

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

System Operator Reference Guide

November 18, 2020

RELIABILITY | RESILIENCE | SECURITY



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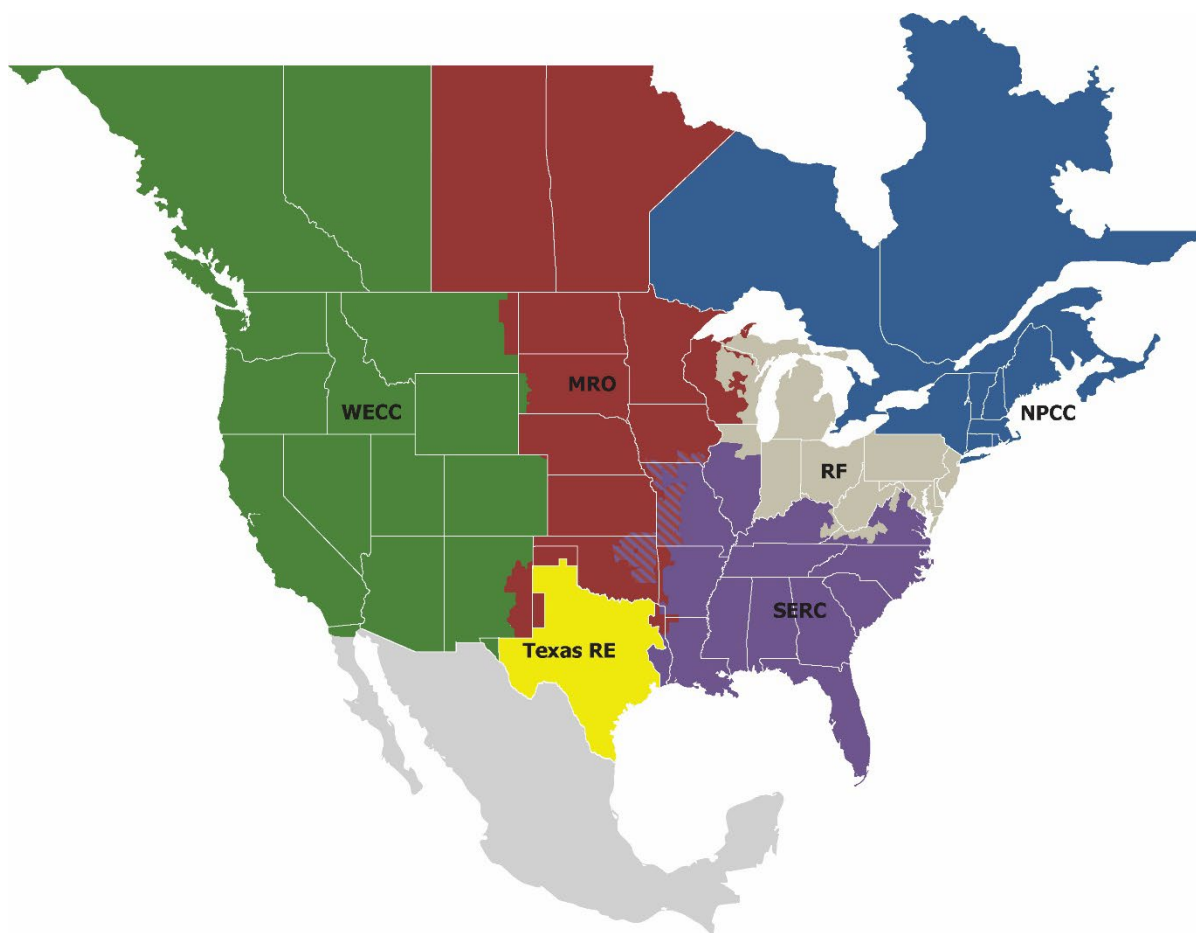
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Preface

Electricity is a key component of the fabric of modern society and the Electric Reliability Organization (ERO) Enterprise serves to strengthen that fabric. The vision for the ERO Enterprise, which is comprised of North American Electric Reliability Corporation (NERC) and the six Regional Entities, is a highly reliable, resilient, and secure North American bulk power system (BPS). Our mission is to assure the effective and efficient reduction of risks to the reliability and security of the grid.

Reliability | Resilience | Security
Because nearly 400 million citizens in North America are counting on us

The North American BPS is made up of six Regional Entities as shown in the map and corresponding table below. The multicolored area denotes overlap as some load-serving entities participate in one Regional Entity while associated Transmission Owners/Operators participate in another.



MRO	Midwest Reliability Organization
NPCC	Northeast Power Coordinating Council
RF	ReliabilityFirst
SERC	SERC Reliability Corporation
Texas RE	Texas Reliability Entity
WECC	WECC

Summary

The *System Operator Certification (SOC) Manual*¹ provides the framework for the System Operator (SO) program. It is the SOs responsibility to read and understand the SOC Manual.

The SOC Manual is located on the System Operator Certification & Credential Maintenance Program² page on NERC.com³ under One-Stop Shop⁴.

The *System Operator Reference Guide* provides information and instructions for the System Operator Certification and Continuing Education Database (SOCCED). This guide references the SOC Manual, and it is recommended to refer to the manual when noted in the guide.

If you have other topic suggestions or want to comment on this guide, submit a ticket via the Help Desk⁵.

¹ https://www.nerc.com/pa/Train/SysOpCert/System%20Operator%20Certification%20DL/SOC_Program_Manual.pdf

² <https://www.nerc.com/pa/Train/SysOpCert/Pages/default.aspx>

³ <https://www.nerc.com/Pages/default.aspx>

⁴ <https://www.nerc.com/pa/Train/SysOpCert/Pages/SOOneStopShop.aspx>

⁵ <https://soccedsupport.zendesk.com/hc/en-us/requests/new>

Introduction

System Operator Certification and Credential Maintenance Program

In support of NERC's mission, the SOC Program promotes reliability of the North American BPS by ensuring that employers have a workforce of SOs that meet minimum qualifications. NERC monitors SOs to ensure they maintain their required credentials to work in system control centers across North America. NERC's SOC exam tests specific knowledge of job skills and reliability standards. It also prepares operators to handle the BPS during normal and emergency operations. Maintain certification by completing NERC-approved Credential Maintenance Program courses and activities. These industry-accepted qualifications are set through internationally recognized processes and procedures for agencies that certify persons.

Governance

The Personnel Certification Governance Committee (PCGC)⁶ is a NERC standing committee that provides oversight to the policies and processes used to implement and maintain the integrity and independence of the NERC SOC program. The PCGC provides reports to the NERC Board of Trustees and NERC President regarding the governance and administration of the SOC program.

The Credential Maintenance Working Group (CMWG)⁷ reports to the PCGC and is responsible for developing and maintaining the Credential Maintenance Program under the general guidelines set by the PCGC.

Process

The Exam Working Group (EWG)⁸ consists of subject matter experts from all regions of North America and is responsible for doing an extensive job analysis survey of certified operators across the industry, which provides the basis for the exams. A job analysis survey results in an exam content outline for each of the four exams. The exam content outline is the framework used to associate tasks to exam questions. NERC contracts with psychometric consultants who assist a working group of NERC Certified System Operators (NCSOs) in the development and maintenance of each exam.

The four exams are the:

- Balancing, Interchange, and Transmission
- Balancing, Interchange
- Reliability Coordinator
- Transmission Operator

After initial certification is obtained, the credential is maintained by meeting the continuing education requirements every three years.

⁶ <https://www.nerc.com/comm/PCGC/Pages/default.aspx>

⁷ <https://www.nerc.com/comm/PCGC/Pages/CMWG.aspx>

⁸ https://www.nerc.com/comm/PCGC/Documents/Exam_Working_Group_Scope_2020.pdf

Credential Maintenance Program

NERC's Credential Maintenance Program acknowledges high-quality learning activities within the electric utility industry by approving continuing education providers that meet NERC guidelines and standards. Information on how to become a NERC-recognized continuing education provider is contained in the links below.

Provider Site:

Initial and existing continuing education providers can access SOCCED⁹ to perform the following:

1. Create a new provider account.
2. Access your existing provider account.
3. Submit new individual learning activity (ILA) applications.
4. Review the status of existing courses.
5. Submit transcripts of delivered courses.

⁹ <https://nerc-socced.useclarus.com>

Chapter 1: SOCCED Account

Creating an Account in SOCCED

Candidates must establish an account in SOCCED¹⁰. During the process, the candidate will be prompted to create a username and password and provide other pertinent information.

Username: Determine by candidate
First Name: First name on driver's license or other form of legal ID
Middle Name: Optional (common first and last names should use a middle initial, at a minimum.)
Last Name: Last name on driver's license or other form of legal ID

Important: PSI (Exam Vendor) requires that you must provide a photo ID that matches the name on the account (name that was sent from SOCCED to PSI). If the name on the SOCCED account does not match the form of legal ID, **you will not be able to take the exam.**

Acceptable forms of ID: (must include photograph)

- Driver's license
- State identification card
- Passport
- Military identification card

Updating User Profile

The candidates can make changes to their account, operator, and contact information by updating their user profile via SOCCED. See [Appendix A](#)

Duplicate SOCCED Accounts

Duplicate SOCCED accounts are **prohibited**. NERC completes routine audits on duplicate accounts. If found, NERC will move forward in closing the additional account(s), and the candidate will potentially lose information, and start over.

Forgot Username or Password

- Submit a Request¹¹ to the SOCCED helpdesk.
 - Include full name, email address, and phone number.

SOCCED Help Center

NERC Staff manages and responds to SOCCED and Candidate/Credential Holder program related inquiries typically within 24 -48 business hours (excluding holidays and weekends).

- Help Desk 404-446-9759 (General Questions; M-F 8:30 a.m. – 5:00 p.m. Eastern)
- Submit a Request¹² to the SOCCED helpdesk.
 - Include full name, email address, and phone number.

Note: Please do not send messages via SOCCED.

¹⁰ <https://nerc-socced.useclarus.com>

¹¹ <https://soccedsupport.zendesk.com/hc/en-us/requests/new>

¹² <https://soccedsupport.zendesk.com/hc/en-us/requests/new>

Chapter 2: NERC Certification Exams

Applying for an Exam

There are no United States or Canadian residency requirements to take the NERC certification exam. Therefore, interested persons across all continents are eligible to take the exam. However, the exam is only available at an approved testing location within the United States or Canada.

Note: Remote proctoring of the exams is unavailable.

For guidance on how to apply for an exam, see [Appendix B](#).

PSI (Exam Vendor)

Scheduling an Exam

Once a candidate has submitted and paid for an exam application, the application is processed to create a candidate exam eligibility file. PSI receives the candidate exam eligibility file within 24 - 48 hours (business days). Upon receipt of the file, PSI will send a secondary examination eligibility confirmation email to schedule an exam.

Note: Candidates will receive an initial payment confirmation email from SOCCED with details about PSI.

The PSI Examination Eligibility Confirmation Email will include the following:

- Candidate's First and Last Name
- Test Taker ID
- 1 year eligibility period dates to schedule exam
- Test Taker Scheduling Link¹³
 - Please review the PSI Test Taker Portal - How to Book Your Test¹⁴ for guidance.

Note: Once a candidate has scheduled their exam, PSI will send a schedule confirmation email.

Changing Exam Type

The SOC Manual provides candidates the ability to change the examination type (See [Figure 1](#) – Change Exam Type) that was previously registered for in SOCCED. Once the examination type is changed, their SOCCED account is updated. The exam type change will cancel the existing exam authorization and application and create a new exam application with a new eligibility window for the candidate to schedule the new exam with the third-party exam vendor, PSI.

Note: *PSI must receive notification no later than by close of business time for that test center at least two business days prior to the scheduled exam appointment for making this change or for submitting any additional change. The candidate may not be able to keep the original exam date and location.*

¹³ <https://test-takers.psiexams.com/>

¹⁴ www.nerc.com/pa/Train/SysOpCert/System%20Operator%20Certification%20DL/PSI%20Test%20Taker%20Portal%20-%20How%20to%20Book%20Your%20Test.pdf

After a candidate changes their exam type, they should notify NERC Staff through the SOCCED help desk at Submit a Request¹⁵.

SOCCEd sends an updated exam profile to PSI. PSI will send an updated ID# to the candidate via email. After the candidate receives the updated ID number, they can schedule the exam.

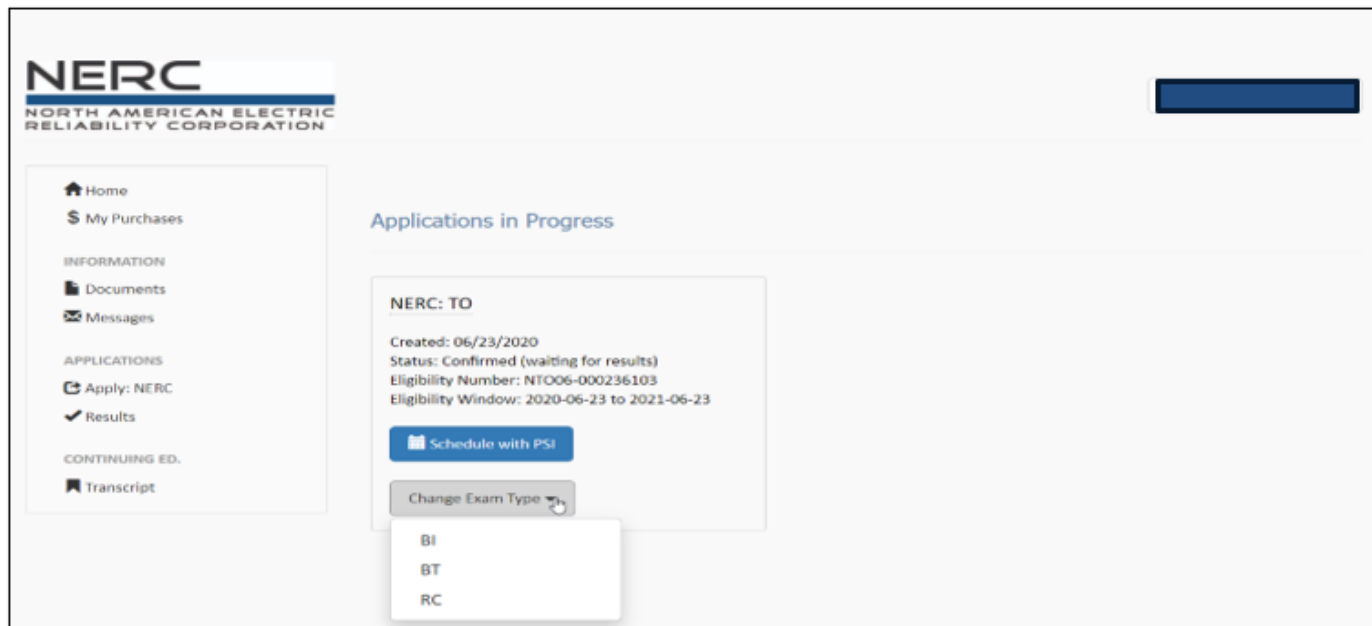


Figure 1: Change Exam Type

Examination Date

Candidates will need to note the following for their examination date:

- You must present two (2) valid forms of identification at the test center prior to taking an exam – one primary and one secondary identification from the list below.

Primary Identification – Currently valid, government-issued, has a photograph of you, is pre-printed with your name and signature

Examples:

- Driver's license
- Passport
- State identification card with photo
- Military identification card

Secondary Identification – Currently valid, pre-printed with your name and signature.

Examples:

- Credit card with signature
- ATM card
- School identification card
- Employer identification card

Not Accepted ID: Social Security card, Temporary ID, Expired passport, or driver's license

- There should be an on-screen basic exam calculator. Exam questions do not require the use of the square root or exponents functions. This is the calculator that is used by all NERC exam candidates.
- No outside items can be brought into the exam room.
- Pre-test/Practice Questions

¹⁵ <https://soccetsupport.zendesk.com/hc/en-us/requests/new>

- The pre-test/practice questions prior to an exam are in English. If a candidate has selected to take a French RC exam, (only in a selected center in Canada), the exam pretest/practice questions will appear in English. The actual exam will be in French.

Post Exam and Results

Once a candidate has completed their exam, they should receive a hard copy of their exam results and score report. The results will be posted to the candidate's account in SOCCED within 24 – 48 hours (business days).

Time between Examinations: 42-Calendar Day Wait Period

See the SOC Manual¹⁶ for program information on this topic.

Failed Exams

If a candidate fails an exam, candidates:

- Are permitted to purchase an exam prior to the expiration of the 42-calendar day wait period.
- Will receive an email from SOCCED, whenever a payment is made in SOCCED.
- Are responsible for tracking the 42-calendar day wait period.
 - SOCCED does not send an email notification when the candidate is eligible to schedule the retake exam.
- Can schedule their next exam, starting at midnight of the 43rd day.

¹⁶ https://www.nerc.com/pa/Train/SysOpCert/System%20Operator%20Certification%20DL/SOC_Program_Manual_v4.pdf

Chapter 3: Credential Holder

Certificates

Candidates who pass their exams will receive a hard copy of the NCSO certificate and wallet card via the mailing address in their SOCCED account approximately 6 weeks after the certificate effective date. The certificate is embossed and has the NERC CEO signature, certification number, effective date, expiration date, and is suitable for framing.

Credential Maintenance and Renewal

NERC issues a credential that is valid for three years to successful candidates. To maintain a valid credential, the SO must earn the required Continuing Education Hours (CEHs) within the three years preceding the expiration date. Once the candidate has successfully earned their hours, the candidates will complete a credential renewal and pay the renewal fees through SOCCED to remain active for an additional three years. See [Appendix C](#).

Credential Renewal Payment Timing

When renewing your credential, you must consider the payment processing time. SOCCED does not allow a renewal to be completed until the payment has been successfully processed.

The [Table 2.1](#) below shows the amount of time needed for payment via credit card and check.

Table 2.1: Credential Renewals Payment Timing	
Payment Type	Processing Time
Credit Card	24–48 Hours (excluding weekends)
Check	7–10 Business Days

Paying by credit card

Payment Timing Example: If your certification renewal date is October 13, you must submit your credit card payment before October 11 to renew your certification prior to October 12 at 00:00.

Paying by check

Payment Timing Example: If your certification renewal date is October 13, you must send your check payment by October 3 so that you can renew your certification prior to October 12 at 00:00.

Candidates that pay by check must include their full name and order number on the check. Send check payments to the following lockbox address:

NERC
PO Box 531652
Atlanta, GA 30353-1652

Credential Status Change

If the required CEHs are not met prior to their credential expiration date, the status of the credential will change to suspended. The suspension will last for one year. Credential Holders can accumulate hours while in the suspended status to have their credential reinstated with the original expiration date.

If the hours are not obtained by end of the expiration date, the credential status will change to expired. The credential will be revoked, and the candidate will have to take and pass an exam to become recertified.

Email Reminders

Credential Holders will receive three auto-email reminders to renew their credentials. The emails are triggered by the credential's expiration date and sent on the following days:

- 90 days prior to expiration date
- 60 days prior to the expiration date
- 30 days prior to the expiration date

The email includes the expiration date and credential renewal related information.

Note: The email reminders are only sent to Credential Holders while the credential is active (*to avoid a suspended credential*). If a credential goes into suspension, the Credential Holder will be responsible for renewing their credential before the credential expires. Auto emails reminders will not be sent while the credential is suspended.

Timing of Renewals

The timing of a credential renewal is imperative for SOs to avoid suspension or expired certificates. SOs should accumulate the required hours and perform a renewal by 11:59 p.m. Eastern, one day prior to their expiration date to avoid a status change. **Note:** Payments processed on or after the expiration date will cause the credential to be suspended or expired.

Example

A SO who has an active credential from August 2, 2017 to August 2, 2020, will need to accumulate the required number of hours prior to their expiration date of August 2, 2020 to renew. If required hours are not met by 11:59 p.m., Eastern of August 1, 2020, the status of the credential will change to suspended by 12:00 a.m. August 2, 2020.

If the SO is in suspension status, the SO has until 11:59 p.m. Eastern of August 1, 2021 to accumulate the required number of hours to renew. If the hours are not met, the status of the credential will change to expired by 12:00 a.m. August 2, 2021. The credential will be revoked, and the SO will be required to re-take the exam to become certified.

Time Zone

SOCCEd operates in the Eastern Prevailing Time Zone. SOs should note the time zone to prevent a timing issue when completing their credential renewal. As shown in [Table 2.2](#) below. If you are in the Pacific Time Zone, you will be required to complete your renewal by 9:00 p.m. Pacific prior to the expiration date.

Time Zone	Time
Eastern Time Zone	12:00 a.m.
Central Time Zone	11: 00 p.m.
Mountain Time Zone	10: 00 p.m.
Pacific Time Zone	9: 00 p.m.

Reviewing Your Transcript

As noted in the SOC Manual, each SO is responsible for reviewing and ensuring the accuracy of their transcript in SOCCEd. See [Appendix D](#)

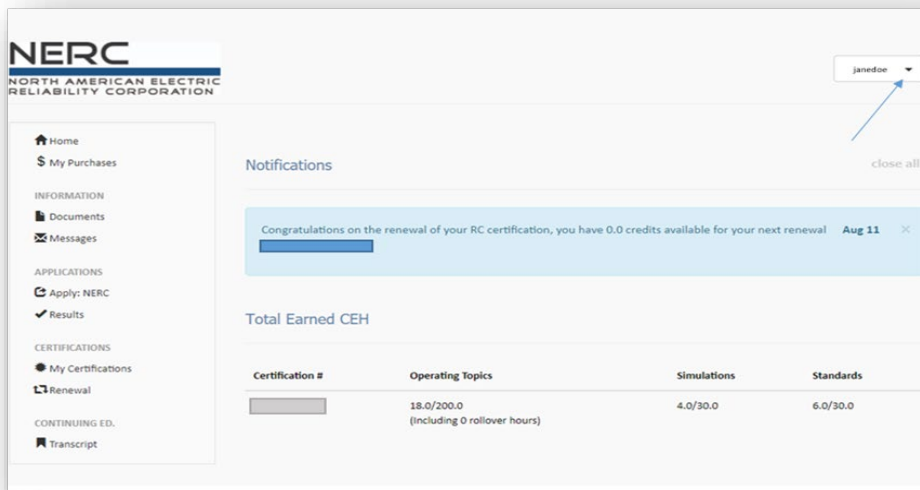
Provider Access to Review and Update Your Transcript

See the SOC Program Manual for information on SO's responsibility concerning credential maintenance.

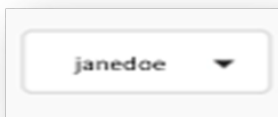
The SO is responsible for giving their credential maintenance providers access by updating their SOCCED profile account. When a SO leaves their company, the SO should update their SOCCED profile by removing the credential provider name. See [Appendix E](#)

Appendix A: Updating User Profile

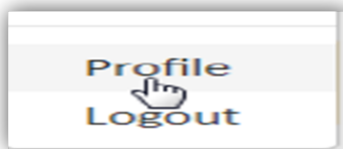
1. Login in to SOCCED



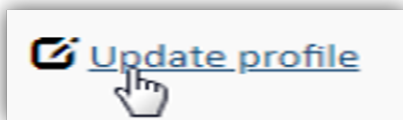
2. Select Dropdown arrow.



3. Select Profile



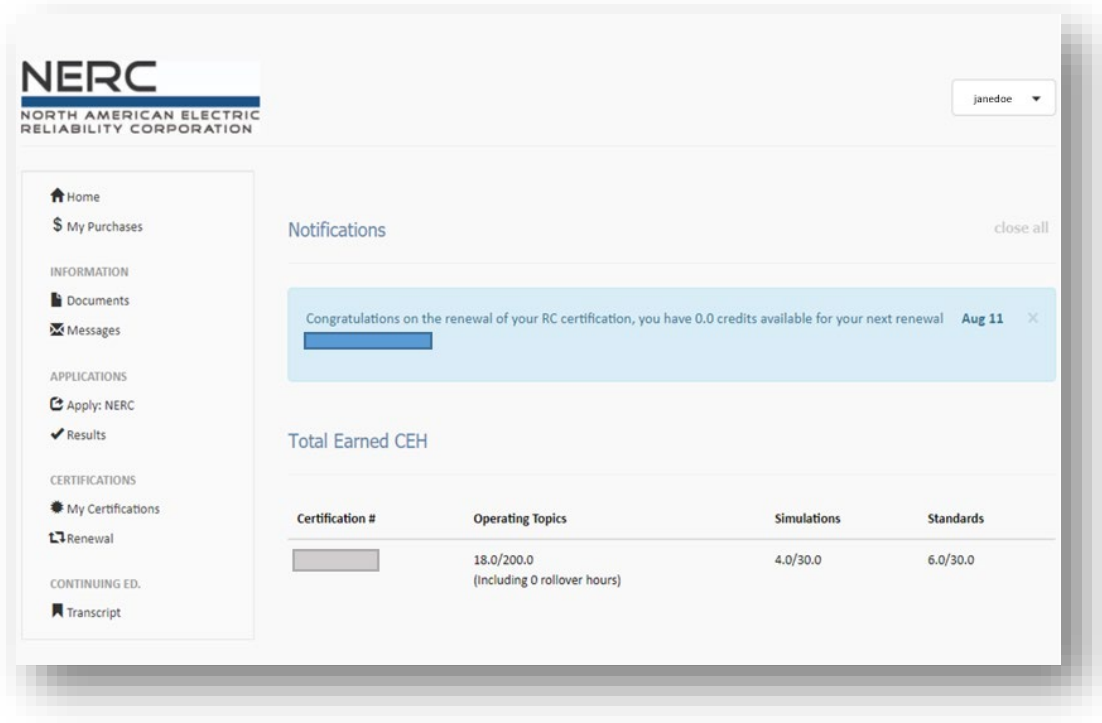
4. Select Update Profile



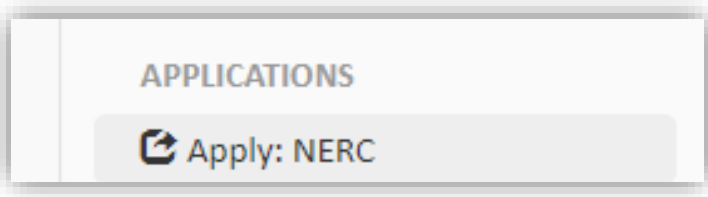
- a. Make necessary changes.
- b. Select Save Changes

Appendix B: Applying for an Exam

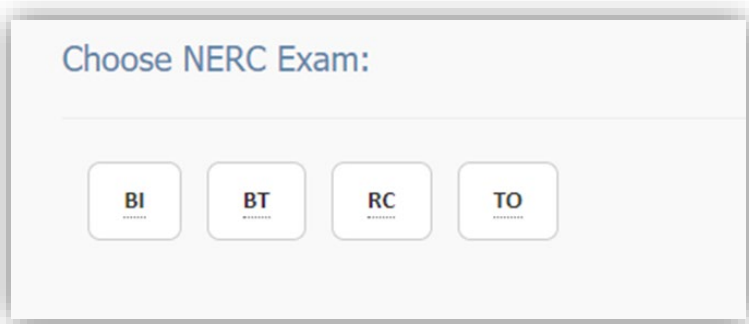
1. Login to SOCCED Account



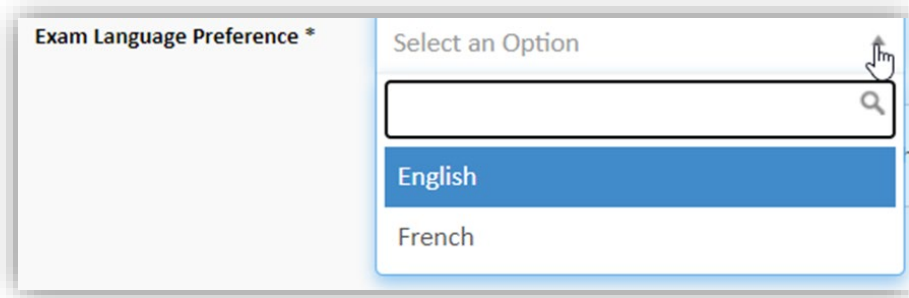
2. Select Apply: NERC



3. Choose NERC Exam:

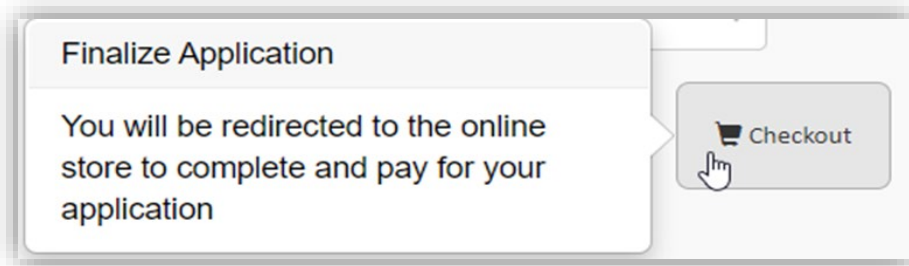


- 4. Select Exam Language Preference
 - a. English
 - b. French



The screenshot shows a form titled "Exam Language Preference *". To the right of the title is a dropdown menu labeled "Select an Option". The dropdown is open, showing a search bar and two options: "English" (highlighted in blue) and "French". A hand cursor is positioned over the top right corner of the dropdown menu.

5. Select Checkout for Credit Card Payment

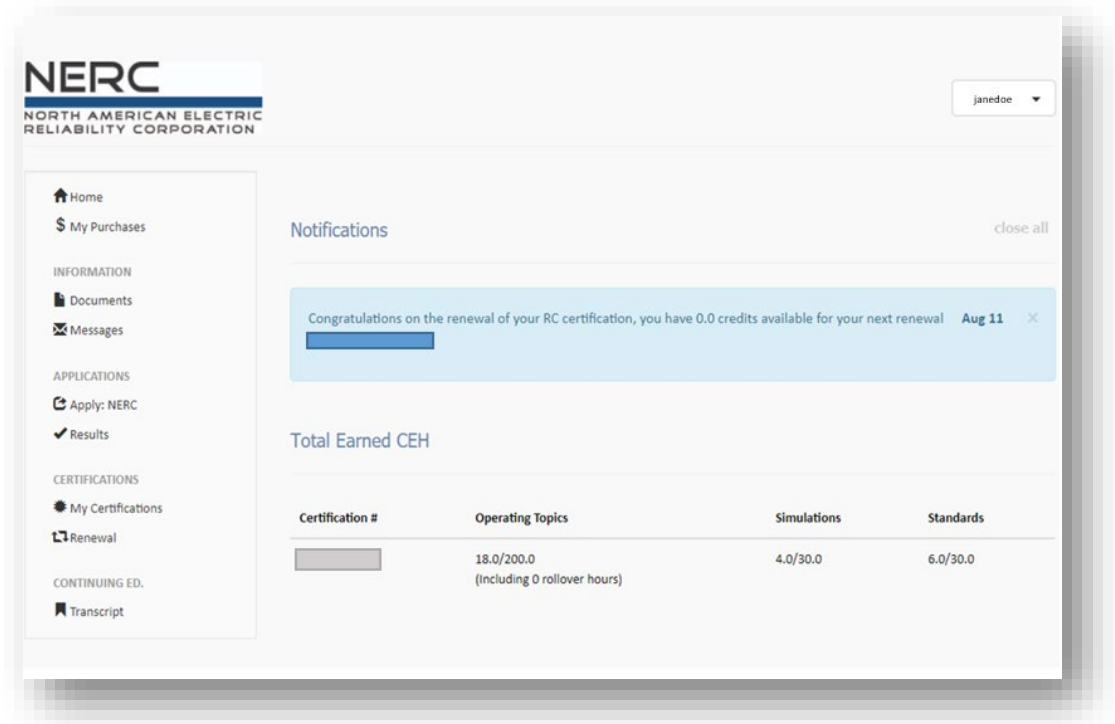


The screenshot shows a "Finalize Application" section. A text box contains the message: "You will be redirected to the online store to complete and pay for your application". To the right of this text is a button labeled "Checkout" with a shopping cart icon. A hand cursor is pointing at the "Checkout" button.

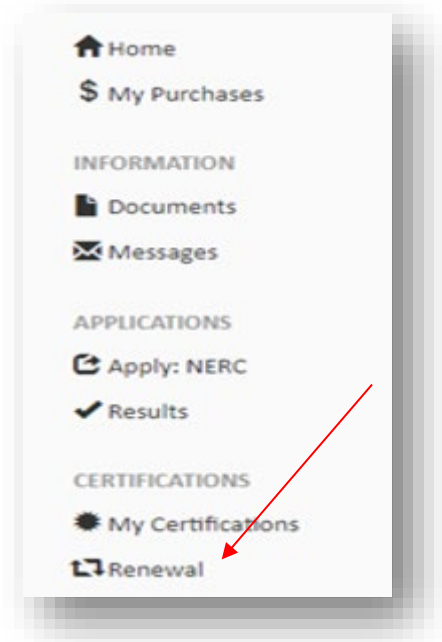
6. Select Send a Check for Check Payment
7. Complete PSI Steps

Appendix C: Renewing Your Credential

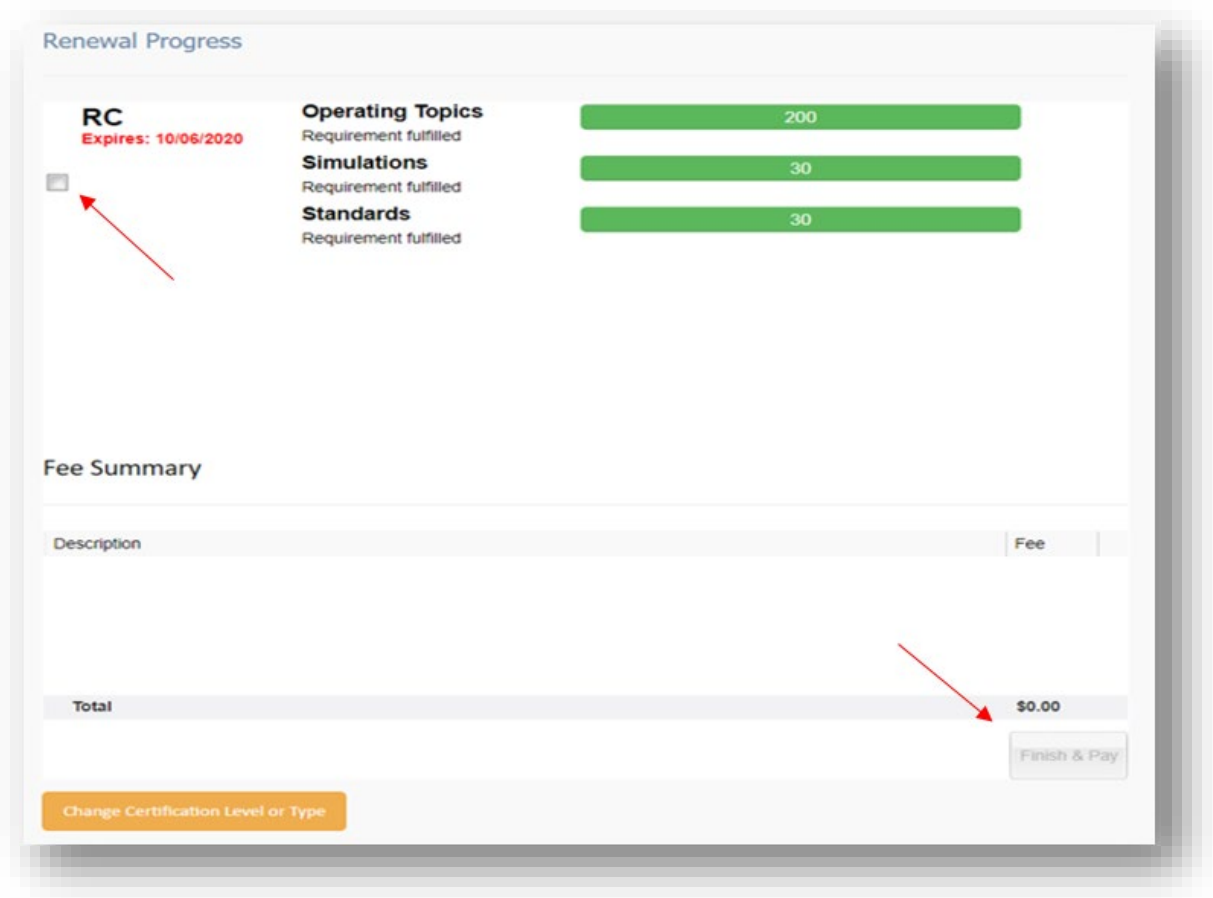
1. Login to SOCCED Account



2. Select Renewal

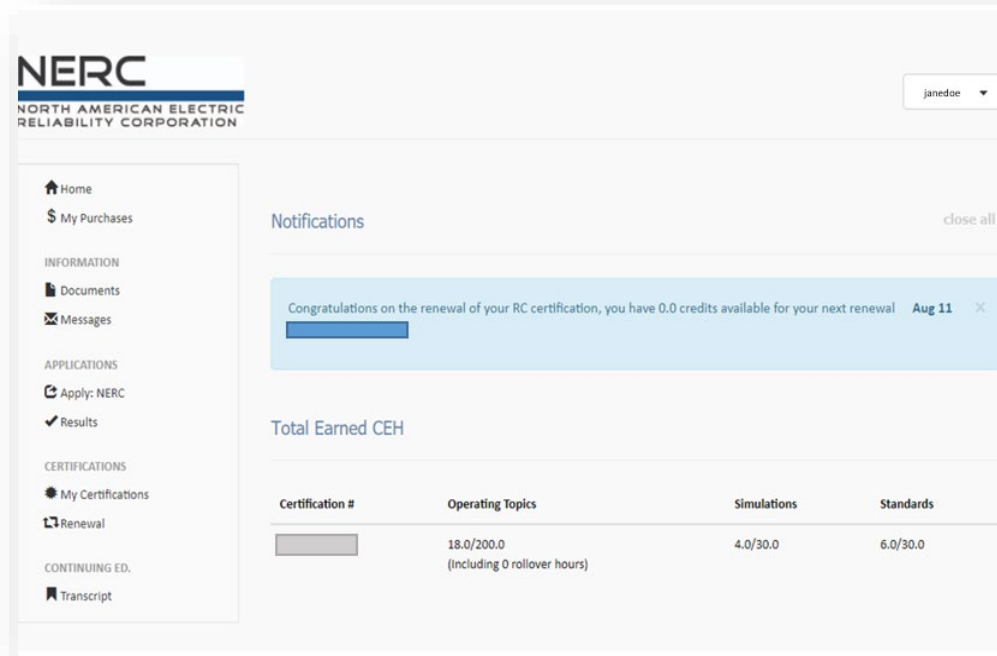


3. Please ensure the **box is checked** to allow the **Finish & Pay** Icon to turn **blue** to submit payment.
 - a. **Note:** If the box is not checked, the Finish & Pay will remain gray, and you cannot process the payment.

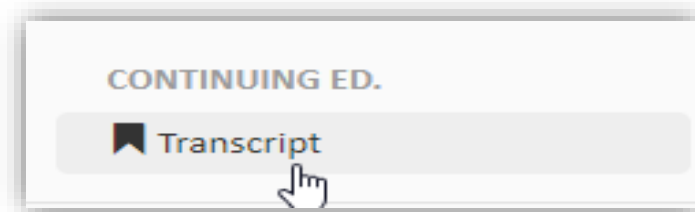


Appendix D: Reviewing Your Transcript

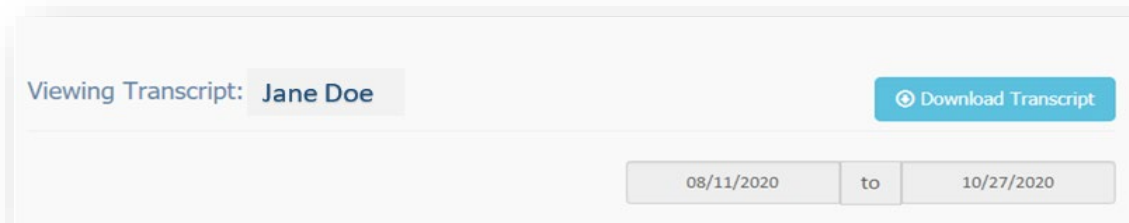
1. Login to your SOCCED account.

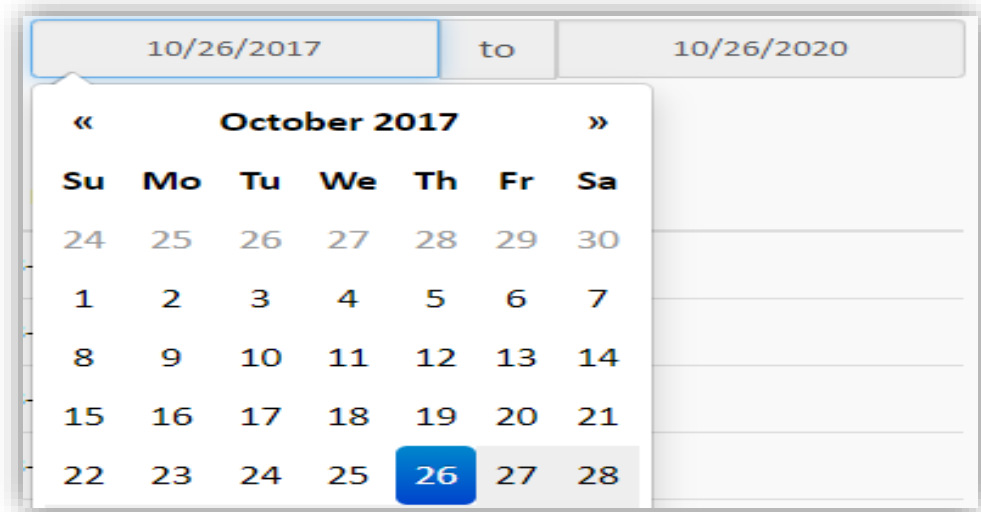


2. Select "Transcript" on the left under Continuing ED.

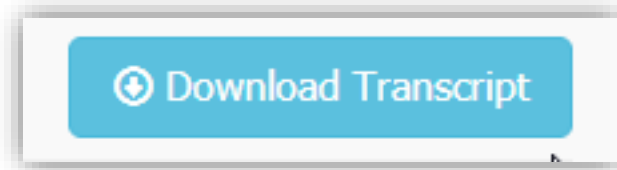


3. Select Date Range:





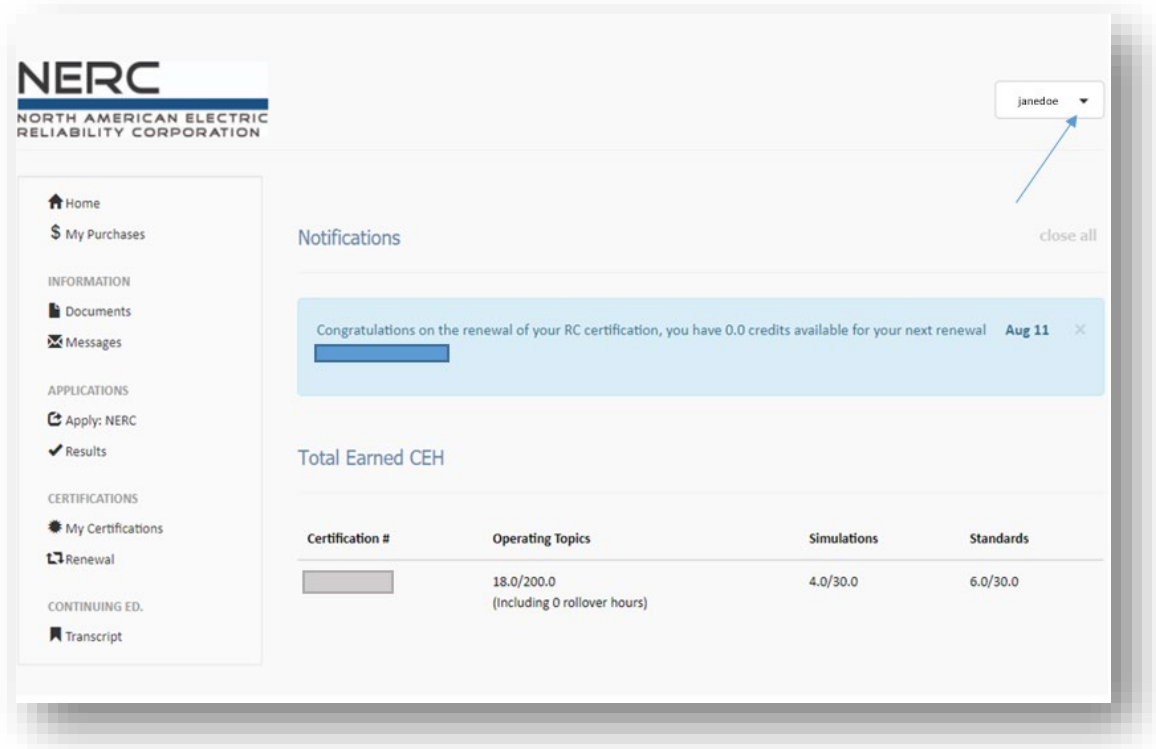
4. Select Download Transcript



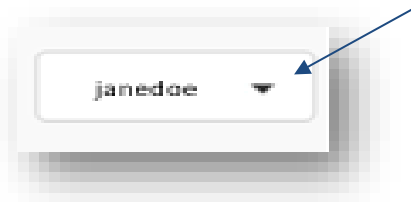
5. The transcript will appear in the form of an excel spreadsheet as a csv file.

Appendix E: Provider Access to View Your Transcript

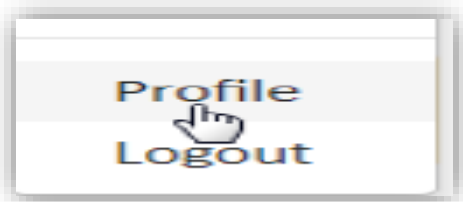
1. Login to SOCCED account.



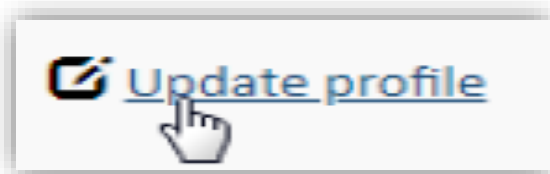
2. Select the dropdown arrow:



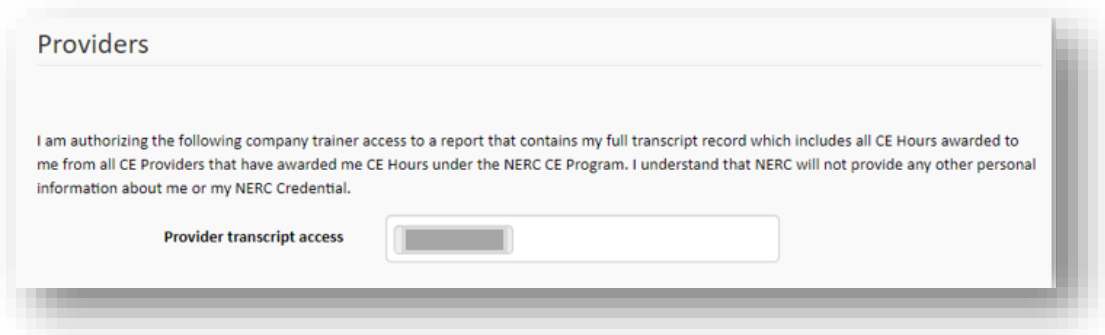
3. Select Profile



4. Select Update profile



5. Scroll to the bottom of the page until you see the “Providers” section.
6. Begin to type the name of the Provider within the Provider transcript access Box
 - a. Select the name to be added

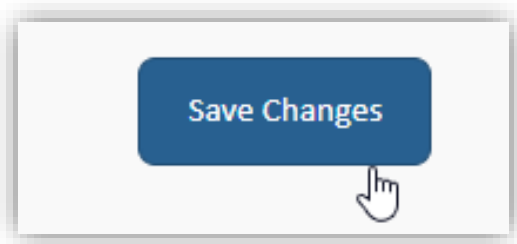


Providers

I am authorizing the following company trainer access to a report that contains my full transcript record which includes all CE Hours awarded to me from all CE Providers that have awarded me CE Hours under the NERC CE Program. I understand that NERC will not provide any other personal information about me or my NERC Credential.

Provider transcript access

7. Select Save Changes to submit.



Appendix F: Revision History

Table F.1: SOC Reference Guide Revision History				
Revision No.	Date	Chapter	Description	Version
0	11/18/2020	All	The <i>System Operator Certification Reference Guide</i> was approved by the Personnel Certification Manager	1.0
1	02/16/2021	2	Added check payment address.	1.1
2	3/29/2021	All	Moved SOCCED related items from under PSI to SOCCED	1.2
3	6/7/2022	3	Added the exam calculator description.	1.3
4	2/17/2023	2	Added pre-test/practice questions are English only.	1.4
5	9/29/2023	2 & 3	<ul style="list-style-type: none"> • Changed Help Desk to SOCCED Help Center • Changed Chapter 2's title from Exams and Credential Renewals to NERC Exams • Updated PSI info under chapter 2 regarding Test Taker Portal and basic exam on-screen calculator description • Updated Test Taker Scheduling Link • Added Exam Schedule, Post Exam/Results, and Failed Exam subheadings with new information. • Changed Chapter 3 title from PSI Exam Vendor to Credential Holder 	1.5