



Business Process

Transferring Guarantees of Origin

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1 DOCUMENT TRACKING

| Version | Author | Content | Date |
|---------|------------|---|------------|
| 1.0 | SEMO & CER | Final version as approved by CER | 01/12/2011 |
| 1.1 | SEMO | Update to reflect changes to processes | 13/08/2012 |
| 1.2 | SEMO | Update to reflect implementation of Online Registry, becoming member of the Association of Issuing Bodies (AIB) and connecting to the AIB Trading Hub | 31/07/2015 |
| 1.3 | SEMO | Update to reflect implementation of exporting GOs to Northern Ireland for use in Fuel Mix Disclosure | 08/10/202 |

2 PROCESS CONTEXT

2.1 BACKGROUND

Directive 2001/77/EC introduced the concept of Guarantees of Origin (GO) for electricity. The Renewables Directive¹ 2009/28/EC replaces Directive 2001/77/EC and Article 15 of the Renewables Directive further develops GOs. The directive states that the sole purpose of a GO is for Fuel Mix Disclosure and that the GO does not need to follow the physical flow of electricity. This legislation was transposed in Ireland by S.I. 147 of 2011 (replaced by S.I. 483 of 2014); the Statutory Instrument places the obligation for issuing GOs in Ireland on the Single Electricity Market Operator (SEMO) subject to the Supervisory Framework for the Administration of Guarantees of Origin (CER/11/824); developed by the CER in consultation with SEMO and the industry.

Every 1 MWh of renewable energy produced in a year is entitled to a GO certificate, subject to the terms set out in S.I. 147 of 2011 (replaced by S.I. 483 of 2014). GO certificates are issued to Account Holders in the GO Online Registry following successful completion of the GO Issuing (including Requesting) Process.

GO certificates are transferable within the European Union, until they expire or are used for Fuel Mix Disclosure. GO certificates expire 12 months from production end date. Expired GO certificates cannot be transferred. While SEMO does not keep track of any commercial arrangements relating to these transfers, transfers will be tracked in the GO Online Registry.

2.2 PROCESS SCOPE

This document outlines the process for the request, validation and completion of GO transfers.

It does not cover any of the following processes:

- Registering for the GO scheme
- Issuing GO certificates (including Request)
- Importing GO certificates
- Withdrawal of GO certificates

¹ Transposed by the [Renewables Obligation \(Amendment\) Order \(Northern Ireland\) 2010](#) in Northern Ireland and by S.I. 147 of 2011 (replaced by 483 of 2014) in Ireland.

3 BUSINESS OBJECTIVE

The objective of this business process is to meet the obligations SEMO has under S.I. 147 of 2011 (replaced by S.I. 483 of 2014), namely:

5. (1) Guarantees of origin shall be issued by SEMO in accordance with the supervisory framework established by CER and these Regulations.

(2) CER shall, after consultation with SEMO and other relevant persons, design, establish and publish a supervisory framework for the issuance, registration, transfer and cancellation by electronic means, of guarantees of origin to generators of electricity from renewable energy sources.

(3) CER and SEMO shall ensure that guarantees of origin are accurate, reliable and fraud-resistant.

8. (5) SEMO shall, in accordance with the supervisory framework, establish an electronic register of issued guarantees of origin which shall include, at a minimum, the following information:

(a) the date of issue of the guarantee of origin;

(b) the name and address (if a body corporate its registered place of business) of the person to whom the guarantee has been, or was originally, issued;

(c) a unique identification number for each guarantee of origin;

(d) the energy source or sources from which the electricity to which the guarantee of origin relates was generated;

(e) the start and end dates of generation to which the guarantee of origin relates;

(f) the type and capacity of the generating station where the energy was generated to which the guarantee of origin relates;

(g) where the guarantee of origin has been transferred, the name and address (if a body corporate its registered place of business) of the last person to whom it has been transferred;

(h) where a guarantee of origin has been issued to a PSO generator, a statement to this effect;

(i) a list of any guarantees of origin revoked pursuant to Regulation 9.

Functions of the Guarantee of Origin

(3) A supplier may use a guarantee of origin as proof of the share or quantity of energy from renewable sources in its energy mix for the purposes of compliance with the requirements of Regulation 25 of the Internal Market Regulations.

Eligibility and characteristics of a guarantee of origin

(5) Any use of the guarantee of origin shall take place within 12 months of the generation of the corresponding renewable energy unit.

(6) A guarantee of origin shall be cancelled once it has been used.

10. (1) The supervisory framework established by CER shall provide for the recognition of guarantees of origin issued by other Member States in accordance with Article 15(9) of the Directive.

(2) SEMO, acting in accordance with the supervisory framework may refuse to recognise a guarantee of origin issued by another Member State only where it has well-founded doubts about the accuracy, reliability or veracity of the guarantee of origin and in such a case shall notify the Minister and the European Commission of such a refusal and its justification.

Where Article 15(9) of the Directive states:

9. Member States shall recognise guarantees of origin issued by other Member States in accordance with this Directive exclusively as proof of the elements referred to in paragraph 1 and paragraph 6(a) to (f). A Member State may refuse to recognise a guarantee of origin only when it has well-founded doubts about its accuracy, reliability or veracity. The Member State shall notify the Commission of such a refusal and its justification.

SEMO is bound to follow the Supervisory Framework as set out in the decision paper CER/11/824 “Supervisory Framework for Administration of Guarantees of Origin” and all amendments to said framework.

4 PROCESS OVERVIEW

4.1 TERMINOLOGY

| Previous Terminology | GO Online Registry Terminology |
|----------------------|--|
| Generator | Producer |
| Supplier | Supplier |
| GO Participant | Account Holder |
| Generator Unit | Production Device |
| Authorised User | Account Holder User (see appendix 9.3) |
| Revocation | Withdrawal |

4.2 GO TRANSFER WITHIN IRELAND

The initiation of GO Transfers within Ireland is done in the GO Online Registry by the selling Account Holder. Figure 1 below shows the process for GO Transfer within Ireland.

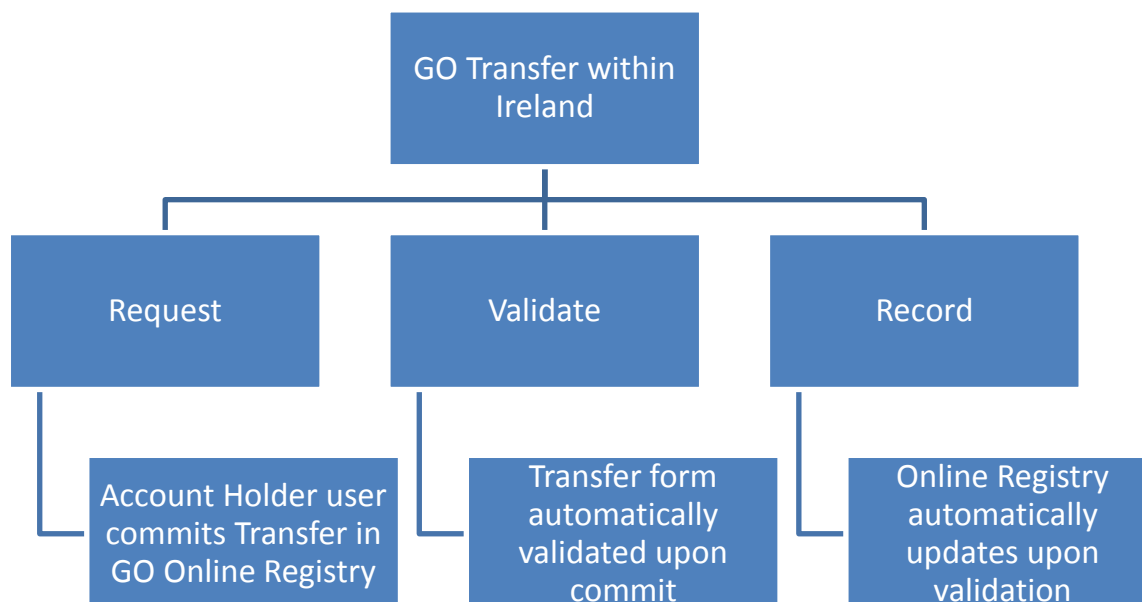


Fig. 1 GO Transfer within Ireland Process Overview

Details of these activities are provided below.

4.2.1 REQUEST

Commit Transfer

The Account Holder Root User or Account Administrator accesses their account and completes the transfer certificates form on the GO Online Registry, selecting Ireland from the domain drop down list.

See section 6.4.1 of CMO.Grexel Account Holder User Manual for the step by step approach to completing the transfer form.

The user must have the Commit Transaction role – see appendix 9.3 for further details on roles and permissions.

GO transfers within Ireland can be done on an ad hoc basis. However, transfer transactions should be initiated 10 working days before the expiry of any GO certificate to be included in the transaction to avoid expiry of GO certificates in the course of the transaction. GO certificates expire 12 months from production end date.

On submission, the Transfer form is validated (go to section 4.2.2.).

4.2.2 VALIDATE

Validation Fail:

If any mandatory fields are completed incorrectly, or left blank, the form will fail validation and a message on screen will indicate to the Account Holder Root User or Account Administrator the field(s) that failed validation.

Figure 2 displays an example of an error message.

Certificates Open

Transfer certificates

| | | |
|-------------------------------------|--------------------------------------|---|
| Total certificates volume available | 17 | |
| Give Certificate amount | 17 | * Transfer all <input type="checkbox"/> |
| Domain | - Select - | * |
| Account Holder | Self - UAT2 AH2 IE222222222222 | * |
| Account | 643002406600045781 - Default Account | * |
| Enter account no/member code | <input type="text"/> | |
| Message to Receiver | test | Note: Message is shown to receiver inside the CMOgrexel systems |

Domain is required

Note: Fields marked with an asterisk are mandatory

Transfer **Back**

Fig. 2 Sample Error Message


The Account Holder Root User or Account Administrator can update the transfer form as instructed by the error message and resubmit the transfer form. On submission, the transfer form is validated (restart the steps in section 4.2.2.).

In the event that an Account Holder Root User or Account Administrator has revised the transfer form as instructed by the error message, but the transfer does not pass validation, the Account Holder should contact SEMO (guaranteesoforigin@sem-o.com) with a screenshot of the error message and a screenshot of the revised transfer form before it was submitted.

Validation Pass:

If all mandatory fields are completed correctly, a message on screen will indicate to the Account Holder Root User or Account Administrator that the GO certificate(s) have transferred to the selected account.

Figure 3 shows an example of a success message.

 17 Certificates transferred to AH400UAT1 IE777777 , Ireland, 643002406600045361 - Default Account

| Transfer certificates | |
|-------------------------------------|--|
| Total certificates volume available | 17 |
| Give Certificate amount | <input type="text" value="17"/> * <input checked="" type="checkbox"/> Transfer all |
| Domain | <input type="text" value="Ireland"/> * |
| Account Holder | <input type="text" value="AH400UAT1 IE777777"/> * |
| Account | <input type="text" value="643002406600045361 - Default Account"/> * |
| Enter account no/member code | <input type="text"/> |
| Message to Receiver | <div><div>test</div><div>Note: Message is shown to receiver inside the CMOGrexel systems</div></div> |

Note: Fields marked with an asterisk are mandatory

Fig. 3 Sample Success Message

4.2.3 RECORD

Update GO Online Registry – Validation Fail

On validation fail, there is no update to the GO Online Registry and the GO certificates do not leave the account of the sending Account Holder.

Update GO Online Registry – Validation Pass

On validation pass, the GO certificates are automatically transferred to the account of the receiving Account Holder.

The sending Account Holder can use the Search Transactions report function in the GO Online Registry to view the status of the transaction and the transaction status will show as completed.

The receiving Account Holder will be notified via an alert in the GO Online Registry. Alerts are visible to Account Holder Users upon log in to the GO Online Registry. Only Account Holder Users subscribed to 'GO' alerts will receive these alerts via email. The process for subscribing to alerts can be found in section 4.7 of the GO Registration Business Process.

The receiving Account Holder can also use the Search Transactions report function in the GO Online Registry to view the status of the transaction and the transaction status will show as 'Completed'.

4.3 GO TRANSFER TO NORTHERN IRELAND

It is not technically possible to transfer GO certificates between Ireland and Northern Ireland using the GO Online System. This can be overcome by a process that involves manually cancelling and transferring GO certificates for use in Fuel Mix Disclosure (FMD) to Northern Ireland Suppliers. This can only be done with the agreement SEMO as the body responsible for Fuel Mix Disclosure in both ROI and NI. Account Holders must contact SEMO to request such a transfer. Requested transfers will be assessed on a case by case basis.

NOTIFY

The Account Holder Root User or Account Administrator notifies SEMO by emailing via guaranteesoforigin@sem-o.com of their intent to transfer and cancel GO certificates for use by a NI Supplier in their FMD. This email should include information on the sending Account Holder, the receiving NI supplier, the number of certificates being requested for transfer and the intended transfer date.

COMMUNICATE

Accepted: SEMO will contact the Account Holder to indicate that the cancellation can be initiated in the GO Online Registry.

Rejected: SEMO will contact the Account Holder to indicate that the cancellation cannot be facilitated if the other domain confirms that the ex-domain cancellation will not be accepted.

REQUEST

The Account Holder Root User or Account Administrator accesses their account and completes the Cancel certificates form on the GO Online Registry.

See section 6.4.2 of the CMO.Grexel Account Holder User Manual for the step by step instructions on completing the Cancel certificates form.

For cancelling GO certificates for use in Fuel Mix Disclosure in NI, the below fields should be completed as follows:

- ☐ Country of Consumption: Northern Ireland
- ☐ Name of Beneficiary: [FMD ID and name of NI Supplier who is beneficiary]
- ☐ Location of Beneficiary: Northern Ireland
- ☐ Usage Category: Disclosure
- ☐ Consumption Period State: [YYYY-01-01] (YYYY = relevant Fuel Mix Disclosure Year the GOs are to be associated with in NI)
- ☐ Consumption Period End: [YYYY-12-31] (YYYY = relevant Fuel Mix Disclosure Year the GOs are to be associated with in NI)
- ☐ Cancellation Purpose: [No.] GO certificates cancelled for use in Fuel Mix Disclosure in Northern Ireland.

Cancellation transactions should be initiated before the expiry of any GO certificate to be included in the transaction. GO certificates expire 12 months from production end date.

VALIDATE

On submission, the Cancel certificates form is validated.

Validation Fail:

If any mandatory fields are completed incorrectly, or left blank, the form will fail validation and a message on screen will indicate to the Account Holder Root User or Account Administrator the field(s) that failed validation. The Account Holder Root User or Account Administrator can update the Cancel certificates form as instructed by the error message and resubmit.

In the event that an Account Holder Root User or Account Administrator has revised the Cancel certificates form as instructed by the error message, but the Cancel certificates form does not pass validation, the Account Holder should contact SEMO (guaranteesoforigin@sem-o.com) with a screenshot of the error message and a screenshot of the revised Cancel certificates form.

Validation Pass:

If all mandatory fields are completed correctly, the form will pass validation and a message is displayed to the Account Holder Root User or Account Administrator indicating that the cancellation has been submitted.

VERIFY

All cancellations in the GO Online Registry must be verified and approved by SEMO.

Verification - Rejected:

If any of the mandatory fields are completed incorrectly, SEMO will reject the cancellation.

On rejection, the Account Holder will be notified via an alert in the GO Online Registry. Alerts are visible to Account Holder Users upon logging in to the GO Online Registry. Only Account Holder Users subscribed to 'GO' alerts will receive these alerts via email. SEMO will also contact the Account Holder Root User or Account Administrator by email to explain why the cancellation was rejected. The Account Holder Root User or Account Administrator can initiate the process again by submitting a cancel certificates form.

Verification - Approved:

If all mandatory fields are completed correctly SEMO will approve the cancellation.

On approval, the Account Holder User will be notified via an alert in the GO Online Registry. Alerts are visible to Account Holder Users upon log in to the GO Online Registry. Only Account Holder Users subscribed to 'GO' alerts will receive these alerts via email.

RECORD

Update GO Online Registry – On Rejection:

If the cancellation is rejected by SEMO, the GO certificate(s) will not be cancelled in the GO Online Registry. The Account Holder can use the Reports function in the GO Online Registry to search for the cancellation; the status will show as 'Failed'.

Update GO Online Registry – On Approval:

If the cancellation is approved by SEMO, the GO certificates will be cancelled in the GO Online Registry. The Account Holder can use the Reports function in the GO Online Registry to search for the Cancellation Statement; the status will show as 'Completed'. Account Holders can export the Cancellation Statement to Excel or pdf from the GO Online Registry.

If the cancellation is approved, SEMO will issue an email to the Account Holder Root User or Account Administrator confirming that Transaction No. [x] has been approved in the GO Online Registry and the GO certificates have been marked as cancelled for use in FMD in Northern Ireland

4.4 GO TRANSFER TO DOMAIN WITHIN CMO.GREXEL

The initiation of GO transfers to another domain within CMO.grexel is done in the GO Online Registry by the selling Account Holder. The details of the activities involved are as per section 4.2, except that the Account Holder Root User or Account Administrator selects a domain within CMO.Grexel from the domain drop down list when completing the transfer certificates form. The Account Holder Root User or Account Administrator will then be prompted to select an Account Holder in that domain to transfer GO certificates to.

GO transfers to accounts in another domain within CMO.Grexel can be done on an ad hoc basis. However, transfer transactions should be initiated 10 working days before the expiry of any GO certificate to be included in the transaction, to avoid expiry of GO certificates in the course of the transaction. GO certificates expire 12 months from production end date.

To view the list of countries that CMO.Grexel is currently the national registry for, go to cmo.grexel.com.

4.5 GO TRANSFER VIA AIB HUB

The initiation of GO transfers to a domain that is a member of the Association of Issuing Bodies (AIB) (but is not within CMO.Grexel) is done in the GO Online Registry by the selling Account Holder. When transferring GO certificates between accounts in two different registries, the success of the transfer is subject to the verification process of the AIB trading hub and the receiving registry.

To view the list of countries that are members of AIB, go to;
http://www.aib-net.org/portal/page/portal/AIB_HOME/FACTS/AIB%20Members/AIB%20Members

Figure 4 below shows the GO Transfer process via the AIB trading hub:

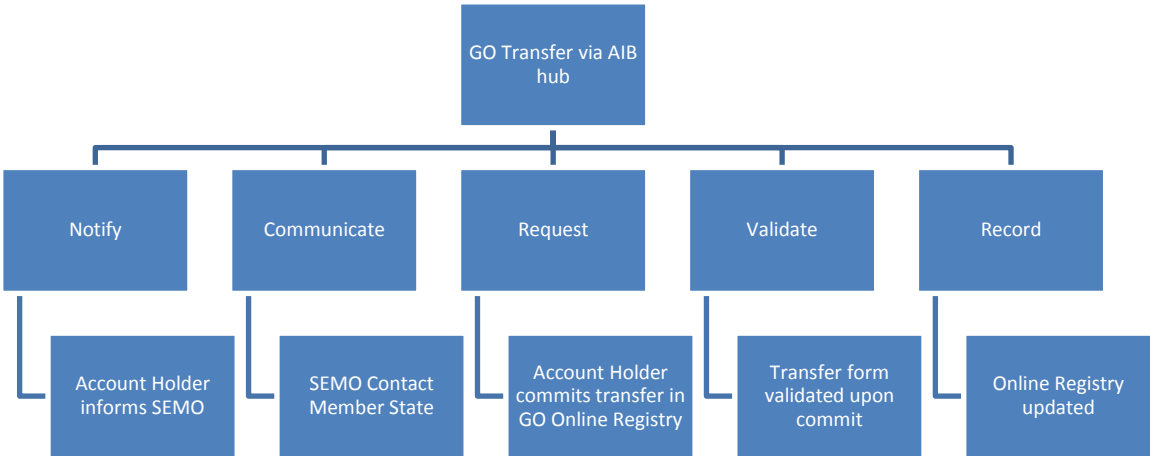


Fig. 4 GO Transfer via AIB hub Process Overview

Details of these activites are provided below.

4.5.1 NOTIFY

The Account Holder informs SEMO of their intent to transfer GO certificates to a domain that is a member of AIB (but is not within the CMO.Grexel registry) via email to guaranteesoforigin@semo.com.

4.5.2 COMMUNICATE

SEMO will contact the domain (Member State) to ensure that Irish GO certificates will be recognised and can be transferred to the receiving registry through the AIB trading hub.

On confirmation of recognition by the receiving domain, SEMO will contact the Account Holder to indicate that the transfer can be initiated in the GO Online Registry, as per section 4.4.3.

SEMO will contact the Account Holder to indicate that the transfer cannot be facilitated if the receiving domain confirms that the GO certificates will not be recognised.

4.5.1 REQUEST

The Account Holder Root User or Account Administrator accesses their account and completes the Transfer certificates form on the GO Online Registry, selecting the relevant domain (Member State) from the domain drop down list.

See section 6.4.1 of CMO.Grexel Account Holder User Manual for the step by step approach to completing the transfer form.

The user must have the Commit Transaction role – see appendix 9.3 for further details on roles and permissions.

GO transfers can be done on an ad hoc basis. However, transfer transactions should be initiated 10 working days before the expiry of any GO certificate to be included in the transaction, to avoid expiry of GO certificates in the course of the transaction. GO certificates expire 12 months from production end date

4.5.2 VALIDATE

On submission, the Transfer certificates form is validated.

Validation Fail:

If any mandatory fields are completed incorrectly, or left blank, the form will fail validation and a message on screen will indicate to the Account Holder Root User or Account Administrator the field(s) that failed validation.

The Account Holder Root User or Account Administrator can update the transfer form as instructed by the error message and resubmit. On submission, the transfer form is validated (restart the steps in section 4.4.2)..

In the event that an Account Holder Root User or Account Administrator has revised the transfer form as instructed by the error message, but the transfer does not pass validation, the Account Holder should contact SEMO (guaranteesoforigin@sem-o.com) with a screenshot of the error message and screenshot of the revised form before submission.

Validation Pass:

If all mandatory fields are completed correctly, a message on screen will indicate to the Account Holder Root User or Account Administrator that the GO certificates have transferred.

4.5.3 RECORD

When transferring between accounts in two different registries, the success of the transfer is subject to the verification process of the AIB trading hub and the receiving registry.

Transfer failed:

The certificates will be returned to the account of the sending Account Holder on the failure of an AIB trading hub transfer.

The sending Account Holder can use the Search Transactions report function in the GO Online Registry to view the status of the transaction and the transaction status will show as 'Corrected'.

Transfer successful:

A successful transfer will result in the certificates being transferred to the account of the receiving Account Holder and the transfer transaction status will be 'completed'.

The sending Account Holder can use the Search Transactions report function in the GO Online Registry to view the status of the transaction and the transaction status will show as 'Completed'.

4.6 GO TRANSFER – TECHNICAL LIMITATION

Where it is impossible to transfer for technical reasons, this can be overcome by cancelling GO certificates for use in Fuel Mix Disclosure (FMD) in another domain. This can only be done with the agreement of both SEMO and the receiving domain. Account Holders must contact SEMO to request such a transfer. Requested transfers will be assessed on a case by case basis.

Figure 5 below shows the GO Transfer – Technical Limitation process overview:

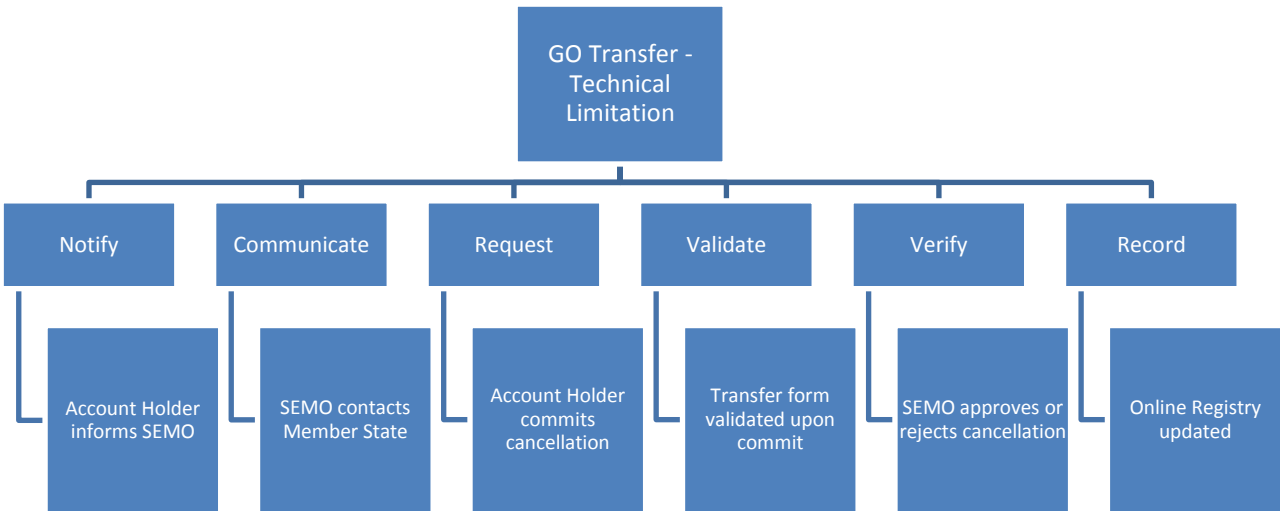


Fig. 5 GO Transfer – Technical Limitation Process Overview

Details of these activities are provided below.

4.6.1 NOTIFY

The Account Holder Root User or Account Administrator notifies SEMO of their intent to cancel GO certificates for use in FMD in another domain.

4.6.2 COMMUNICATE

SEMO will contact the domain (Member State) to ensure that they will accept the certificates cancelled for use in FMD in their domain.

On confirmation of acceptance of ex-domain cancellation, SEMO will contact the Account Holder to indicate that the cancellation can be initiated in the GO Online Registry as per section 4.5.3.

SEMO will contact the Account Holder to indicate that the cancellation cannot be facilitated if the other domain confirms that the ex-domain cancellation will not be accepted.

4.6.3 REQUEST

The Account Holder Root User or Account Administrator accesses their account and completes the Cancel certificates form on the GO Online Registry.

See section 6.4.2 of the CMO.Grexel Account Holder User Manual for the step by step approach to completing the Cancel certificates form.

For cancelling GO certificates for use in Fuel Mix Disclosure in another domain, the below fields should be completed as follows:

- Country of Consumption: [Domain/Member State]
- Name of Beneficiary: [Domain/Member State]
- Location of Beneficiary: [Domain]
- Usage Category: Disclosure
- Consumption Period State: YYYY-MM-DD (Start Date of Fuel Mix Disclosure Period in the other domain)
- Consumption Period End: YYYY-MM-DD (End Date of Fuel Mix Disclosure Period in the other domain)
- Cancellation Purpose: [No.] GO certificates cancelled for use in Fuel Mix Disclosure in [Domain]

Cancellation transactions should be initiated before the expiry of any GO certificate to be included in the transaction. GO certificates expire 12 months from production end date.

4.6.4 VALIDATE

On submission, the Cancel certificates form is validated.

Validation Fail:

If any mandatory fields are completed incorrectly, or left blank, the form will fail validation and a message on screen will indicate to the Account Holder Root User or Account Administrator the field(s) that failed validation (see sample error message in figure 6).

| Certificate Cancellation | | |
|---|--|---|
| Selected certificate amount | 17 | |
| Amount of certificates to Cancel | <input type="text" value="10"/> * | |
| Country of Consumption | <input type="text" value="- Select -"/> * | Note: Certificates may only be cancelled for domestic consumption in countries where the EECS is not implemented. |
| Name of Beneficiary | <input type="text" value="Test Supplier"/> * | |
| Location of beneficiary | <input type="text" value="United Kingdom"/> * | Department, unit, division, or geographical branch |
| Usage Category | <input type="text" value="- Select -"/> * | |
| Consumption Period Start | <input type="text" value="2014-04-01"/> * | Support: Cancelled to receive financial support, Disclosure: Cancelled under a green labeling scheme or as proof of supply to consumers or for own use. Has not been used to receive financial support, Other |
| Consumption Period End | <input type="text" value="2015-03-31"/> * | |
| Type of beneficiary | <input type="text" value="Energy supplier"/> * | |
| Cancellation Purpose | <input type="text" value="Test"/> | |
| <div style="border: 1px solid red; padding: 5px; color: red;"> Select Country of Consumption Usage Category is required. </div> | | |

Note: Fields marked with an asterisk are mandatory

Fig. 6 Sample Error Message

The Account Holder Root User or Account Administrator can update the Cancel certificates form as instructed by the error message and resubmit. On submission, the cancel certificates form is validated and the process resumes from section 4.5.4.

In the event that an Account Holder Root User or Account Administrator has revised the Cancel certificates form as instructed by the error message, but the Cancel certificates form does not pass validation, the Account Holder should contact SEMO (guaranteesoforigin@sem-o.com) with a screenshot of the error message and a screenshot of the revised Cancel certificates form.

Validation Pass:

If all mandatory fields are completed correctly, the form will pass validation and a message is displayed to the Account Holder Root User or Account Administrator indicating that the cancellation has been submitted (see sample success message in figure 7).

Certificates Open

✓ 10 Certificates cancelled to Test Supplier, Ireland

Certificate Cancellation

| | | |
|----------------------------------|--|---|
| Selected certificate amount | 17 | |
| Amount of certificates to Cancel | <input type="text" value="10"/> | * |
| Country of Consumption | <input type="text" value="Ireland"/> | * |
| Name of Beneficiary | <input type="text" value="Test Supplier"/> | * |
| Location of beneficiary | <input type="text" value="Ireland"/> | * |
| Usage Category | <input type="text" value="Disclosure"/> | * |
| Consumption Period Start | <input type="text" value="2014-01-01"/> | * |
| Consumption Period End | <input type="text" value="2014-12-31"/> | * |
| Type of beneficiary | <input type="text" value="Energy supplier"/> | * |
| Cancellation Purpose | <input type="text" value="Test"/> | * |

Note: Fields marked with an asterisk are mandatory

Note: Certificates may only be cancelled for domestic consumption in countries where the EECS is not implemented.

Department, unit, division, or geographical branch

Support: Cancelled to receive financial support, Disclosure: Cancelled under a green labeling scheme or as proof of supply to consumers or for own use. Has not been used to receive financial support, Other

Cancel Certificates Back

Fig. 7 Sample Success Message

4.6.5 VERIFY

All cancellations in the GO Online Registry must be verified and approved by SEMO.

Verification - Rejected:

If any of the mandatory fields are completed incorrectly (see section 4.5.2 for details of entries accepted for each field), SEMO will reject the cancellation.

On rejection, the Account Holder will be notified via an alert in the GO Online Registry. Alerts are visible to Account Holder Users upon logging in to the GO Online Registry. Only Account Holder Users subscribed to 'GO' alerts will receive these alerts via email. The process for subscribing to alerts can be found in section 4.7 of the GO Registration Business Process document.

SEMO will also contact the Account Holder Root User or Account Administrator by email to explain why the cancellation was rejected. The Account Holder Root User or Account Administrator can initiate the process again by submitting a cancel certificates form (process resumes from section 4.5.3).

Verification - Approved:

If all mandatory fields are completed correctly (see section 4.5.2 for details of entries accepted for each field), SEMO will approve the cancellation.

On approval, the Account Holder User will be notified via an alert in the GO Online Registry. Alerts are visible to Account Holder Users upon log in to the GO Online Registry.

Only Account Holder Users subscribed to 'GO' alerts will receive these alerts via email. The process for subscribing to alerts can be found in section 4.7 of the GO Registration Business Process document.

4.6.6 RECORD

Update GO Online Registry – On Rejection

If the cancellation is rejected by SEMO, the GO certificate(s) will not be cancelled in the GO Online Registry. The Account Holder can use the Reports function in the GO Online Registry to search for the cancellation; the status will show as 'Failed'.

Update GO Online Registry – On Approval

If the cancellation is approved by SEMO, the GO certificates will be cancelled in the GO Online Registry. The Account Holder can use the Reports function in the GO Online Registry to search for the Cancellation Statement; the status will show as 'Completed'. Account Holders can export the Cancellation Statement to Excel or pdf from the GO Online Registry.

If the cancellation is approved, SEMO will issue a signed letter to the Account Holder Root User or Account Administrator confirming that Transaction No. [x] has been approved in the GO Online Registry and the GO certificates have been marked as cancelled for use in FMD in the receiving domain.

5 ROLES AND RESPONSIBILITIES

5.1 SEMO MARKET OPERATIONS

As the GO issuing body SEMO has the following responsibilities:

5 (1) Guarantees of origin shall be issued by SEMO in accordance with the supervisory framework established by CER and these Regulations.

(2) CER shall, after consultation with SEMO and other relevant persons, design, establish and publish a supervisory framework for the issuance, registration, transfer and cancellation by electronic means, of guarantees of origin to generators of electricity from renewable energy sources.

(3) CER and SEMO shall ensure that guarantees of origin are accurate, reliable and fraud-resistant.

8. (5) SEMO shall, in accordance with the supervisory framework, establish an electronic register of issued guarantees of origin which shall include, at a minimum, the following information:

(a) the date of issue of the guarantee of origin;

(b) the name and address (if a body corporate its registered place of business) of the person to whom the guarantee has been, or was originally, issued;

(c) a unique identification number for each guarantee of origin;

(d) the energy source or sources from which the electricity to which the guarantee of origin relates was generated;

(e) the start and end dates of generation to which the guarantee of origin relates;

(f) the type and capacity of the generating station where the energy was generated to which the guarantee of origin relates;

(g) where the guarantee of origin has been transferred, the name and address (if a body corporate its registered place of business) of the last person to whom it has been transferred;

(h) where a guarantee of origin has been issued to a PSO generator, a statement to this effect;

(i) a list of any guarantees of origin revoked pursuant to Regulation 9.

Under S.I. 483 of 2014 SEMO has the following obligations relating to importing GOs from other Member States:

10. (1) The supervisory framework established by CER shall provide for the recognition of guarantees of origin issued by other Member States in accordance with Article 15(9) of the Directive.

(2) SEMO, acting in accordance with the supervisory framework may refuse to recognise a guarantee or origin issued by another Member State only where it has well-founded doubts about the accuracy, reliability or veracity of the guarantee of origin and in such a case shall notify the Minister and the European Commission of such a refusal and its justification.

Where Article 15(9) of the Directive states:

9. Member States shall recognise guarantees of origin issued by other Member States in accordance with this Directive exclusively as proof of the elements referred to in paragraph 1 and paragraph 6(a) to (f). A Member State may refuse to recognise a guarantee of origin only when it has well-founded doubts about its accuracy, reliability or veracity. The Member State shall notify the Commission of such a refusal and its justification.

5.2 ACCOUNT HOLDERS

Where possible, the Account Holder Root User or Account Administrator initiates transfers by completing a transfer form within the GO Online Registry. Where it is impossible to transfer for technical reasons, this can be overcome by the Account Holder Root User or Account Administrator cancelling GO certificates in the GO Online Registry for use in Fuel Mix Disclosure (FMD) in another domain. This can only be done with the agreement of both SEMO and the receiving domain.

5.3 ISSUING BODY OF OTHER MEMBER STATE

The issuing body of the other Member State has the following obligations under regulation 15 of 2009/28/EC (the Directive):

4. Member States or designated competent bodies shall supervise the issuance, transfer and cancellation of guarantees of origin. The designated competent bodies shall have non-overlapping geographical responsibilities, and be independent of production, trade and supply activities.

5. Member States or the designated competent bodies shall put in place appropriate mechanisms to ensure that guarantees of origin shall be issued, transferred and cancelled electronically and are accurate, reliable and fraud-resistant.

6 PROCESS DESCRIPTION

6.1 PROCESS SWIMLANES

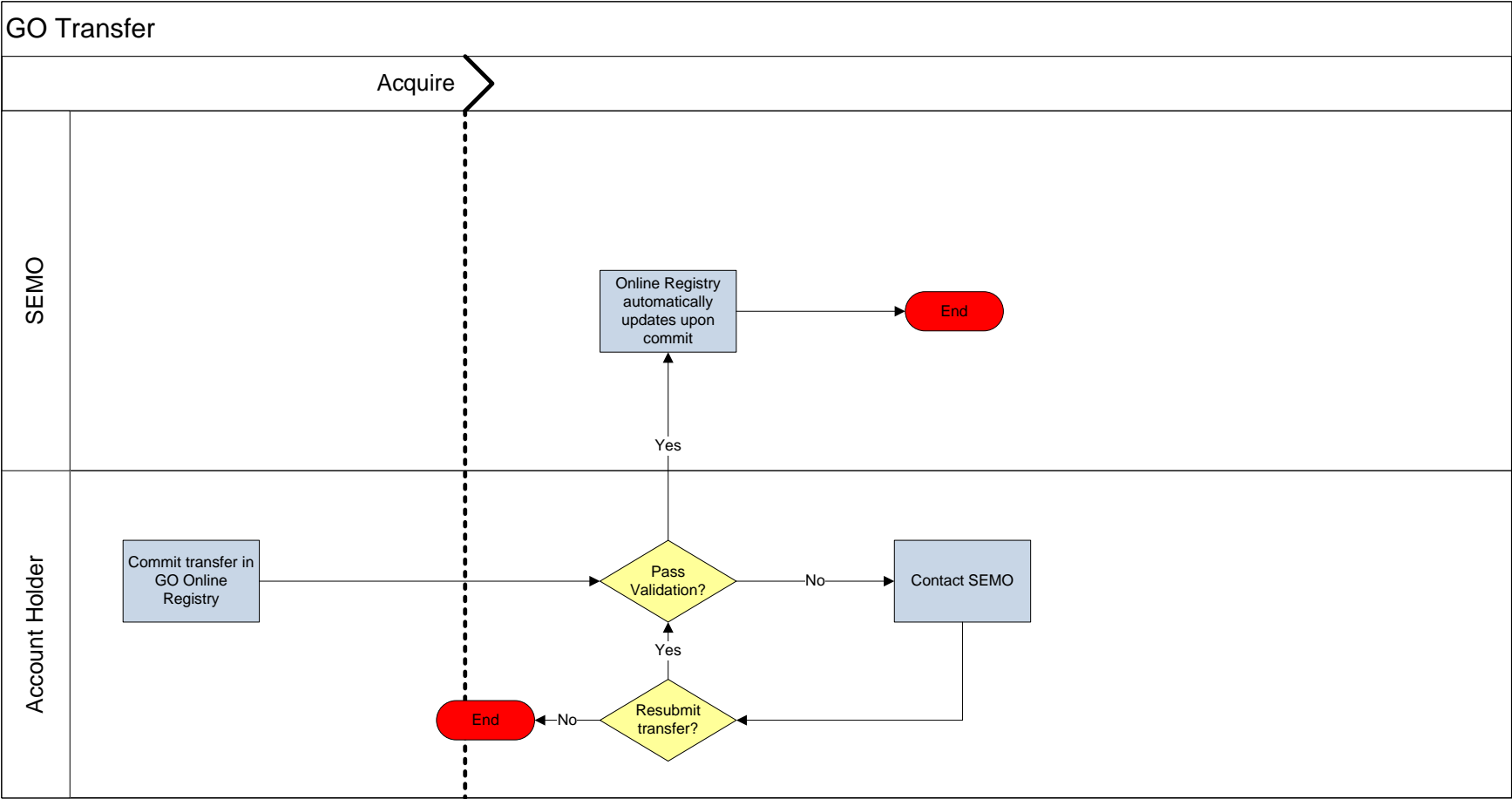


Fig. 8 GO Transfer Process (within Ireland)

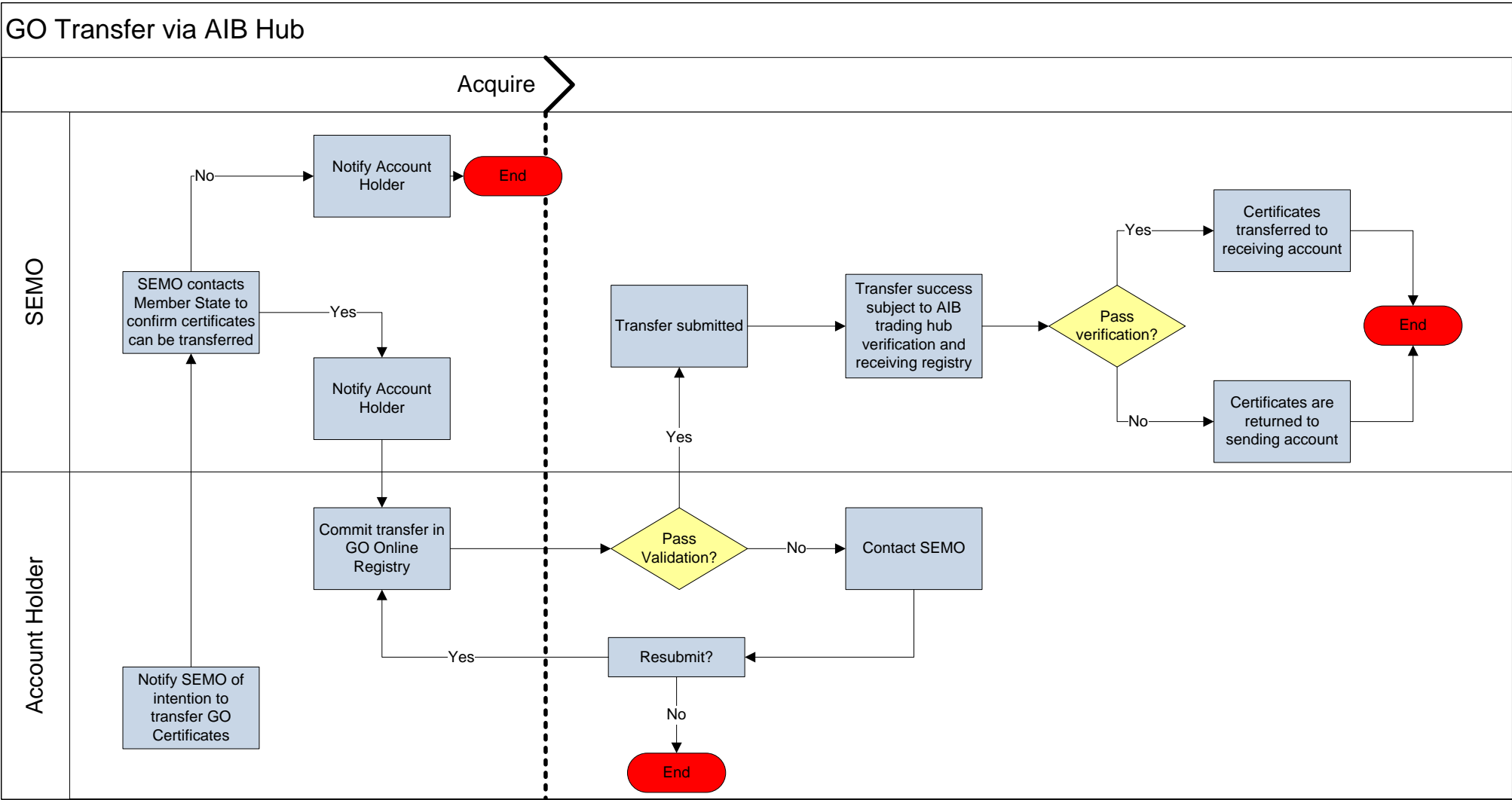


Fig. 9 GO Transfer Process (via AIB Hub)

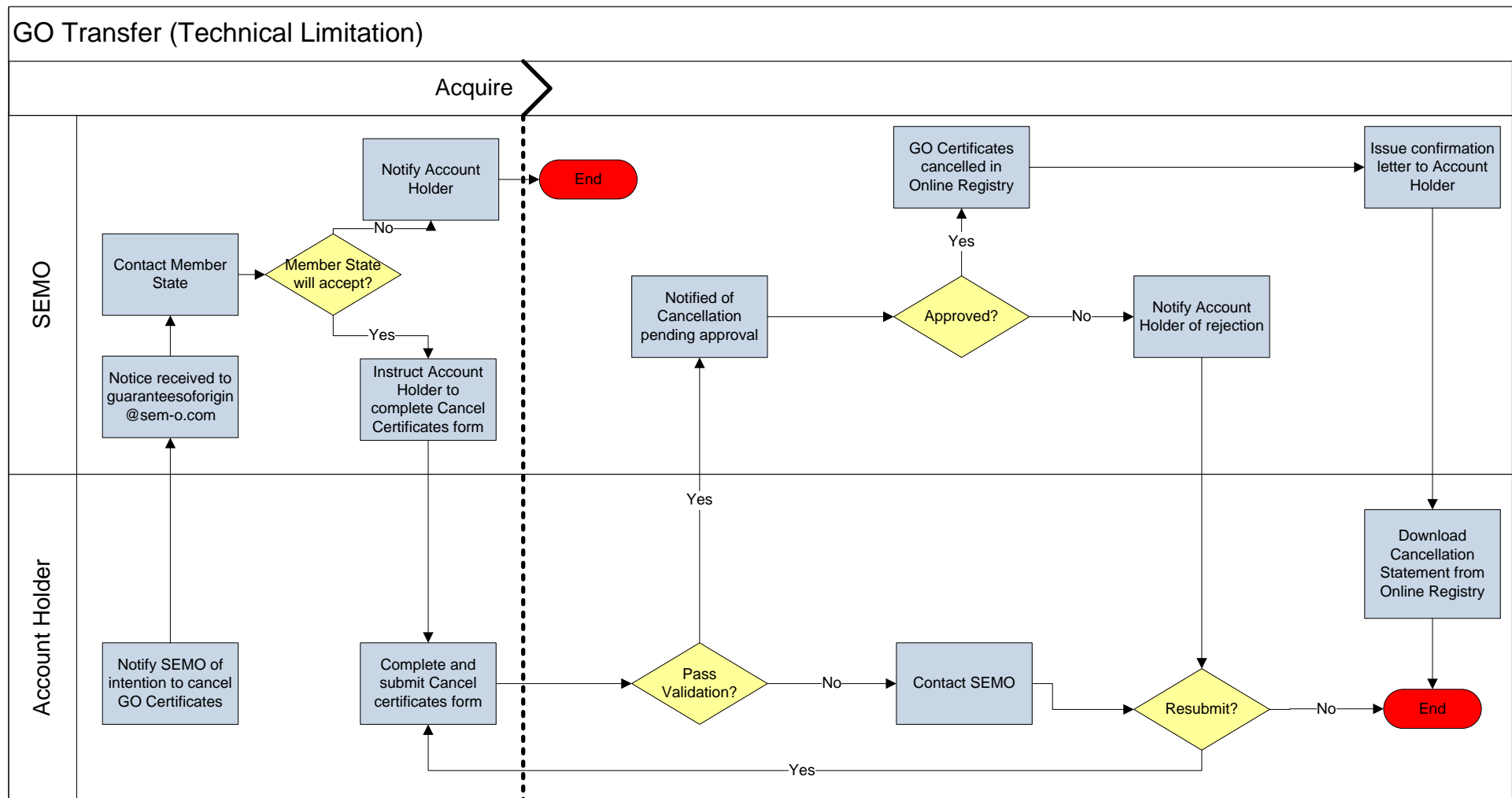


Fig 10. GO Transfer Process (Technical Limitation)

6.2 PROCESS STEPS

GO Transfer (within Ireland) Process Steps:

| Step | Step Name | Step Description | Timing |
|----------------|---------------------------|--|--------------------------|
| Request | | | |
| 1 | Commit transfer | The Account Holder (Account Holder Administrator or Root User) commits a transfer form on the GO Online Registry. | Ad Hoc |
| 2 | Validation | The Account Holder User, processing the transfer, receives a message on screen to indicate that the transfer has completed successfully. If the form fails validation, the Account Holder User will receive an error message on screen indicating the field(s) that has failed validation. | Immediately after step 1 |
| (Optional) | Contact SEMO | In the event that a transfer is unsuccessful, Account Holders can contact SEMO (guaranteesoforigin@sem-o.com) with a screenshot of the error message and a screenshot of the form that failed validation. | Immediately after step 2 |
| Record | | | |
| 3 | GO Online Registry update | On validation pass, the GO certificates are automatically transferred to the selected account. The sending Account Holder can use the Search Transactions report function in the GO Online Registry to view the status of the transaction and the transaction status will show as completed. The receiving Account Holder will be notified via an alert in the GO Online Registry. Alerts are visible to Account Holder Users upon log in to the GO Online Registry. Account Holder Users subscribed to the 'GO' alerts will receive these alerts via email. | Immediately after step 2 |

GO Transfer (to domain within CMO.Grexel) Process Steps:

| Step | Step Name | Step Description | Timing |
|----------------|---------------------------|---|---------------------------|
| Request | | | |
| 1 | Commit transfer | The Account Holder (Account Holder Administrator or Root User) selects a domain within CMO.Grexel from the domain drop down list and an Account Holder in that domain. The Account Holder Administrator or Root User commits a transfer form on the GO Online Registry. | Ad Hoc |
| 2 | Validation | The GO Account Holder User processing the transfer receives a message on screen to indicate that the transfer has completed successfully. If the form fails validation, the Account Holder User will receive an error message on screen indicating the field(s) that has failed validation. | Immediately after step 1 |
| (Optional) | Contact SEMO | In the event that a form fails validation, Account Holders can contact SEMO (guaranteesoforigin@semo.com) with a screenshot of the error message and a screenshot of the form that failed validation. | Immediately after step 2 |
| Record | | | |
| 3 | GO Online Registry update | On validation pass, the GO certificates are automatically transferred to the selected account. The sending Account Holder can use the Search Transactions report function in the Online Registry to view the status of the transaction and the transaction status will show as completed. | Within 1 hour from step 2 |
| (optional) | GO Online Registry update | On validation failure, there is no update to the GO Online Registry. The GO certificates do not leave the account of the sending Account Holder. | Immediately after step 2 |

GO Transfer (via AIB Hub) Process Steps:

| Step | Step Name | Step Description | Timing |
|----------------|------------------------------|---|--|
| Request | | | |
| 1 | Inform SEMO | The Account Holder notifies SEMO of their intention to transfer GO certificates to a domain that is a member of AIB but not within the CMO.Grexel registry. | Ad Hoc |
| 2 | SEMO contacts Member State | SEMO will contact the domain (Member State) to ensure that the Irish GO certificates can be transferred to the receiving registry through the AIB trading hub | Within 1 WD of step 1 |
| 3 | SEMO contacts Account Holder | SEMO will contact the Account Holder to indicate that the transfer can be initiated in the GO Online Registry | Within 1 WD of receipt of answer from step 2 |
| (optional) | SEMO contacts Account Holder | SEMO will contact the Account Holder to indicate that the transfer cannot be facilitated | Within 1 WD of receipt of answer from step 2 |

| Step | Step Name | Step Description | Timing |
|---------------|---|---|---------------------------|
| 4 | Commit transfer | The Account Holder (Account Holder Administrator or Root User) selects a domain within CMO.Grexel from the domain drop down list and an Account Holder in that domain. The Account Holder Administrator or Root User commits a transfer form on the GO Online Registry. | Within 1 WD of step 3 |
| 5 | Validation | The GO Account Holder User processing the transfer receives a message on screen to indicate that the transfer has completed successfully. If the form fails validation, the Account Holder User will receive an error message on screen indicating the field(s) that has failed validation. | Immediately after step 4 |
| (optional) | Contact SEMO | In the event that a transfer form fails validation, Account Holders can contact SEMO (guaranteesoforigin@sem-o.com) with a screenshot of the error message and the form that failed validation. | Immediately after step 5 |
| 6 | Verification process of AIB trading hub | The transfer is subject to the verification process of the AIB trading hub and the receiving registry.. | Immediately after step 4 |
| Record | | | |
| 7 | GO Online Registry update | On verification pass, the GO certificates will be transferred to the account of the receiving Account Holder and the transfer transaction status will be 'Completed'. The sending Account Holder can use the Search Transactions report function in the GO Online Registry to view the status of the transaction and the transaction status will show as 'Completed' | Within 1 hour from step 6 |
| (optional) | GO Online Registry update | On verification failure, the GO certificates will be returned to the account of the sending Account Holder. The sending Account Holder can use the Search Transactions report function in the Online Registry to view the status of the transaction and the transaction status will show as 'Corrected'. In the event that a transfer is unsuccessful, Account Holders can contact SEMO (guaranteesoforigin@sem-o.com) | Immediately after step 6 |

GO Transfer (Technical Limitation) Process Steps:

| Step | Step Name | Step Description | Timing |
|----------------|-------------|--|--------|
| Request | | | |
| 1 | Inform SEMO | The Account Holder notifies SEMO of their intent to cancel GO certificates for use in FMD in another domain (known as an ex-domain cancellation to facilitate transfer). | Ad Hoc |

| Step | Step Name | Step Description | Timing |
|---------------|---------------------------|--|--|
| 2 | Contact Member State | SEMO will contact the other domain to confirm that the ex-domain cancellation will be accepted | Within 1 WD of step 1 |
| 3 | Contact Account Holder | If the Member State will accept the ex-domain cancellation, SEMO will contact the Account Holder to indicate that the cancellation can be initiated in the GO Online Registry | Within 1 WD of receipt of answer from step 2 |
| (optional) | Contact Account Holder | If the Member State will not accept the ex-domain cancellation, SEMO will contact the Account Holder to indicate that the cancellation cannot be progressed | Within 1 WD of receipt of answer from step 2 |
| 4 | Commit Cancellation | The Account Holder Root User or Account Administrator completes and submits the Cancel certificates form | Within 1 WD of step 3 |
| 5 | Validation | The GO Account Holder User processing the cancel certificates form receives a message on screen to indicate that the cancellation has completed successfully. If the form fails validation, the Account Holder User will receive an error message on screen indicating the field(s) that has failed validation. | Immediately after step 4 |
| (Optional) | Contact SEMO | In the event of validation failure, the Account Holders can contact SEMO (guaranteesoforigin@sem-o.com) with a screenshot of the error message and a screenshot of the Cancel certificates form | Immediately after step 5 |
| 6 | Verification | SEMO will either approve or reject the cancellation. On rejection, the Account Holder User will be notified via an alert in the GO Online Registry, and by email to explain why the cancellation was rejected. On approval, the Account Holder User will be notified via an alert in the GO Online Registry. Alerts are visible to Account Holder Users upon log in to the GO Online Registry. | Within 1 WD of step 5 |
| Record | | | |
| 7 | GO Online Registry update | Once the cancellation statement is approved by SEMO, the GO certificates are cancelled in the GO Online Registry. SEMO will issue a confirmation letter to the Account Holder who will then be able to download a Cancellation Statement. The Account Holder can also use the Search Transactions report function in the GO Online Registry to view the status of the transaction and the transaction status will show as completed. | Immediately after step 6 |
| (optional) | GO Online Registry update | If the cancellation statement is rejected by SEMO, the GO certificates are not cancelled. The Account Holder can use the Search Transactions report function in the GO Online Registry to view the status of the transaction and the transaction status will show as completed. | Immediately after step 6 |

7 PROCESS REFERENCES

7.1 PROCESS RULE DOCUMENTS

The following table provides references to the documents that govern the design of this business process.

| Document | Title | Version | Section | Description |
|---------------------------|---|---------|---------------|--|
| S.I.483 of 2014 | European Communities (Renewable Energy) Regulations 2014 | N/A | | Transposes EU directive to Irish law and names SEMO as the issuing body for GOs |
| Decision Paper CER/11/824 | Supervisory Framework for Administration of Guarantees of Origin | N/A | | Establishes the Supervisory Framework for the administration of Guarantees of Origin. Sets out specific details of the GO scheme. |
| Directive 2009/28/EC | DIRECTIVE 2009/28/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC | N/A | Regulation 15 | EU directive which sets out rules for GOs. Has been transposed by S.I. 483 of 2014 and is common source of law between Ireland and other Member States |

7.2 RELATED DOCUMENTS

The following table provides a list of documents that are related to this business process.

| Document | Title | Version | Relationship | Description |
|-----------------------------|--|---------|-----------------|--|
| SEMO Business Process Model | SEMO Business Process Overview | 1.0 | Parent Document | Overview of the model used for the SEMO Business Process. Provides the context for where each business processes fits into SEMO. |
| Decision Paper CER/11/095 | Fuel-Mix Disclosure in the Single Electricity Market: Calculation Methodology Decision Paper | N/A | Related Process | Decision paper outlining the process for Fuel Mix Disclosure which is the sole purpose of GOs. |

8 ASSUMPTIONS



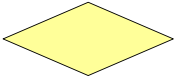
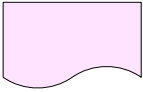
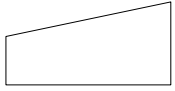

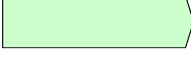


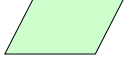

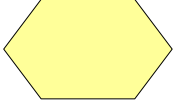
- GO Transfers can be submitted on an ad hoc basis
- GO Transfers to accounts within the Irish registry will be processed immediately
- GO Transfers via the AIB trading hub are subject to AIB trading hub verification
- GO Transfers to domains that are not in CMO.Grexel and are not connected to the AIB trading hub will be assessed on a case by case basis and may be processed as per section 4.5
- GO Transfers should be initiated before GO certificates expire. GO certificates expire 12 months from production end date.
- In the event that a transfer is unsuccessful, Account Holders can contact SEMO via the Contact Us form in the GO Online Registry

9 APPENDICES

9.1 GLOSSARY

| Abbreviation | Definition |
|--------------|--|
| DSO | Distribution System Operator |
| RA | Regulatory Authority |
| SEM | Single Electricity Market |
| T&SC | Trading and Settlement Code |
| TSO | Transmission System Operator |
| WD | Working Day (Working Day ends at 5 pm) |
| CER | Commission for Energy Regulation |
| S.I. | Statutory Instrument |
| GO | Guarantee of Origin |

9.2 PROCESS FLOWCHART KEY

| FLOWCHART KEY | |
|---|---|
|  | Process Trigger |
|  | Process step |
|  | Process decision / question |
|  | Document |
|  | Manual Input / Update |
|  | Reference to another process |
|  | Another business process to be implemented following current step (current step is a trigger for another process) |
|  | Process end |
|  | System |
|  | Data |
|  | System File |
|  | Preparation |

9.3 USER ROLES AND PERMISSIONS

CMO.grexel has various authorisation levels for Account Holder Users shown in Figure 5 below.

Specific responsibilities related to the use of CMO.grexel are identified and assigned to the predefined role(s) and the appropriate roles are assigned to the users so that a user can have one or several roles.

Users with the Commit Transaction role can submit GO transfers.

| | AH Account Administrator | AH Account Viewer | AH PD Admin | AH PD Editor | AH PD Viewer | AH Root | AH User Administrator |
|-------------------------------------|--------------------------|-------------------|-------------|--------------|--------------|---------|-----------------------|
| HOME | x | x | x | x | x | x | x |
| Alerts list* | x | | x | x | x | x | |
| Domain Announcement* | x | x | x | x | x | x | x |
| EECS-GO | x | x | | | | x | |
| Accounts List | x | x | | | | x | |
| Account Statement | x | x | | | | x | |
| Search Certificates | x | x | | | | x | |
| Search Transactions | x | x | | | | x | |
| Initiate Transactions | x | x | | | | x | |
| Commit Transactions | x | | | | | x | |
| Transfer Approval | x | | | | | x | |
| PD Transaction Summary | x | x | | | | x | |
| REPORTS | x | x | x | x | x | x | x |
| Activity Log | x | x | x | x | x | x | x |
| Cancellation Statements* | x | x | x | x | x | x | x |
| Issuing Statistics | x | x | x | x | x | x | x |
| USERS | | | | | | x | x |
| Search User | | | | | | x | x |
| Create User | | | | | | x | x |
| Grant Permissions to External Users | | | | | | x | x |
| Subscribe to Alerts* | x | x | x | x | x | x | x |
| PLANTS* | | x | x | x | x | x | |
| View PD details | | x | x | x | x | x | |
| Change Issuing Account | | x | | | | x | |
| Initiate PD registration* | | x | x | | | x | |
| Confirm PD registration* | | x | | | | x | |
| Search Meter Readings* | | x | | | | x | |
| Add Meter Readings* | | x | | | | x | |
| Make Declarations* | | x | x | | | x | |
| License Expiration Date | | x | x | x | | x | |
| MY PAGE | | | | | | x | |
| Manage My Organization | | | | | | x | |
| SUPPORT | x | x | x | x | x | x | x |
| User Manuals | x | x | x | x | x | x | x |
| Contact Us* | x | x | x | x | x | x | x |

Fig. 11 User Roles and Permissions (taken from the Grexel Account Holder User Manual)