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

Climate Regulation and Carbon Markets

Albertan

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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 *.xlsm* 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 (*.xlsm* 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.

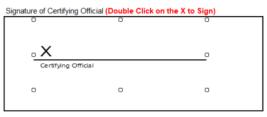
 TIER forms typically contain several named worksheets to collect and organize data being submitted. Statement of Certification (SoC) worksheet allows an official to certify the document with an electronic signature and digital certificate.



- 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.
 - 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.

🛃 🔒 🛨			Manage	Office16			- 🗆	×
File Home	Share	View	Application Tools					~ (
← → ~ ↑	« Mic	rosoft Office	> Office16	~	ට 🔎 Search Offic	e16		
	^	Name	^		Date modified	Туре	Size	
📌 Quick access		SCNPST	64C.DLL		2020-04-14 5:06 PM	Application exten	621 KE	3
- Desktop	*	SELFCER	रा		2015-07-31 10:56 AM	Application	352 KB	}
Documents	*	🗟 SENDTO	.DLL		2015-07-31 10:57 AM	Application exten	26 KB	3
👆 Downloads	*	SEQCHI	(10.DLL		2015-07-31 10:56 AM	Application exten	77 KB	3
339 items 1 item	♥ selected	Contemporation Contemporatio Contemporation Contemporation Contemporation Contemp	G		2015-07-31 10:56 AM	Application	55 KB) ==

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

Create Digital Certificate X				
This program creates a self-signed digital certificate that bears the name you type below. This type of certificate does not verify your identity.				
Since a self-signed digital certificate might be a forgery, users will receive a security warning when they open a file that contains a macro project with a self-signed signature.				
Office will only allow you to trust a self-signed certificate on the machine on which it was created.				
A self-signed certificate is only for personal use. If you need an authenticated code signing certificate for signing commercial or broadly distributed macros, you will need to contact a certification authority.				
Click here for a list of commercial certificate authorities				
Your certificate's name: FirstGivenName Sumame				
OK Cancel				

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

🔄 Create Digital Certificate	×
This program creates a self-signed digital certificate that bears the name you type below. This type of certificate does not verify your identity.	
Since a self-signed digital certificate might be a forgery, users will receive a security warning when they open a file that contains a macro project with a self-signed signature.	
Offi SelfCert Success ×	:
A s sigr Successfully created a new certificate for FirstGivenName Surname. nee	
Сііс	
Your certificate's name:	
FirstGivenName Sumame	
OK Cancel	

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: <u>create a digital certificate to digitally</u> <u>sign a document</u>.

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: <u>find digital ID or digital signature services</u>.

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.

6 See additio	nal information about what you are signing	
efore signing thi	is document, verify that the content you are s	igning is correct.
/pe your <u>n</u> ame b gnature:	below, or click Select Image to select a pictur	e to use as your
Х		Select Image
Certifying Offici		
	rmation about the signer, click the details but	ton. Details
		Decompan
Signing as:	Your name	C <u>h</u> ange

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.

Sign		?	×
See additional information about what you are signing			
Before signing this document, verify that the content you are s	igning is	correc	t.
ype your <u>n</u> ame below, or click Select Image to select a picture ignature:	to use as	s your	
X	Se	lect Ima	ge
FirstGivenName Surname Manager, Company Name			
To include information about the signer, click the details but	tton.	<u>D</u> etails	
Signing as: FirstGivenName Surname		C <u>h</u> ange	2

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.

1	Your signature has been successfully saved with this document If the document is changed, your signature will become invalid
	Don't show this message again

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 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.

Some Excel features can't be displayed in Google Sheets and will be lost if you make changes View details

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

Trust Center		?	×
Trusted Publishers	Macro Settings		
Trusted Locations	O Disable all macros without notification		
Trusted Documents	Disable all macros with notification		
Trusted Add-in Catalogs	 Disable all macros except digitally signed macros 		
Add-ins	 <u>Enable all macros (not recommended; potentially dangerous code can run)</u> 		
ActiveX Settings	Developer Macro Settings		
Macro Settings	Trust access to the VBA project object model		
Protected View	Thus access to the YDA project object model		
		OK C	Cancel