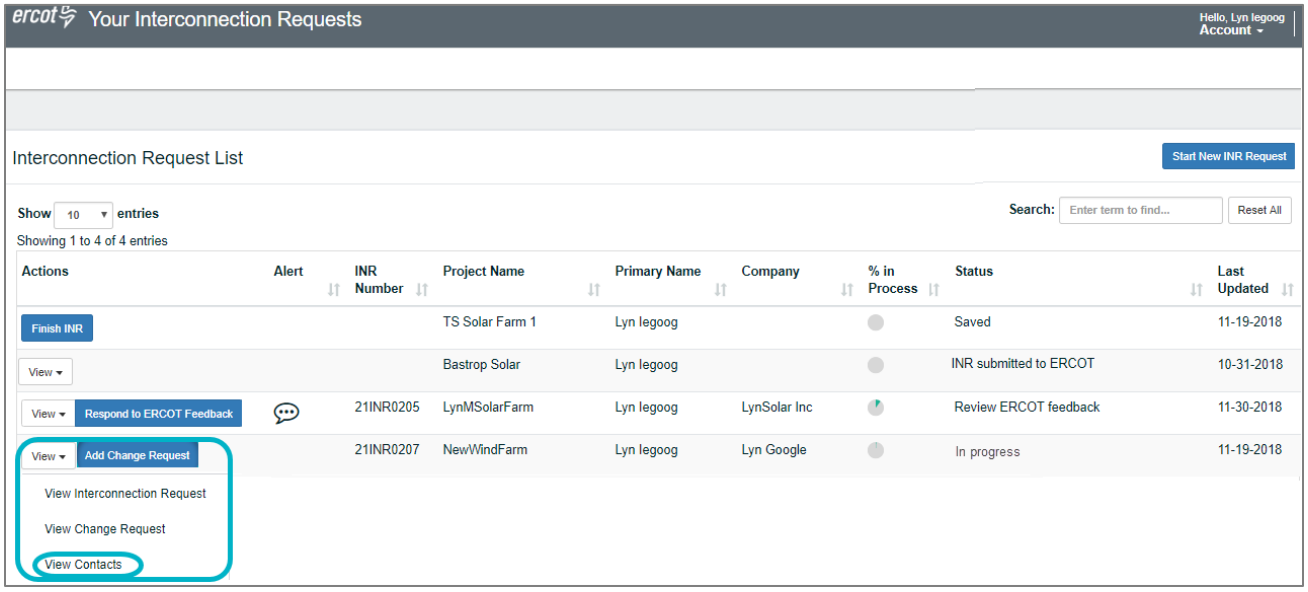


To close this page and return to the Interconnection Requests List, click the ercot logo at the top left of the page.

Editing Contact Information

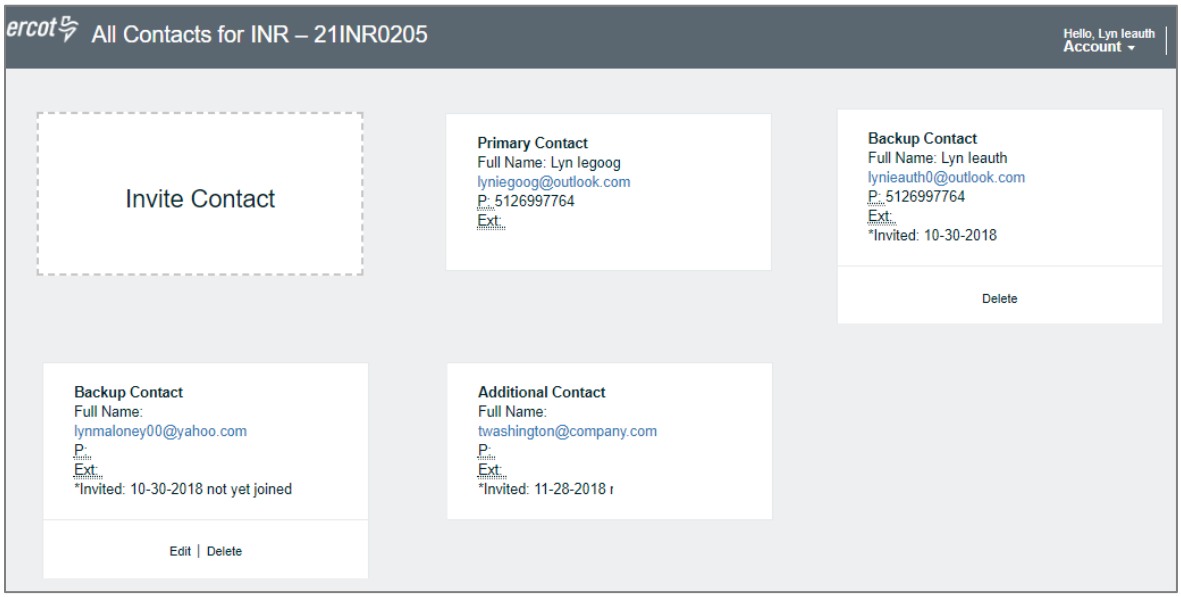
You can edit only the email address of contacts who have not yet joined this project.

Interconnection Requests List Page



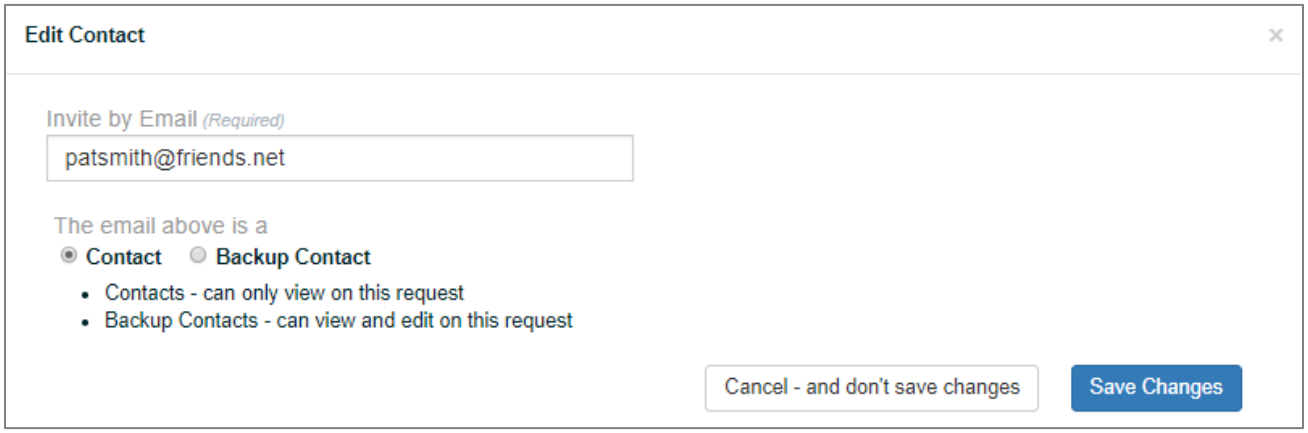
1 Click the **View** dropdown and click **View Contacts**.

All Contacts Page



2 Locate the contact and click **Edit** on their card.

Edit Contact Popup

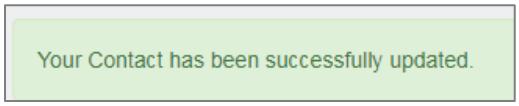


3. Make your changes.

4. If this is a backup, click the **Backup Contact** option.

5. Click the **Save Changes** button.

Contact Successfully Updated Message

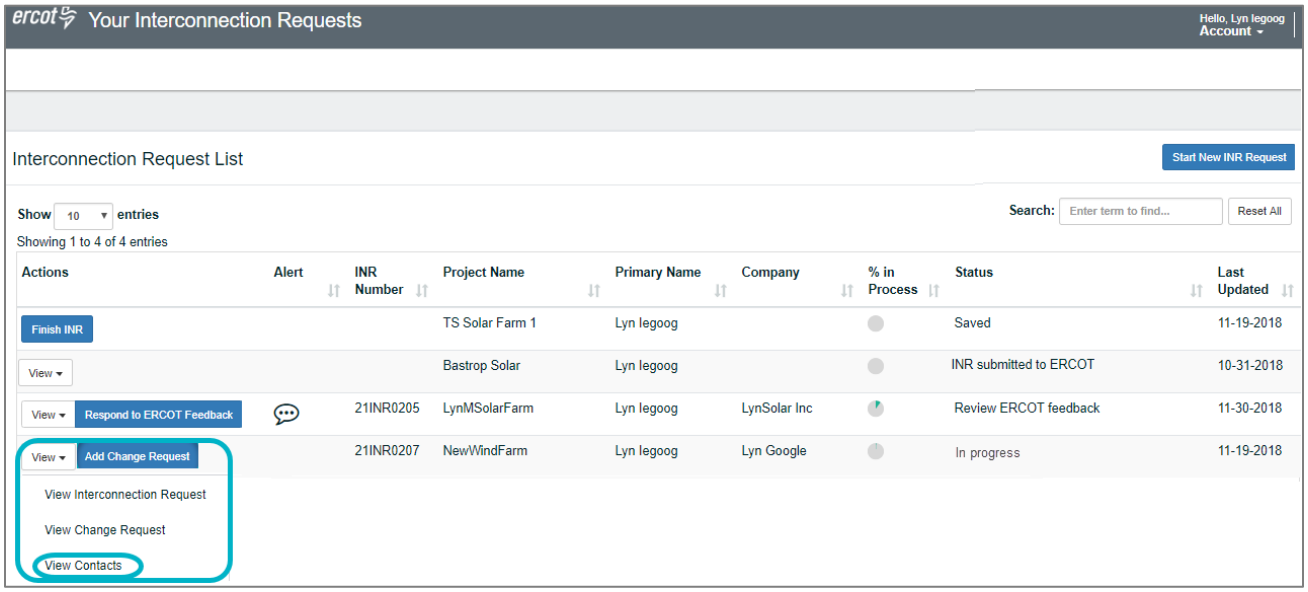


To close this page and return to the Interconnection Requests List, click the ercot logo at the top left of the page.

Removing a Contact from the Project

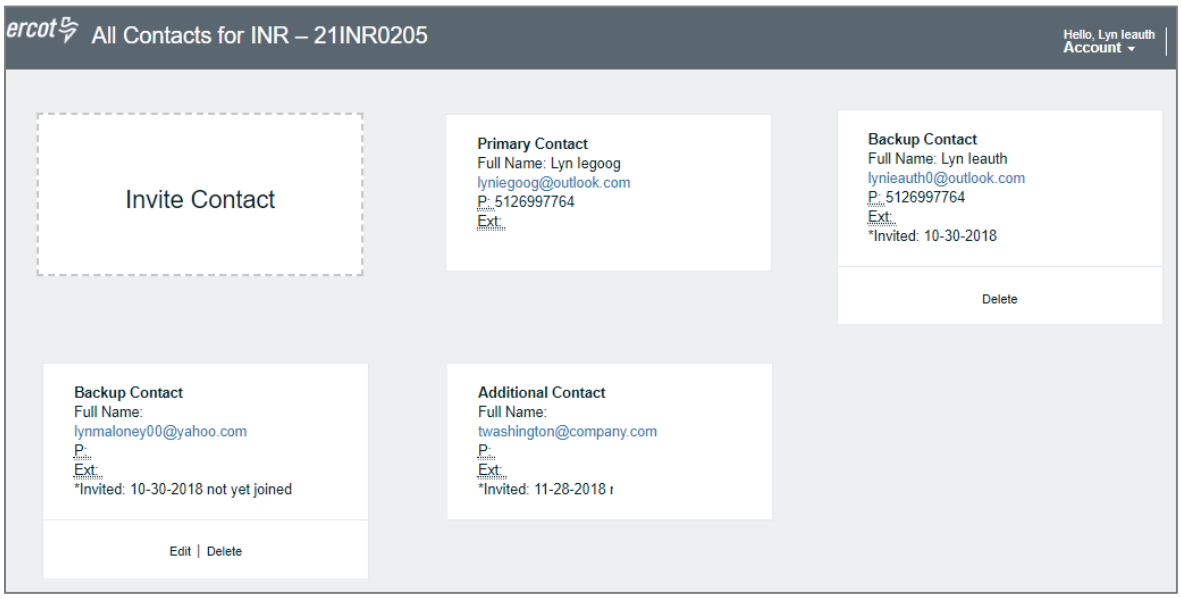
You can remove a contact. From your contact, unless the contact is your only Backup Contact. You should invite a new Backup Contact and, when that contact joins, you can delete their contact card.

Interconnection Requests List Page



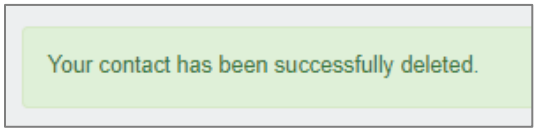
1 Click the **View** dropdown and click **View Contacts**.

All Contacts Page



2 Locate the contact and click **Delete** on their card.

Contact Successfully Deleted Message



To close this page and return to the Interconnection Requests List, click the ercot logo at the top left of the page.

Deleting an Unsubmitted INR

You can delete an INR to remove it from your Interconnection Request List before you have submitted it. Otherwise, for an INR that you have submitted to ERCOT, you can cancel it (refer to page 43).

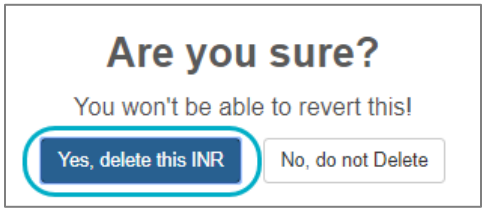
You can delete the INR from any page as you are working by clicking the **Delete INR** button at the bottom of the page. But, if you completed several of the web pages, left, and have come back to the INR from the Interconnection Request List, the Review and Finish Your Changes page displays and you can click the **Delete INR** button at the bottom of that page.

Deleting an INR While Working On It

Bottom of an Interface Page

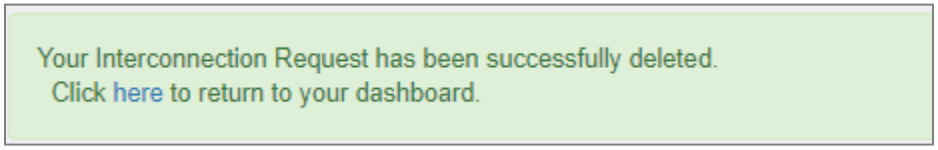
1. Scroll to the bottom of the page and click the **Delete INR** button.

Confirmation Popup



2. Click the **Yes** button.

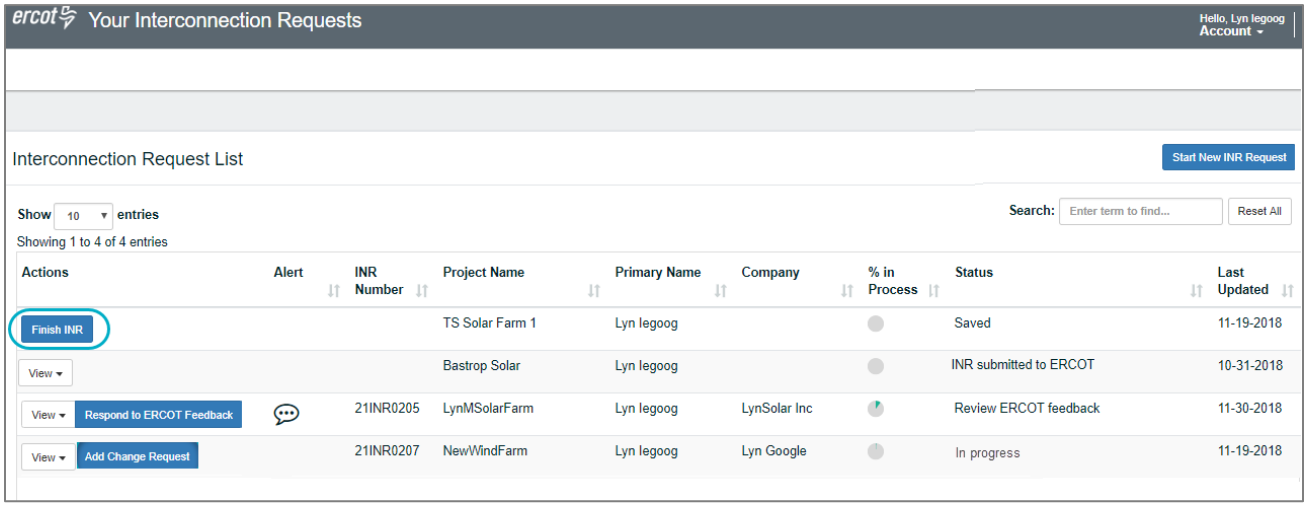
Successfully Deleted Message.



To close this page and return to the Interconnection Requests List, click the link in the message or the ercot logo at the top left of the page.

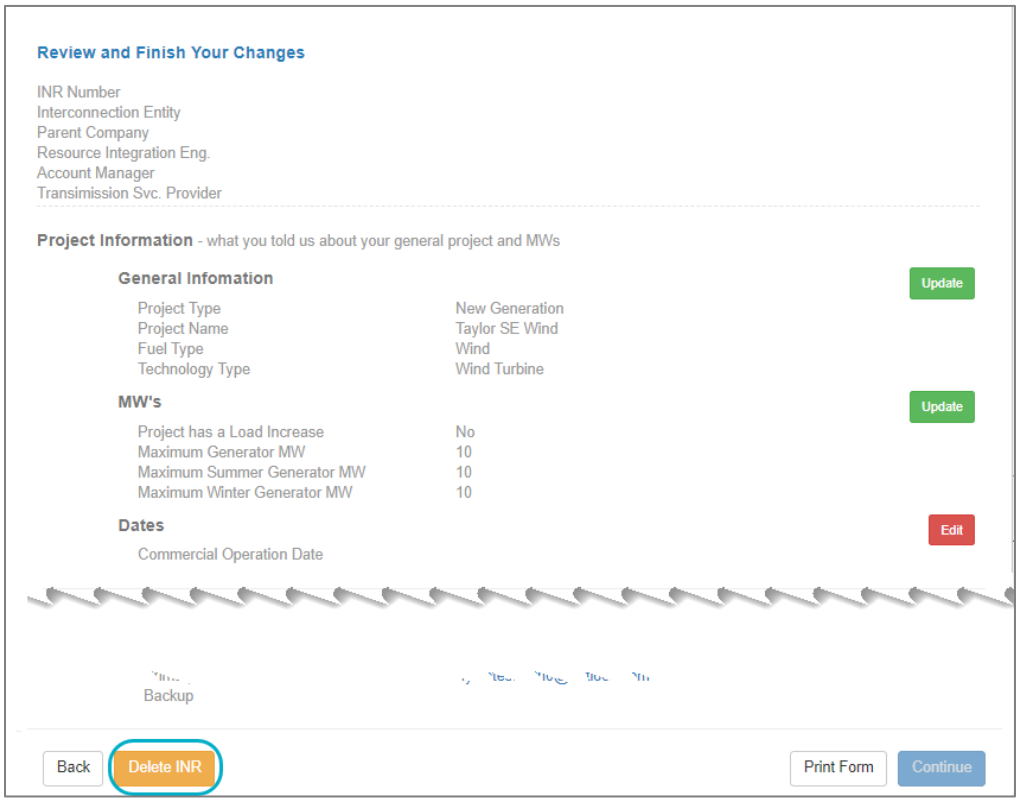
Deleting an Unfinished INR

Interconnection Requests List Page



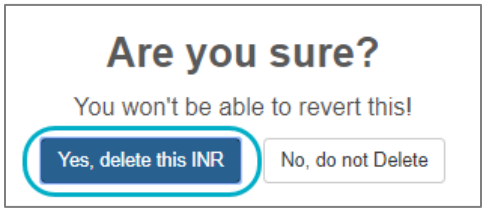
1 Click the **Finish INR** button.

Review and Finish Your Changes Page



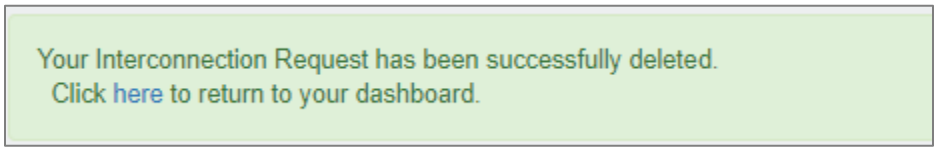
2 Click the **Delete INR** button.

Confirmation Popup



3 Click the **Yes** button.

Successfully Deleted Message.



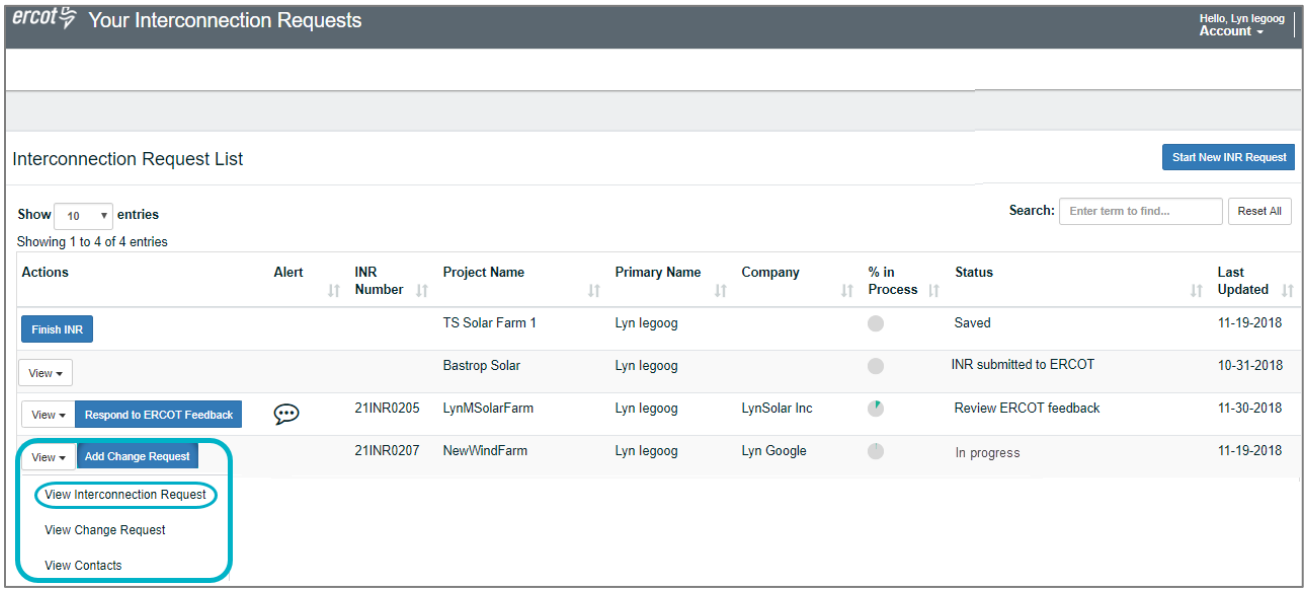
To close this page and return to the Interconnection Requests List, click the link in the message or the ercot logo at the top left of the page.

Cancelling a Submitted INR

You can cancel an INR that has already been submitted to ERCOT, which removes it from your Interconnection Request List and lets ERCOT know that you will no longer be pursuing the project. The system will send an email notifying any assigned TSPs, engineers, and planners that you cancelled the project.

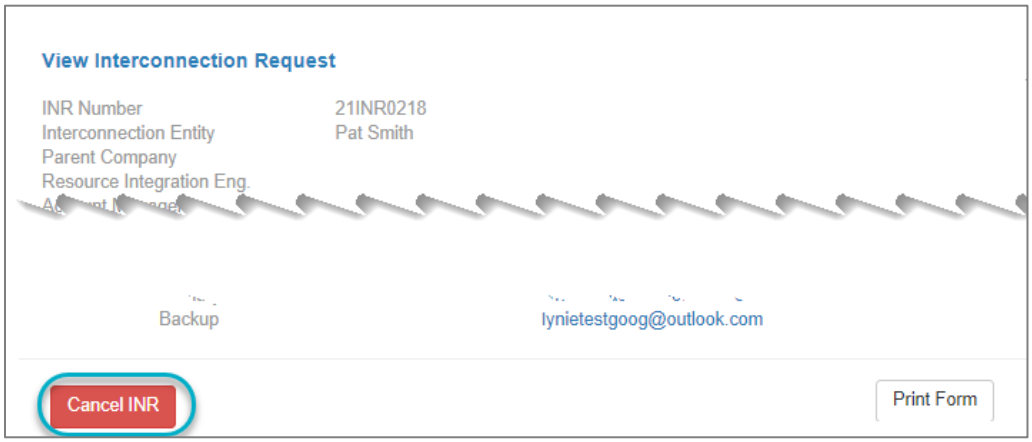
Any Screening Study or FIS fees that you have paid are not refundable.

Interconnection Requests List Page



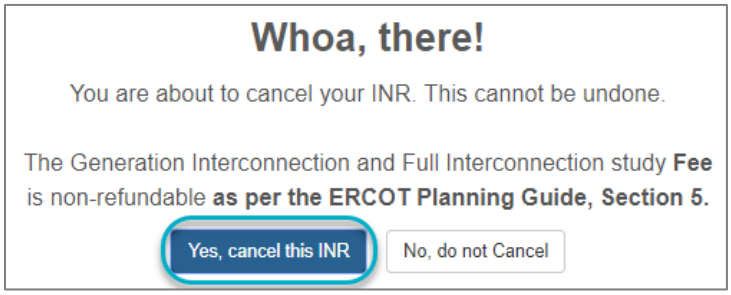
1 Click the **View** action > **View Interconnection Request**.

Review Interconnection Request Page



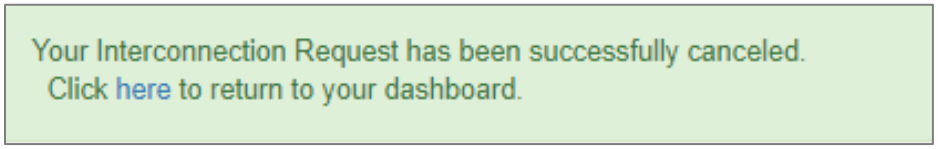
2 Click the **Cancel INR** button.

Confirmation Popup



3 Click the **Yes** button.

Successfully Deleted Message.

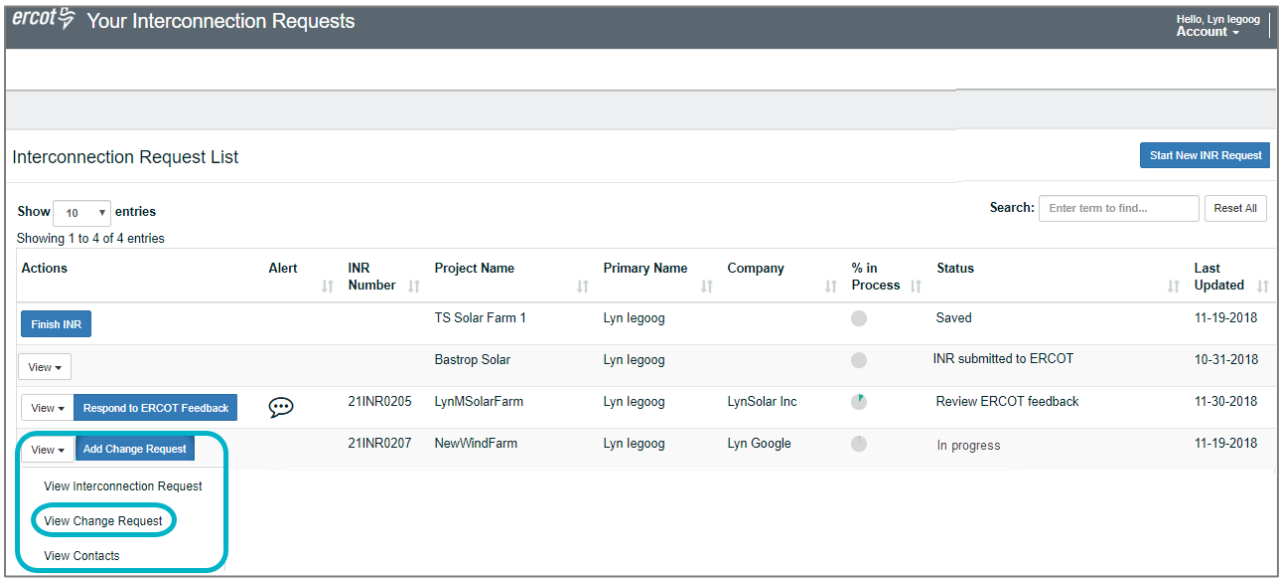


To close this page and return to the Interconnection Requests List, click the link in the message or the ercot logo at the top left of the page.

Cancelling a Change Request

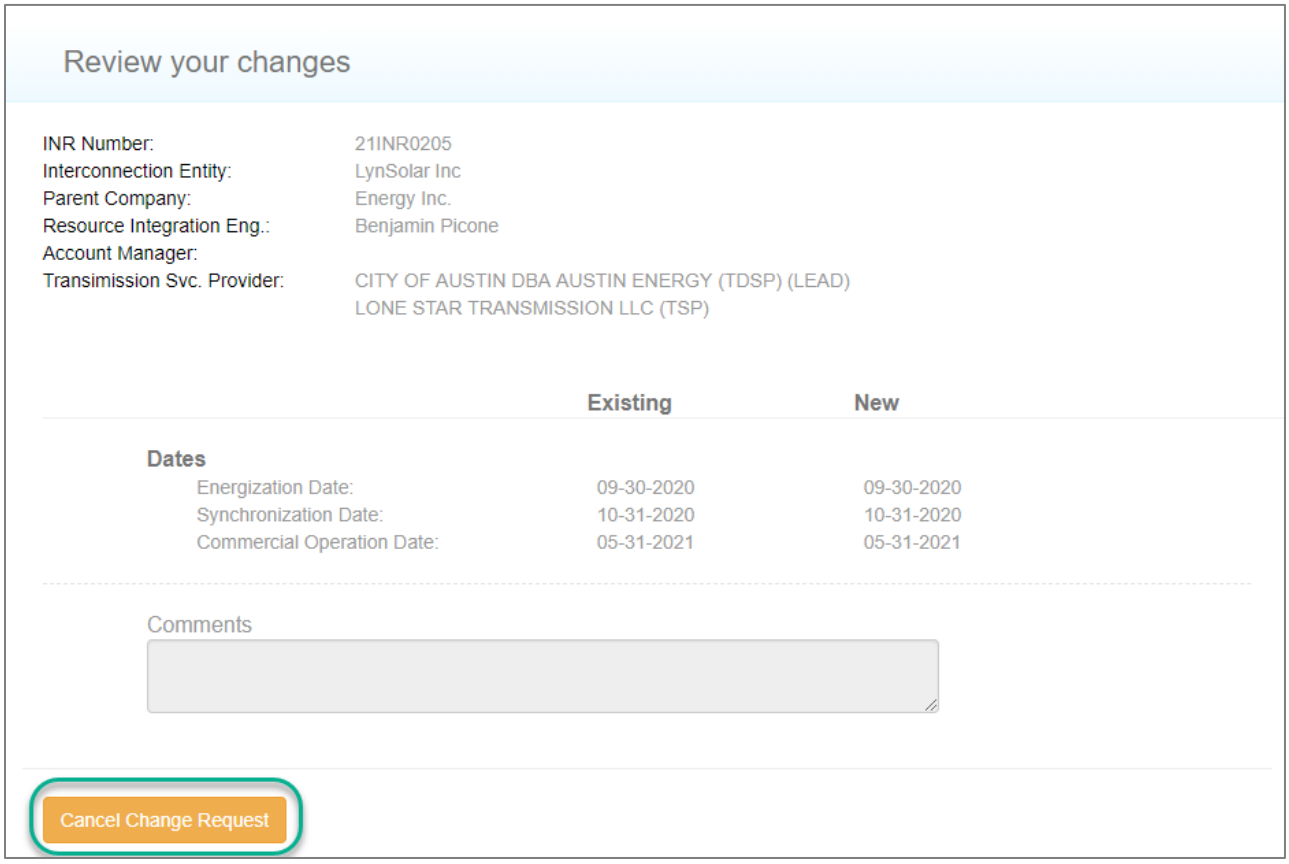
You can cancel a change request online until ERCOT has processed it and merged it into the project.

Interconnection Requests List Page



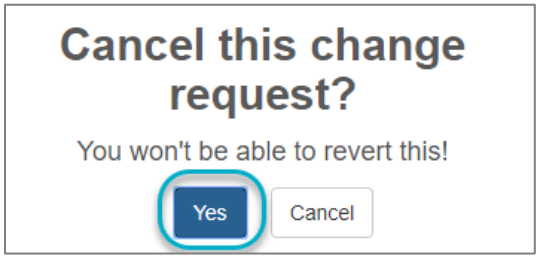
1 Click the **View** dropdown and click **View Change Request**.

Review your changes Page



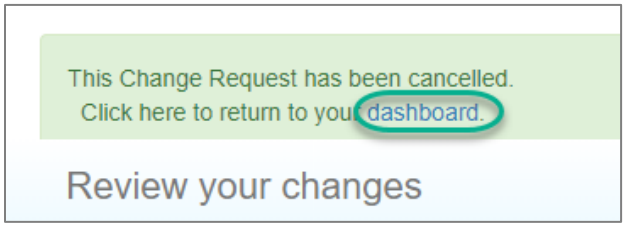
2 Click the **Cancel Change Request** button.

Cancel this change request Popup



3 Click the **Yes** button.

Cancelled Change Request Confirmation on the Review Page



To close this page and return to the Interconnection Requests List, click the dashboard link or the ercot logo at the top left of the page.

Appendix A. INR Timeline

You can print out and use this page to track your milestones.

KEY PROCESSES	ESTIMATED TIME LIMIT	YOUR EXPECTATION	NOTES
IE starts INR	25 days		ERCOT reviews INR and communicates with you until deemed materially complete
ERCOT processes INR, deems it accepted, and starts Screening Study	90 days		ERCOT RI Engineer conducts Screening Study and posts results
IE decides to proceed to Full Interconnection Study (FIS)	180 days		ERCOT will cancel INR after waiting 180 days after Screening Study is complete for your FIS change request
IE uploads RARF and attaches to INR	10 days		
ERCOT assigns project to TSP	5 days		
IE and TSP negotiate FIS study scope and pricing	60 days		ERCOT mediates these discussions
IE provides complete RARF to ERCOT and TSPs	60 days		
TSP performs FIS	**		TSP makes results available
ERCOT accepts FIS report	15 days		
IE executes Standard Generation Interconnection Agreement (SGIA) and submits it to ERCOT	180 days		ERCOT will cancel INR after waiting 180 days from FIS completion
ERCOT reviews project's adherence to binding requirements/protocols	60 days		
RE registers resource; ERCOT performs modeling	180 days		
Final Testing, Commissioning	90 days		

* Estimated duration; some processes may run concurrently

** Depends on technology type and complexity of the project. Larger complex resources may take up to 500 days while simpler projects (like wind farms and solar resources) will only require half of this time.

Appendix B. Changing Your Phone or Phone Number

If you get a new phone with a new phone number, you will need to register your new phone with your login multifactor authentication (MFA) app to associate it with RIOO Interconnection Services. Follow the instructions for using:

- Auth0 Guardian as Your MFA on page 140
- Google Authenticator as Your MFA on page 146
- SMS Text as Your MFA on page 151

To change your phone number, you must submit a HelpDesk ticket requesting to change the phone number in your MPIM profile.

Appendix C. Changing Your Multifactor Authentication Method

For login security, RIOO Interconnection Services uses multi-factor authentication (MFA). This means that you must supply two types of identifying information when you log in – something you know and something that can be obtained from a device in your possession. For ERCOT, you signed up with login credentials (a user name and password) and then scanned a barcode from the Interconnection Services page into an authentication app installed on your phone (or manually typing in a special code if you do not have a smartphone).

Prior to sign up, you were asked to download either of the free apps (Auth0 Guardian or Google Authenticator) to your smartphone from the App Store or Google Play. Or, if you already use a third-party authentication app on your phone, you most likely can use that app. If you do not have a smartphone, you can use the SMS text message app (which is far less secure than the smartphone apps).

When you log in to Interconnection Services, ERCOT verifies that you correctly entered your username/password combination as the first authentication tier and then sends you a text message on your smartphone to verify your identity.

If you need to change the MFA application that associates your device with Interconnection Services, you must first submit a Help Desk ticket to ERCOT that requests your MFA to be reset. When ERCOT removes your current MFA app setting, you will receive an email with the ENROLL YOUR DEVICE button that enables you to set up your MFA app and device again.

A link is provided in the email for more information on multifactor authentication.

If you plan to use the Auth0 Guardian or Google Authenticator app, you should download the appropriate app to your smartphone from the App Store or Google Play before you begin.

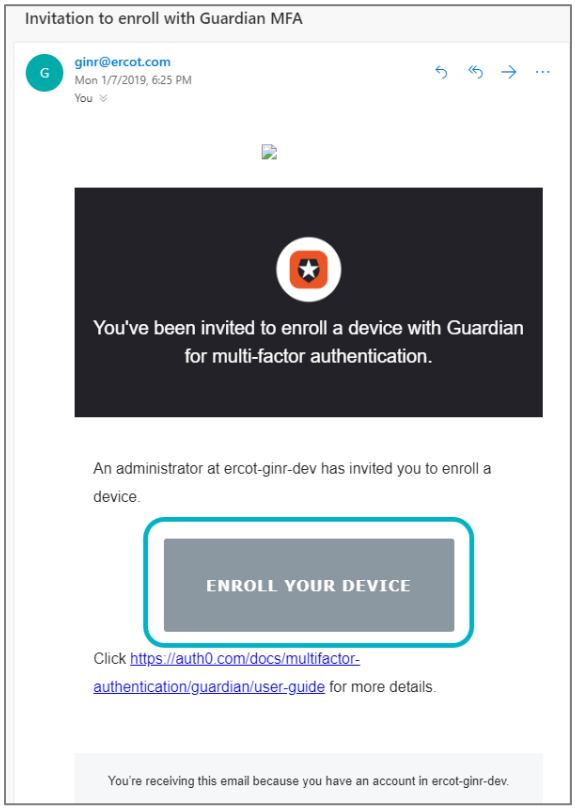
After scanning the app bar code or manually typing in the code, the Recovery Code page displays with a string of 24 characters and numbers that you should copy and paste into a text editor (such as Notepad), and then save the recovery code file to a location on your computer where you keep this kind of information.

Using Auth0 Guardian as Your MFA

After submitting a HelpDesk request to reset your MFA for RIOO Interconnection Services, you should receive the email invitation to enroll the new device (phone).

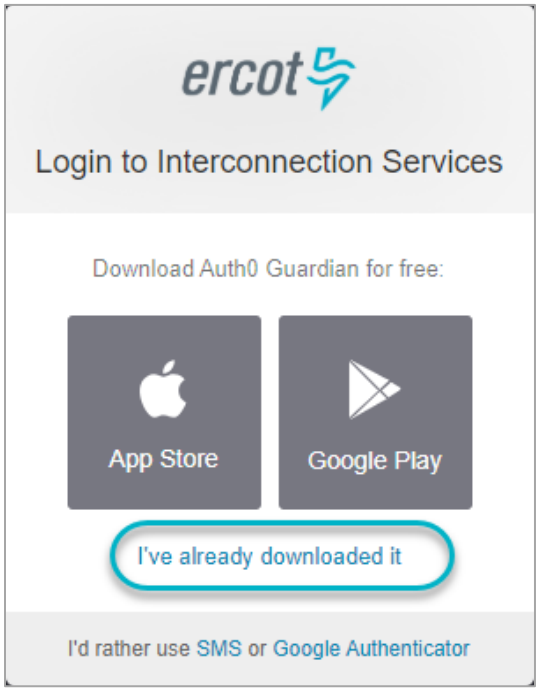
Auth0 Guardian is in the process of updating certain product screens. Some of the screens pictured here may be replaced by those updated screen.

Email Invitation to Enroll Your Device



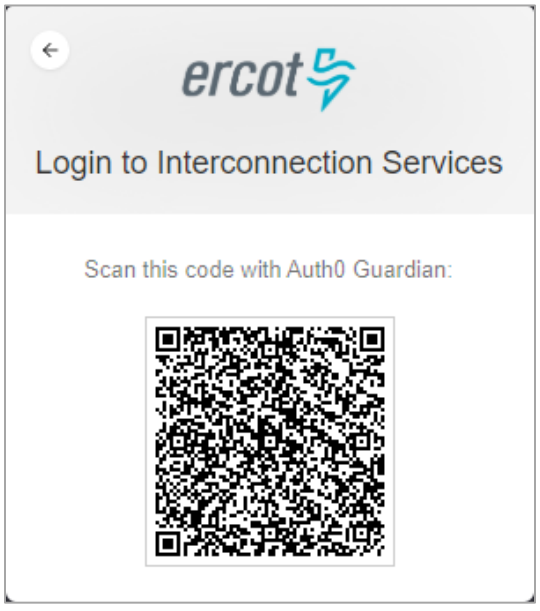
1. Click the **ENROLL YOUR DEVICE** button.

Authentication Method Page



2 Click the **I've already downloaded it** link.

Bar Code Page



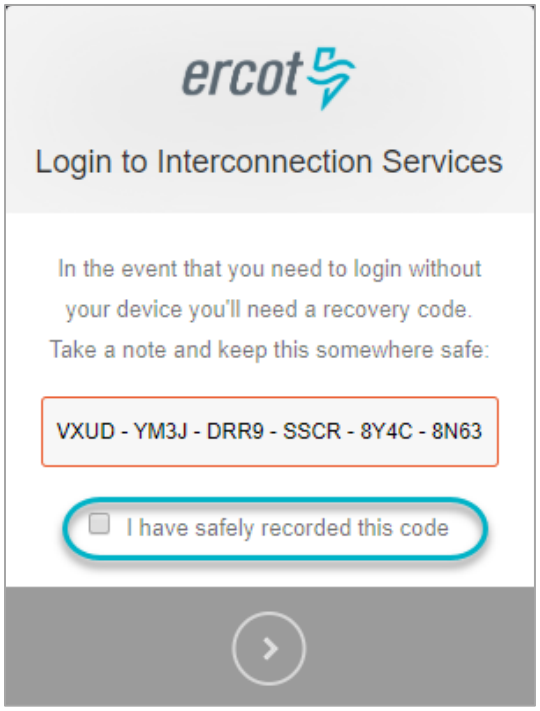
3 When this bar code page displays on your computer screen, click the **Guardian** app on your smartphone to open the app, which opens to the scanner page.

Note: If the Guardian app does not open to the scanner page, click the + at the top of the page to add this account account.

Scan Bar Code Page (On Phone)

4 Position your phone over the bar code on your computer screen until the bar code border turns green (which indicates it was scanned).

Recovery Code Page



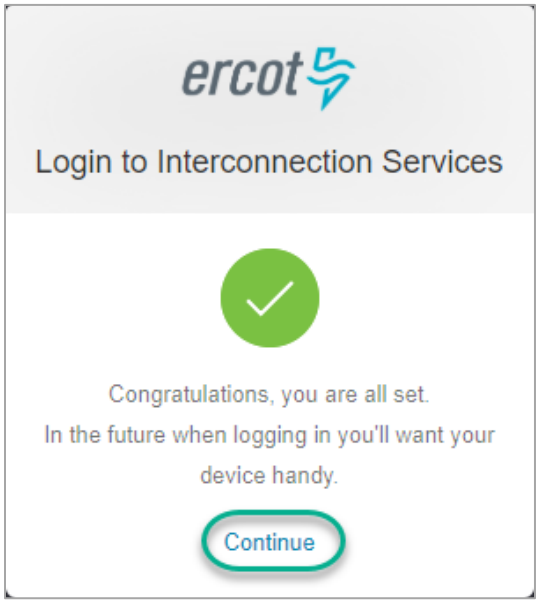
5 **On the recovery code page:**

A Copy this code and paste it into the file you opened earlier for this purpose

B Click the checkbox.

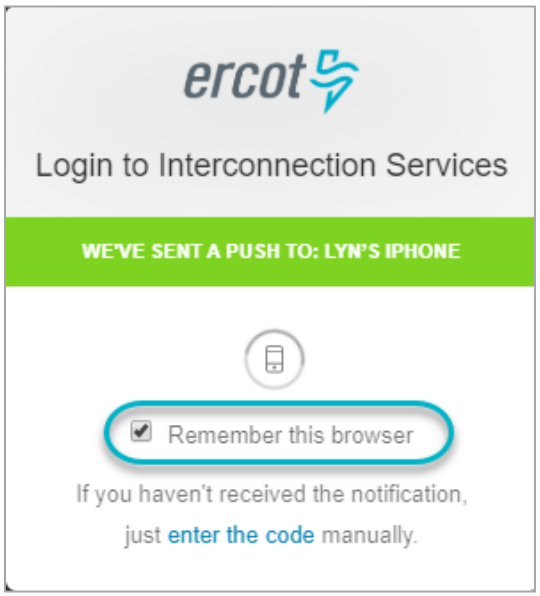
C Click the to continue.

Congratulations Page



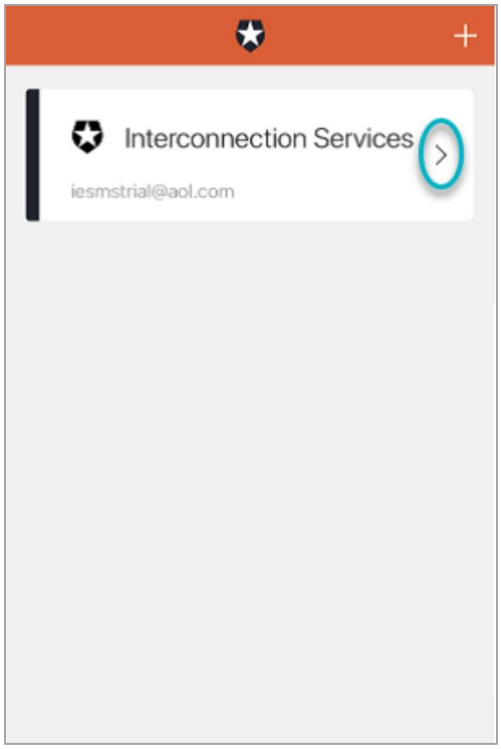
6 Click the **Continue** link.

Sent Push and Remember This Browser Page



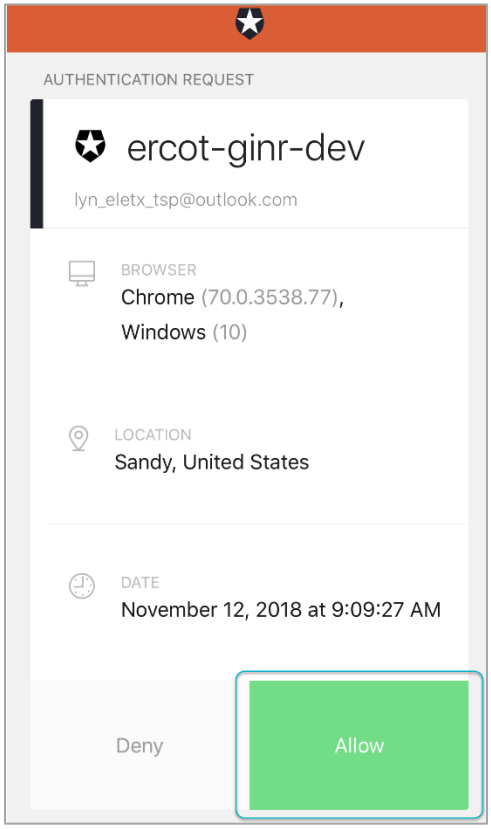
7 Before you go to your phone to get the Authenticator message, click the **Remember this browser** checkbox to avoid having to go to your phone to get the authentication message for the next 30 days.

Guardian Message Notification (On Phone)



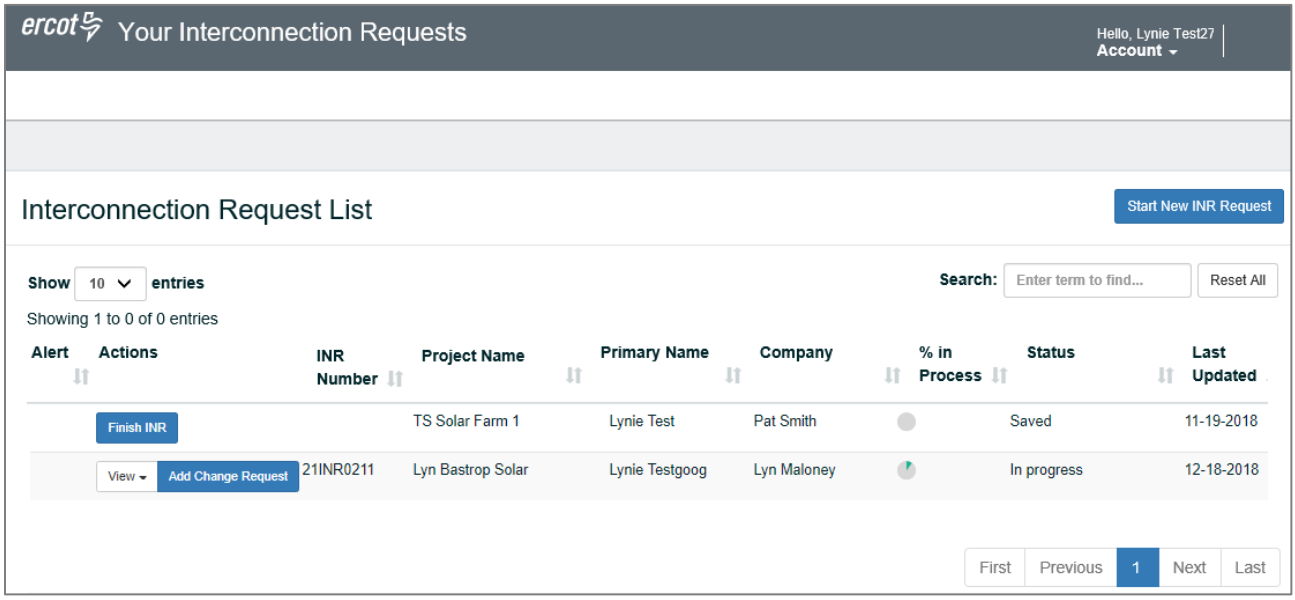
8 On your phone, locate the **Interconnection Services** message and click >.

Guardian Authentication Request (On Phone)



9 Tap the **Allow** button.

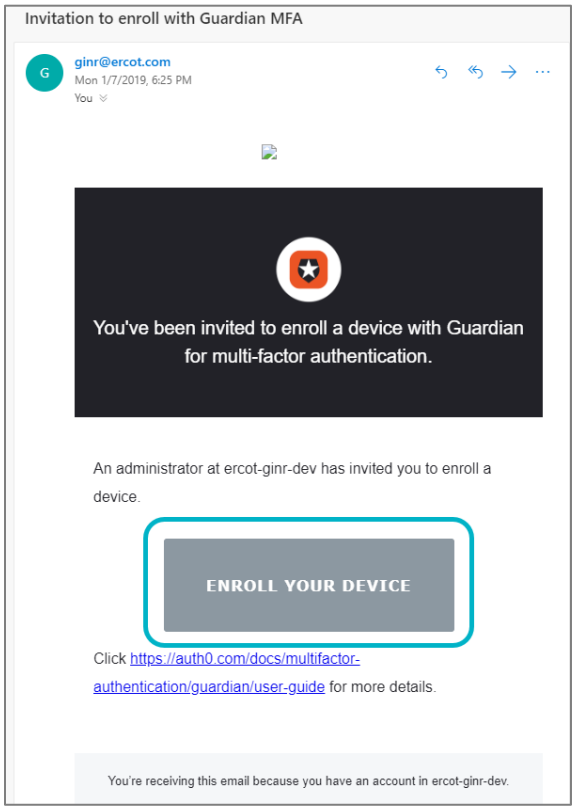
Your Interconnection Requests List



Using Google Authenticator as Your MFA

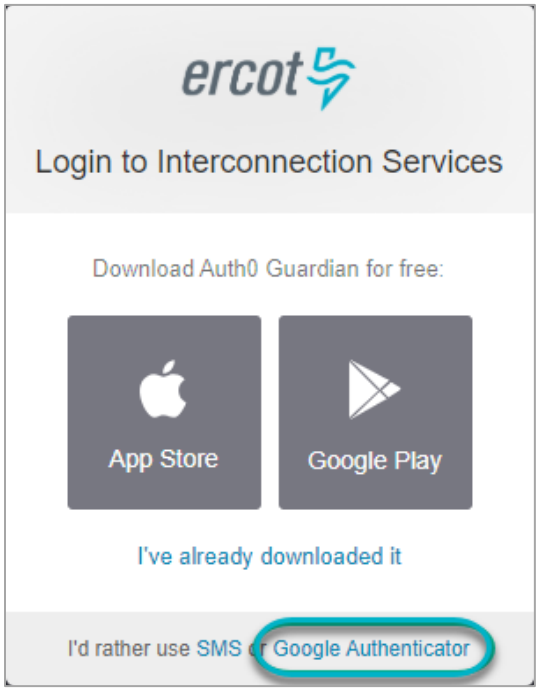
After submitting a HelpDesk request to reset your MFA for RIOO Interconnection Services, you should receive the email invitation to enroll the new device (phone).

Email Invitation to Enroll Your Device



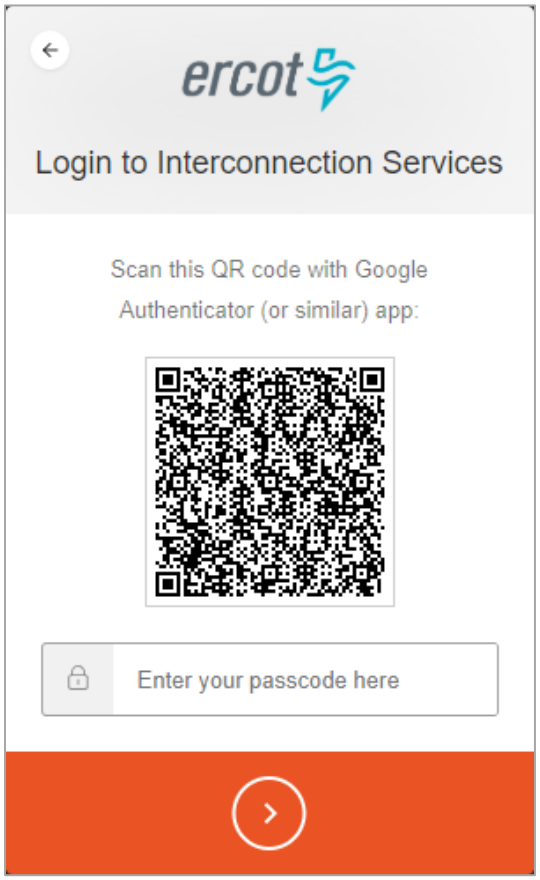
1. Click the **ENROLL YOUR DEVICE** button.

Authentication Method Page



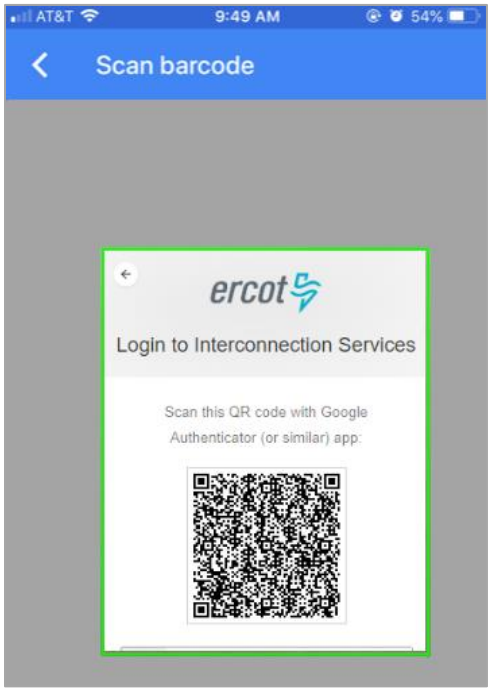
2 Click the **Google Authenticator** link.

Bar Code Page



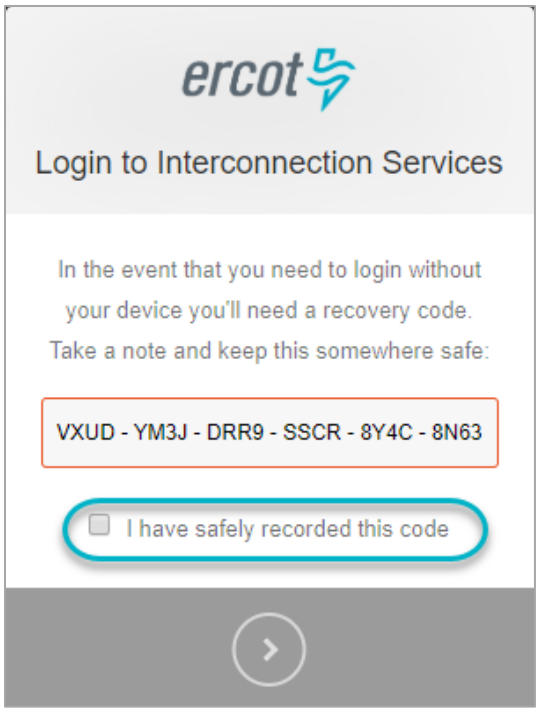
3 When this bar code page displays on your computer screen, click the Authenticator app on your smartphone to open the app, which opens to the scanner page.

Scan Bar Code Page (On Phone)



4 Position your phone over the bar code until the bar code border turns green to indicate it was scanned.

Recover Code Page



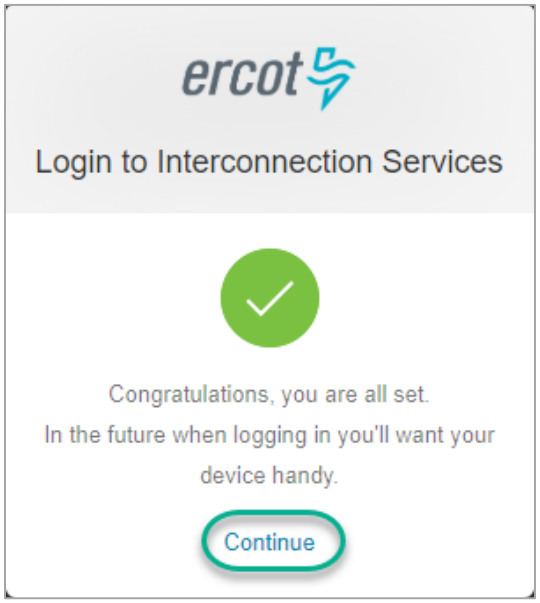
5 **On this page:**

A Copy this code and paste it into the file you opened earlier for this purpose.

B Click the checkbox.

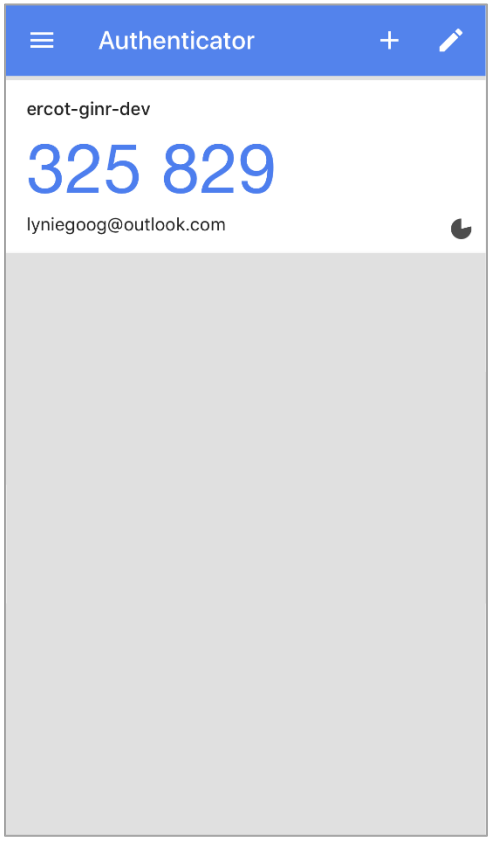
C Click the to continue.

Congratulations, You are all Set Page



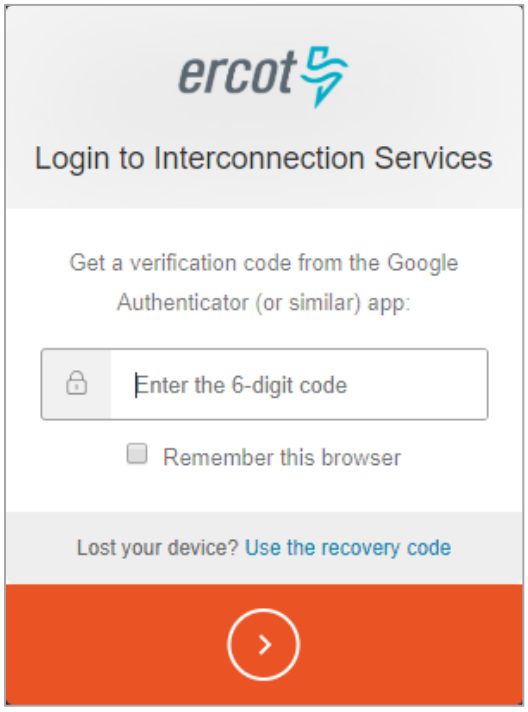
6 Click the **Continue** link.

Authenticator App Code Page (On Phone)



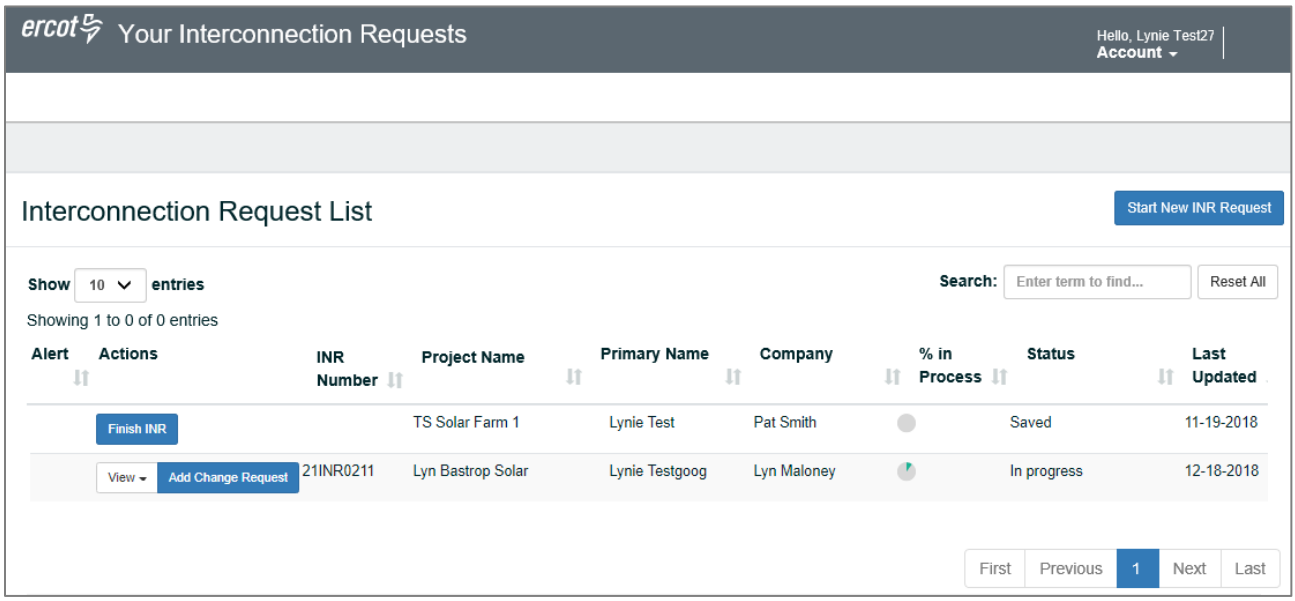
7 Go to your phone for your authentication code from Authenticator and copy it.

Enter Code from Authenticator Page



8. Type in the 6-digit code from the **Authenticator** screen on your phone
9. Click the **Remember this browser** checkbox to avoid having to go to your phone to get the authentication message for the next 30 days.
10. Click the to continue.

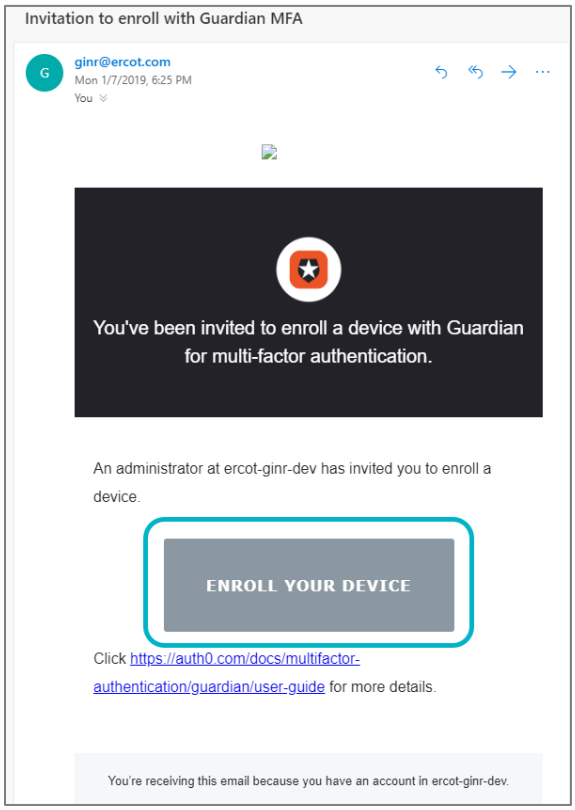
Your Interconnection Requests List



Using the Less Secure SMS Text Message App for Non-Smartphones as Your MFA

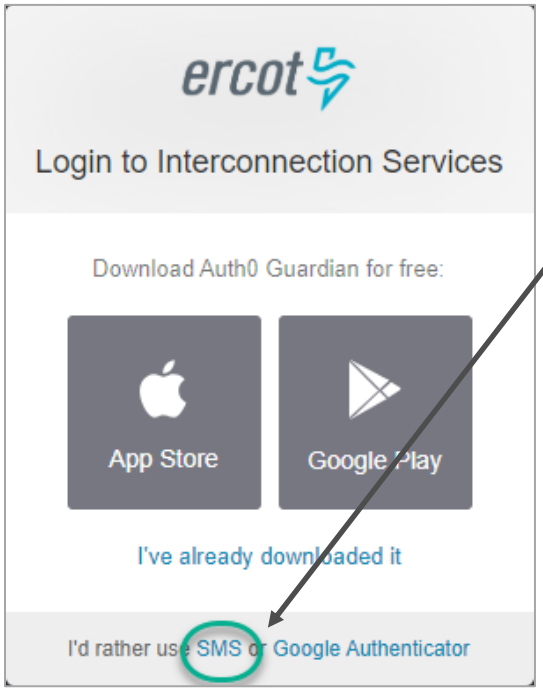
After submitting a HelpDesk request to reset your MFA for RIOO Interconnection Services, you should receive the email invitation to enroll the new device (phone).

Email Invitation to Enroll Your Device



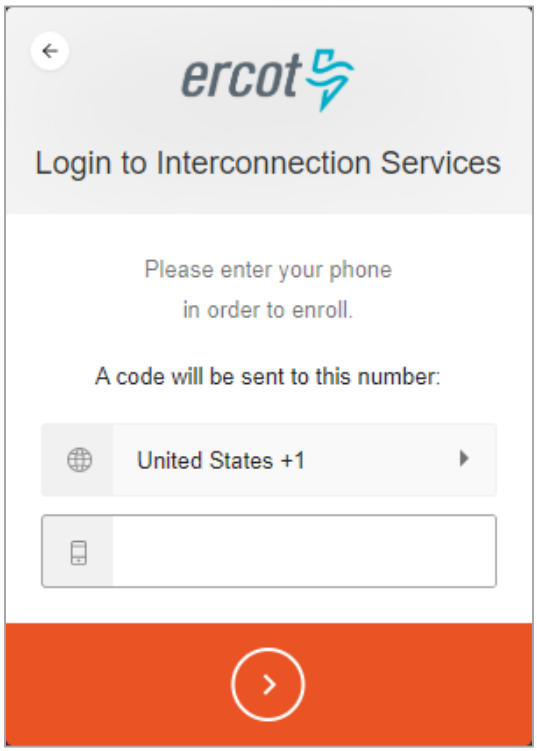
1. Click the **ENROLL YOUR DEVICE** button.

Authentication Method Page



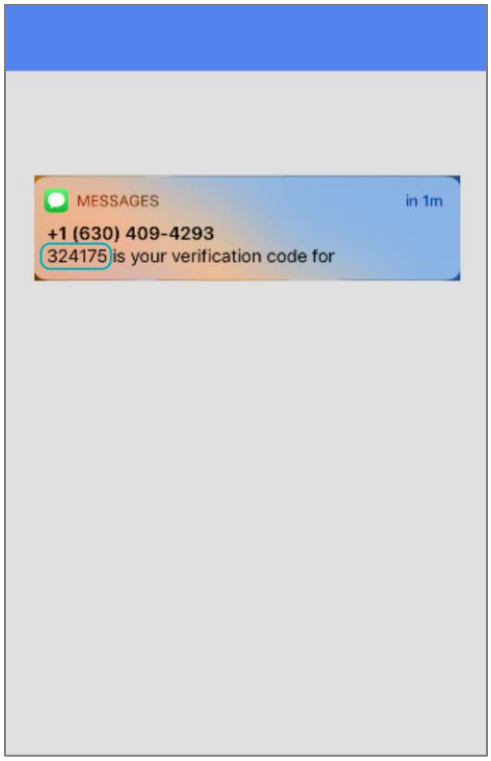
2 Click the **SMS** link.

Phone Number Page



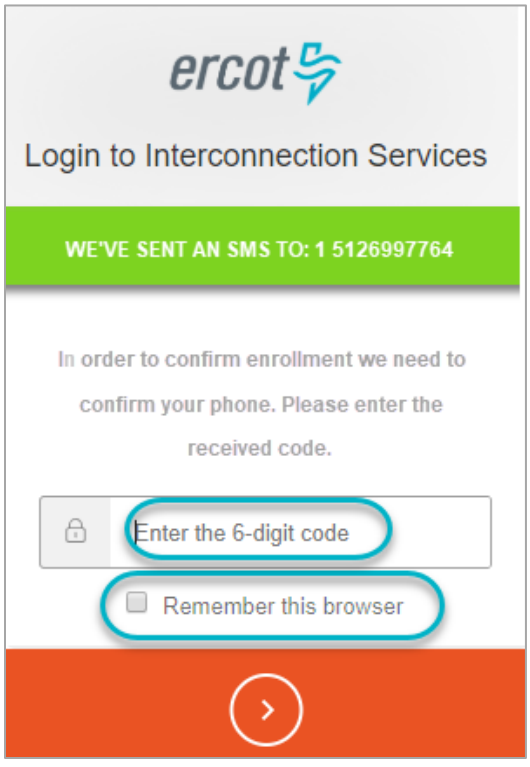
3 Type in a **valid mobile phone number** for ERCOT to send you an authentication code and then click the button to continue to the next page.

SMS Message on Phone



4 Open your phone and look for the verification code message.

Enter the Authentication Code Page



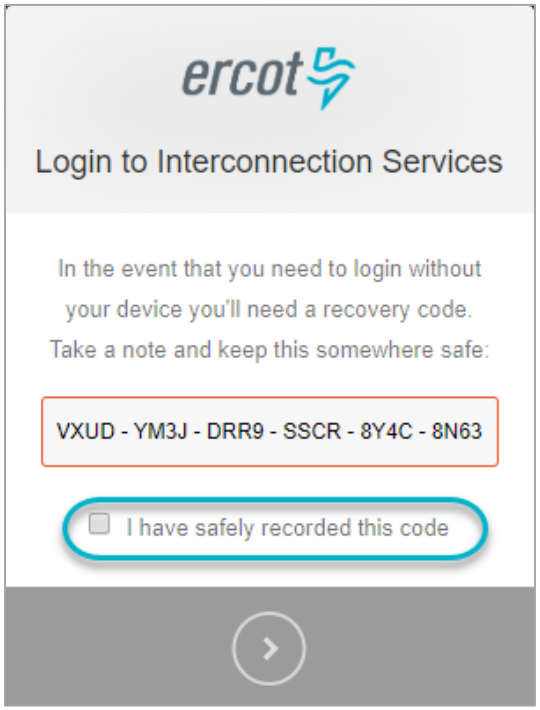
5 **On this page:**

A Type in the 6 numbers of the verification message displayed onyour phone.

B Click the **Remember this browser** checkbox to avoid having to do this for the next 7 days.

C Click the button to continue to the next page.

Recovery Code Page



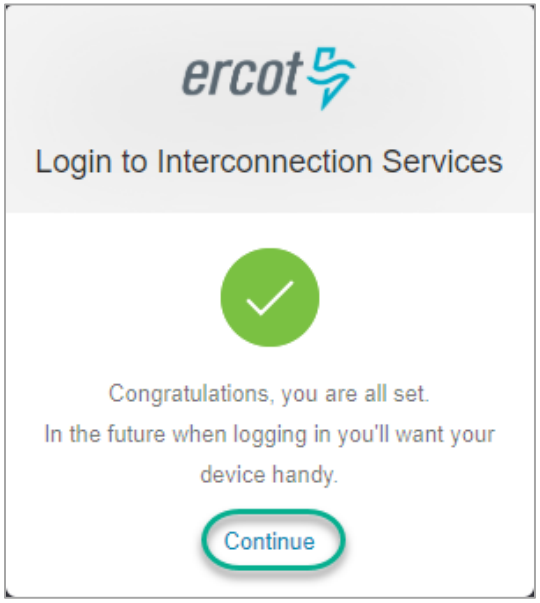
6 **On this page:**

A Copy this code and paste it into the file you opened earlier for this purpose.

B Click the checkbox.

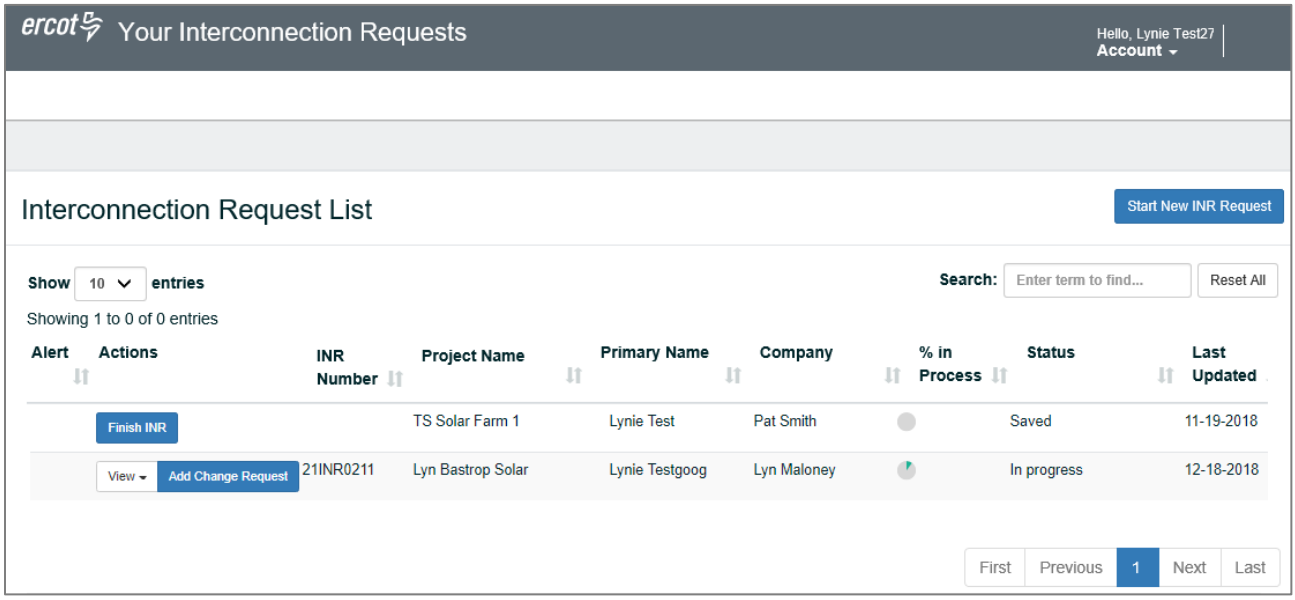
C Click the to continue.

Continue Page



7 Click the **Continue** link.

Your Interconnection Requests List



Appendix D. Troubleshooting Tips

The following tips may help you if you are experiencing certain conditions while using Interconnection Services.

Using Your Auth0 Recovery Code

When you signed up for your RIOO IS account, an Interconnection Services page displayed with a Recovery Code that you were instructed to copy into a file (named something like `ERCOT Auth Information`) and save on your computer. If the Use Your Recovery Code message displays when you attempt to log into your Interconnection Services account, attempt to locate this file.

If you cannot locate the file, you can submit a help desk ticket (directed to Chandrakanth Thoutam) requesting a reset of your MFA. Follow the instructions for changing your MFA on page 139.

Adding Trusted Sites to the Google Chrome Web Browser

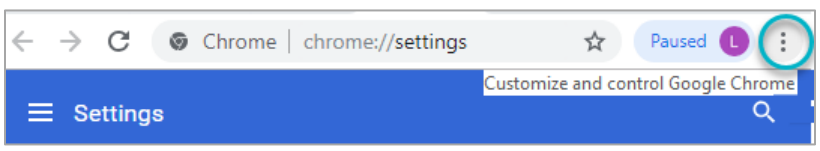
You may need to add the Auth0 Guardian app and ERCOT Interconnection Services to your site as trusted sites (also refered to as whitelisting) in order to access the sites correctly.

The following instructions are for Google Chrome Version 71. Some slight differences may occur in earlier or later versions of the web browser.

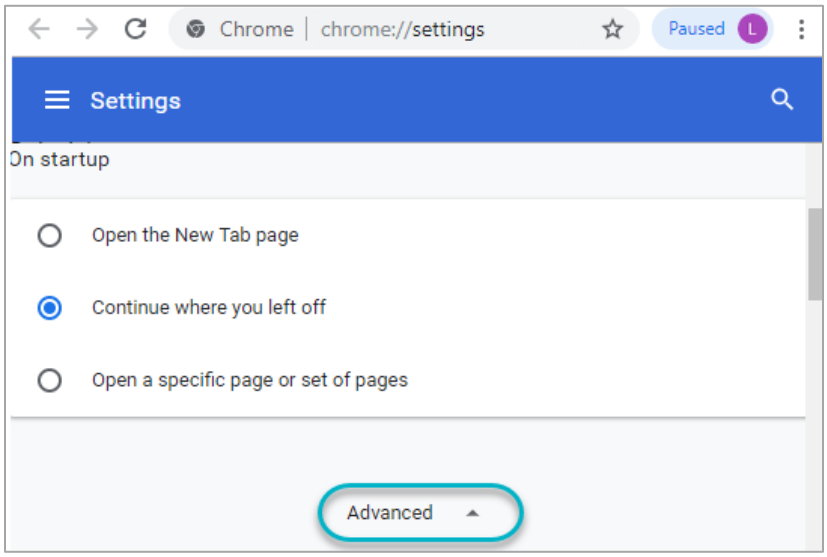
If you are using a different web browser, search the Internet for the procedure for adding trusted sites to that browser.

REMINDER: For the best user experience, ERCOT recommends using Google Chrome as your web browser for ERCOT Interconnection Services. If you use Microsoft Internet Explorer, some issues may occur, including page loading issues that will require you to refresh your page from time to time and being stuck on the login page. You may also need to add Auth0 Guardian or Google Authenticator as a trusted site. If the “Whoops something went wrong” error message displays, check to be sure the ERCOT Interconnection Services site is listed as a trusted site.

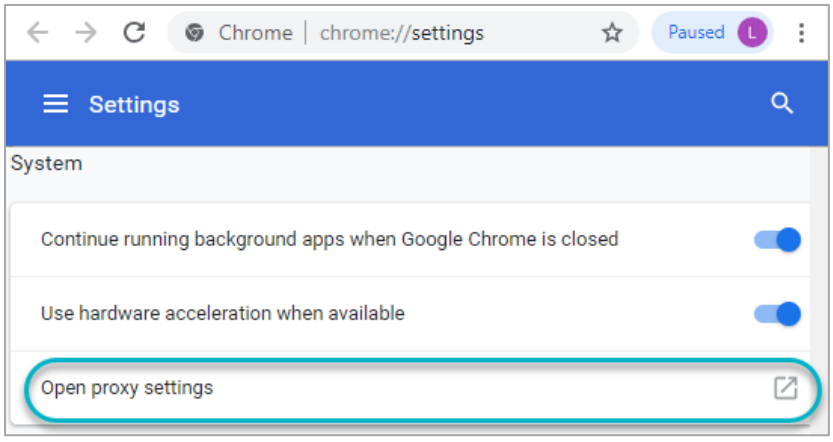
4. On the far right of the address bar, click the icon to **Customize and Control Google Chrome** and click **Settings**.



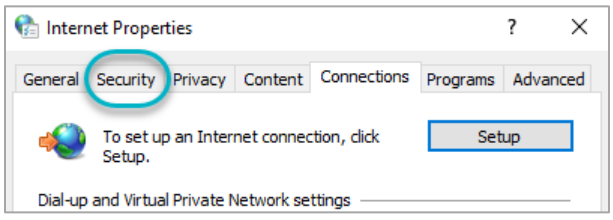
5. On the *Settings* page, scroll down to **Advanced** and click it.



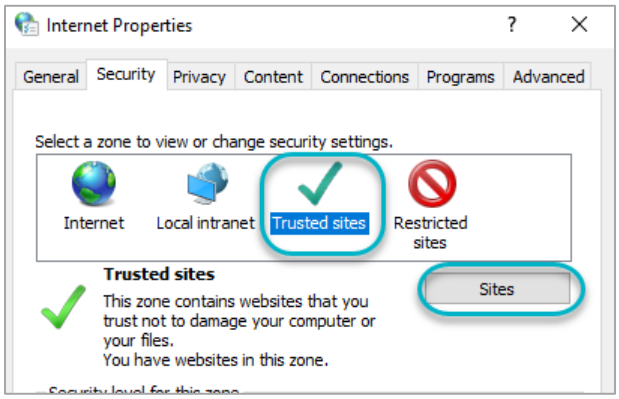
6. On the *Advanced* page, scroll to the **System** area and click **Open proxy settings** (or **Change proxy settings**).



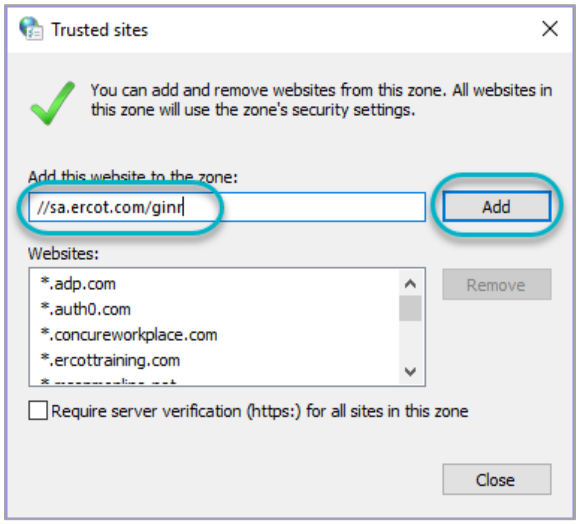
7. In the *Internet Properties* window, click the **Security** tab.



8. OI the *Security* window, click the **Trusted Sites** icon and then the **Sites** button.



9. In the *Trusted sites* window, enter the URL of your **application** and click the **Add** button



Payment Submitted but Submit Page Displays

If you click the **Pay Now** button to submit your payment and another *Submit* page displays, you can click the **Submit** button on the second page without paying again.

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