



Guide to Signing Technology Innovation and Emissions Reduction (TIER) Regulation Forms

Climate Regulation and Carbon Markets



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Background

This is a short reference guide to help you attach your digital certificate and electronic signature when submitting a form under the Technology Innovation and Emissions Reduction (TIER) regulation, which may include aggregate applications, compliance reporting forms or others.

TIER forms are submitted as a workbook file. Workbooks are regular Microsoft Excel files that have macros enabled, hence the slightly different *.xism* as opposed to *.xlsx* file name extension. Excel documents, like other Microsoft Office documents allow users to verify and secure content by adding an electronic signature and a digital certificate. Once a document is signed, subsequent edits automatically invalidate the document. This guide will help you to sign and hopefully avoid common mistakes when working with digital signatures on Excel.

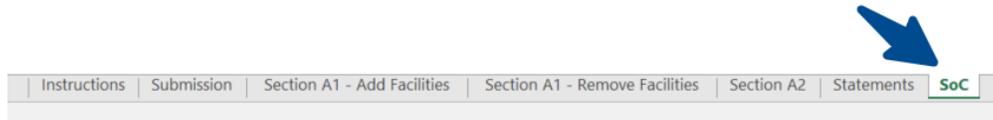
Pre-requisites

Microsoft Office – Macro-Enabled workbooks (*.xism* files) were introduced in Microsoft Office 2007 and are supported by all later versions. While it is possible to open these files on other spreadsheet processors such as Google Sheets, editing or converting to different file format will lose the ability to attach electronic signature, and other embedded features in the workbook.

Signing

The following steps will help you apply an electronic signature on your completed workbook.

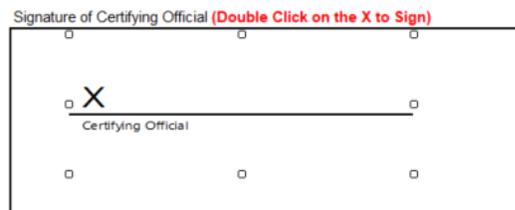
1. TIER forms typically contain several named worksheets to collect and organize data being submitted. Statement of Certification (SoC) worksheet allows an official to certify the document with an electronic signature and digital certificate.



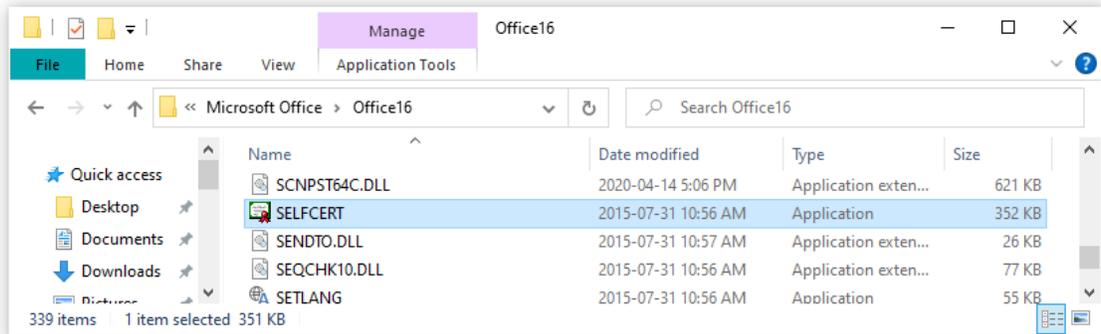
2. It is recommended that signing be the last activity after filling out the preceding worksheets.
3. A digital certificate/ digital ID is required to sign successfully. The following three ways can be used to secure the document:
 - i. Digital Certificate issued by the signer's organization.
 - ii. Digital Certificate issued by third-party certificate authority (CA).
 - iii. Self-issued Certificate.

Please note the methods differ significantly in degree of security provided, a self-issued certificate is the least secure. Nonetheless, the following steps highlight their utility.

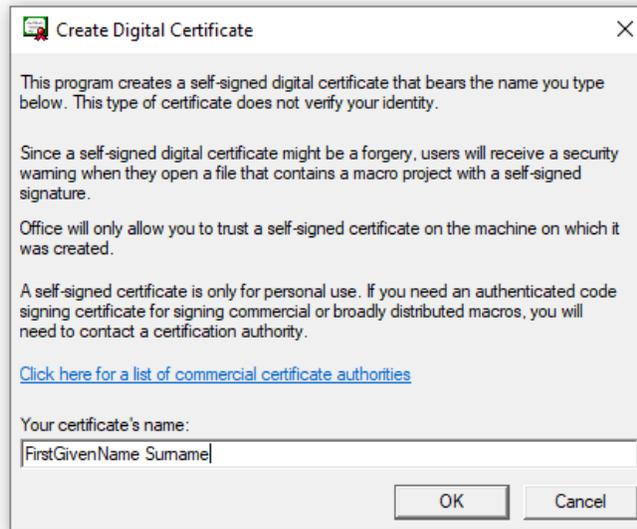
4. The signing box in SoC worksheet will be marked with instructions as shown in the screenshot below.



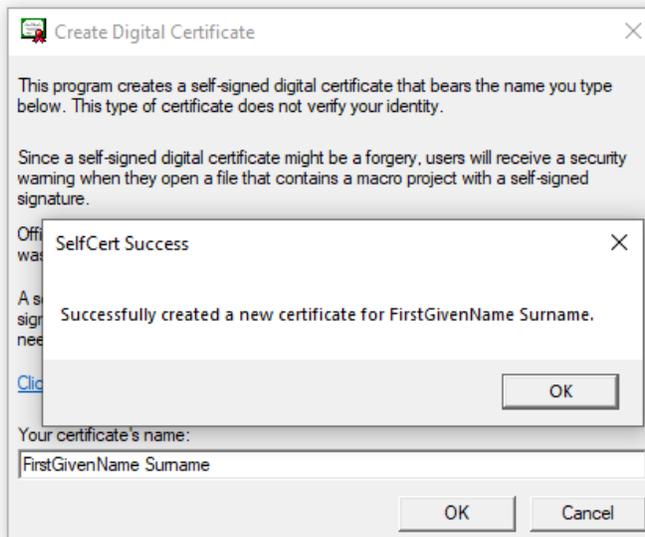
5. Double-clicking the marked area will pop-up a **Get a Digital ID** dialog or **Sign** dialog windows. In case of the latter dialog, feel free to jump to step No. 6 as you already have a digital ID installed and ready to use. In case of the former dialog being presented, you have the option to generate a certificate immediately to sign the document. The following few steps will help you create a less secure, self-issued digital certificate.
 - i. Use File Explorer to find where your Microsoft Office suite is installed. Typical location is **C:\Program Files (x86)\Microsoft Office\Office16**. The last fragment, Office16, denotes the version of Microsoft Office you are using and may be different on your computer.
 - ii. Inside Office16 folder, you need to locate and run the *SELFCERT* application by double-clicking it.



- iii. This action will present a new dialog to name and create the certificate.



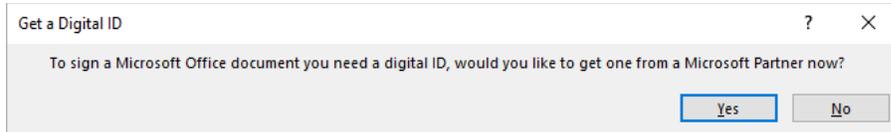
- iv. Click "OK" to generate a certificate on the machine and you will get a confirmation.



- v. You now have a digital ID to secure the workbook. Feel free to jump to step No. 6.

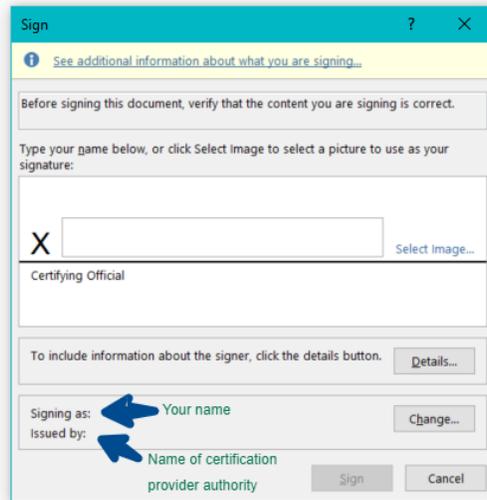
For more information on creating a digital certificate, see: [create a digital certificate to digitally sign a document](#).

Alternatively, you can obtain a digital certificate issued by your organization or from a third-party CA as mentioned in steps 3.i and 3.ii, respectively. Please request a digital certificate from your IT department. If you have no existing digital certificates installed, a **Get a Digital ID** dialog will guide you to third-party certificate providers.

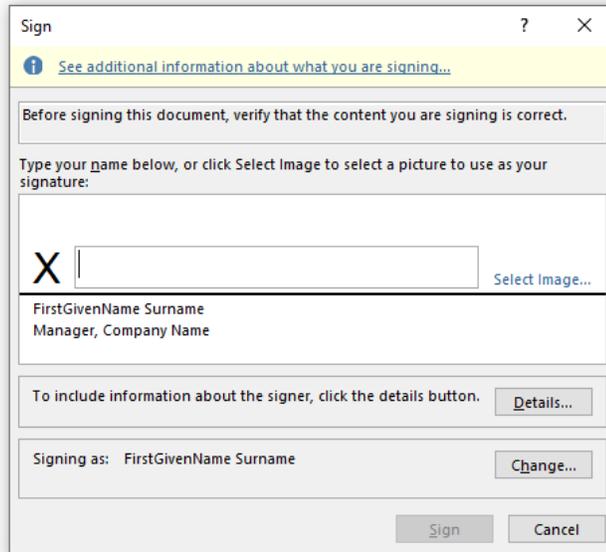


Instructions to install will be provided by third-party CA. For more information on finding third-party certificate providers: [find digital ID or digital signature services](#).

6. With a digital certificate, you can now sign and secure your document. Double-clicking the signing box shown earlier in step No. 4 should present the following dialog.



You have the option to type your name in the field marked **X** or select a drawing / image of your signature. The electronic signature verifies the document, and the attached digital signature secures the document from further alterations. The “Signing as” and “Issued by” labels in **Sign** dialog refer to your name and name of third-party certificate authority respectively. In case you created one i.e. self-issued (in step No. 5), there will be no “Issued by” label as shown in screenshot below.



If you have multiple signatures installed, use “Change” button and select the appropriate digital signature.

After typing your name or selecting an image, and have a valid Digital Signature, you can then click the “Sign” button at the bottom of the dialog window. You will see the confirmation alert-box shown below if this is the first time signing the document.



Your document now has an electronic signature to verify the data and a digital signature to secure it from alterations.

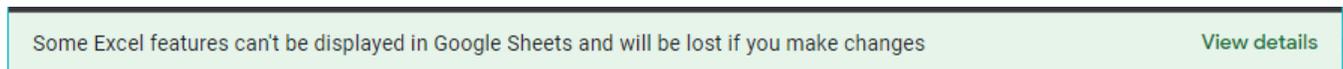
Common mistakes

Editing or saving the document after signing

Once the electronic signature is affixed, further edits or using the “Save” option on Excel will invalidate the signature. Excel will warn and require you to affirm before editing. If you choose to continue, you will need to repeat the signing process outlined above to secure the document again.

Using Spreadsheet applications that do not support Macros

As noted in the pre-requisites, opening the workbook on other spreadsheet software such as Dropbox or Google Sheets will lose not only the ability to secure the workbook Digital Signature, it will also lose automation features embedded in the document. Some software will warn you about this, for example, Google Sheet will show the notification below at the top of the window.



Disabling all macros without notifications

If macros are disabled by default, it is recommended to select “Disable all macros with notification” in order to see any macro notifications that need your attention or approval. You can confirm this by navigating to:

Excel Options > Trust Center > Trust Center Settings > Macro Settings

