



TIGRsSM
Standard & Procedures
March 2017

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1 Introduction

The TIGRs RegistrySM (the **Registry**) collects and tracks information regarding renewable energy generation originating within supported countries. The Registry is designed to provide a policy-neutral, market-driven, electronic system for participants in renewable energy markets. By creating a reliable process to evidence verification, issuance and Retirement of TIGRsSM – Tradable Instruments for Global Renewables – the Registry brings increased levels of integrity and trust to purchasers, sellers and regulators in the market.

The Administrator will issue one electronic TIGR for each MWh of renewable energy that is generated by registered Assets. The Registry will track and display the attributes, certifications and program eligibilities associated with each TIGR, as established by documentation and/or third-party verification during the Asset registration process. Assets can be registered in the Registry based on ownership of the Asset or, if authorized, based on acting as the Responsible Party for the Asset.

Any party, such as generators, traders, marketers, non-profits or retail aggregators, wishing to have TIGRs issued, held, transferred, or Retired must establish an Account in the Registry to do so. All Account Holders must agree to follow the rules and operating standard described in this document and in the Registry Terms of Use.

All Registry Accounts use two types of Sub-accounts to manage TIGRs: Active Sub-accounts and Retirement Sub-accounts. Active Sub-accounts are used for holding and transferring TIGRs. Retirement Sub-accounts are used for Retiring TIGRs from circulation. Once Retired, TIGRs can no longer be transferred between Account Holders or within an Account.

TIGRs are initially deposited into an Active Sub-account associated with an Asset. Account Holders can then transfer TIGRs to other Sub-accounts and to the Accounts of other Account Holders.

Each TIGR issued will indicate if it is eligible for any compliance and/or voluntary programs. Additional eligibilities may be added from time-to-time. Country-specific appendices will also be added from time-to-time as the Registry is introduced in different markets.

The Registry will provide Account Holders and the public with reports on activity within the system. The public reports are accessible to anyone via the public page on the Registry website. These public reports are designed to ensure Registry transparency as to TIGRs issued and Retired as well as providing visibility to the TIGR attributes and program eligibilities.

2 User Registration

2.1 Establishing an Account

Participation in the Registry is voluntary. Any person or entity wanting to participate in the Registry must first establish an Account. Registrants will provide basic Account registration information, such as Account Holder name, address and contact information, to the Administrator through a secure web-page on the Registry website at <http://tigrs.apx.com> and agree to the Terms of Use. See Appendix A: Account Holder Registration Process for step-by-step instructions. The Administrator will review the Account application and may request more information before, in its sole discretion, approving or rejecting the application. An Account will remain active until terminated. Termination can be initiated by the Account Holder by notifying the Administrator. Accounts can also be terminated if an Account Holder fails to pay the Registry fees or is otherwise in default under the Terms of Use. The Terms of Use describe these issues, as well as additional important terms, and should be read and understood by anyone applying to be an Account Holder.

2.2 Account Password Reset

If an Account Holder forgets or loses the password for their Account, the Account Holder will click on “Forgot Password” and will be prompted to enter their login name and additional verifying information. Account Holders will then be prompted to answer the security question they created during their Account registration. Once submitted, a new password will be sent to the Account Manager’s email address.

3 Account Types

The Registry Account types are structured around the activities that will be performed in the Registry. There are seven types of Accounts in the Registry and the following table outlines the key functionality associated with each type.

-) Asset Owner Account
-) General Account
-) Retail Aggregator Account
-) Retirement Account
-) Qualified Reporting Entity/Third Party Verifier
-) Program Administrator Account
-) Registry Administrator Account

Account Types

<i>Registry Activities</i>	Asset Owner	General	Retail Aggregator	Retirement	Qualified Reporting Entity	Program Administrator
<i>Register Projects</i>	Yes	Yes	Yes	Yes	No	No
<i>Transfer TIGRs</i>	Yes	Yes	No	No	No	No
<i>Accept Incoming Transfers</i>	No	Yes	Yes	Yes (into a Retirement Sub-account)	No	No
<i>Hold Active TIGRs</i>	Yes	Yes	Yes	No	No	No
<i>Hold Active TIGRs on behalf of others</i>	No	Only if approved under the Aggregator Exception	Yes	No	No	No
<i>Retire TIGRs on own behalf</i>	Yes	Yes	Yes	Yes	No	No
<i>Retire TIGRs on behalf of others</i>	No	Only if approved under the Aggregator Exception	Yes	No	No	No
<i>Upload Production Data</i>	No, unless qualified under Sec. 7.1.8	No, unless qualified under Sec. 7.1.8	No, unless qualified under Sec. 7.1.8	No, unless qualified under Sec. 7.1.8	Yes	No
<i>Certify Projects to Voluntary /Compliance</i>	No	No	No	No	No	Yes

3.1 Asset Owner Account

This type of Account can register Renewable Energy Assets and have TIGRs issued to it for power produced by such Renewable Energy Assets. An Asset

Owner Account can hold, transfer (only outgoing transfers), withdraw and Retire TIGRs. An Asset Owner Account cannot receive transfers from other parties.

3.2 General Account

This Account type allows the Account Holder to register Renewable Energy Assets, have TIGRsSM issued to its Account, transfer TIGRs to counterparties, receive transfers of TIGRs from counterparties and Retire TIGRs on its own behalf. If approved under the Aggregator Exception, a General Account Holder can also Retire TIGRs on behalf of Beneficial Owners. This Account type is recommended for organizations that buy and sell TIGRs and organizations that develop projects and buy TIGRs.

3.3 Retail Aggregator Account

This Account type allows the Account Holder to receive transfers of TIGRs from counterparties and Retire these on behalf of third parties. They can also register and maintain Renewable Energy Assets and have TIGRs issued in their Account. In order to open this Account type, the applicant must be approved for the Aggregator Exception. Any TIGRs transferred to the Account have to be Retired within a certain period after delivery to the Account, the maximum hold period being established by the Administrator. If the Account Holder does not Retire TIGRs within the prescribed timeline, the Administrator will do so. A Retail Aggregator Account Holder **cannot** transfer TIGRs to counterparties.

3.4 Retirement Account

This Account type allows the Account Holder to receive transfers of TIGRs from counterparties for immediate Retirement only. **Retirements can only be on behalf of the Account Holder.** A Retirement Account Holder **cannot** transfer TIGRs to counterparties or hold Active TIGRs in its Account. Retirement Accounts may be approved to register Assets for TIGR issuance and immediate retirement. This Account type is recommended for organizations that buy TIGRs for their own sustainability goals such as utilizing 100% renewable energy or to offset their Scope 2 emissions per the Greenhouse Gas Protocol.

3.5 Program Administrator Account

This type of Account is provided to administrators of compliance and voluntary programs that utilize the Registry and/or have eligibilities noted for certain TIGRs. It will allow Program Administrators to review eligibilities and compliance reports. Asset details will only be displayed in a Program Administrator Account if the Account Holder registering that Asset has listed it as eligible according to the specific program/certification.

3.6 Qualified Reporting Entity Account

An Account Holder with a QRE Account is assigned to a Renewable Energy Asset and is responsible for verifying generation information from that

Renewable Energy Asset. The Registry tracks the specific types of Renewable Energy Assets for which QREs are approved to provide services, ensuring that they are suitably qualified and accredited. The QRE Account cannot hold TIGRs.

3.7 Registry Administrator Account

This type of Account is provided to the Administrator and allows full access to all Registry functionalities.

4 Sub-Account Structure

Accounts that can hold TIGRs (General, Asset Owner and Retail Aggregator) are organized using two principal types of Sub-accounts, **Active** and **Retirement**. When an Account is created in the system, a single default Active Sub-account and a single default Retirement Sub-account are created automatically. Account Holders can re-name these default Sub-accounts and create as many additional Active and Retirement Sub-accounts as necessary to meet their individual needs (though Retirement Sub-accounts cannot be renamed if they hold TIGRs). Each Account and Sub-account will have a unique identification number, though for ease of reference, Account Holders may attach aliases to Sub-accounts (e.g., by customer or by product name).

When TIGRs are deposited into an Account by the Administrator, they are placed into the Active Sub-account designated at the time of Asset registration. When TIGRs are transferred into an Account, the recipient Account Holder will identify the Active Sub-account into which they will be deposited. Each Account Holder will be able to view a listing of TIGRs held in each Sub-account and their attributes (e.g., documents, eligible program certifications and origination details).

With the exception of Group Retirement Sub-accounts, described in Section 4.5 below, Account Holders cannot hold TIGRs on behalf of any other party. An Account Holder must have full legal title of and all Beneficial Ownership Rights in the TIGRs held in its Accounts.

4.1 Deposits to Active Sub-Accounts

There are three ways that TIGRs are deposited in an Active Sub-account.

- (a) Within an Account, TIGRs can be transferred from one Active Sub-account to another.
- (b) An Account Holder can accept a transfer of TIGRs from another Account Holder.
- (c) TIGRs generated by an Asset and deposited by the Administrator.

4.2 Transfers from Active Sub-Accounts

There are two ways to withdraw or remove TIGRs from Active Sub-accounts:

- (a) Transfer the TIGRs to the Account of another Account Holder.

- (b) Transfer the TIGRs to another of the Account Holder's own Sub-accounts.

4.3 Retirement Sub-Accounts

A Retirement Sub-account is used as a repository for TIGRsSM that the Account Holder wants to designate as Retired. There are three ways that TIGRs are deposited in a Retirement Sub-account:

- (a) For Asset Owner, General and Retail Aggregator Accounts, within their Account, TIGRs can be transferred from an Active Sub-account to a Retirement Sub-account.
- (b) For Retirement Accounts, they can accept a transfer of TIGRs from another Account Holder directly into a Retirement Sub-account.
- (c) For Asset Owner, General and Retail Purchaser Accounts, a standing order transfer can be set up by the Account Holder to automatically deposit TIGRs into a Retirement Sub-account.

Retirement can only be initiated by an Account Holder in respect of the TIGRs in its Account. The Administrator is not responsible for the Retirement of TIGRs by Account Holders, regardless of whether it relates to voluntary or compliance-related retirement deadlines or otherwise.

An Account Holder choosing to Retire a TIGR or block of TIGRs will use the transfer screen to identify the quantity of TIGRs to Retire and the reason for Retirement (an optional field), as well as select the Retirement Sub-account into which the TIGRs will be deposited. The Retirement Sub-account will show the serial numbers of the TIGRs Retired, the date of Retirement and the reason for Retirement (if provided). In addition, there will be a mechanism to view the Asset characteristics/certificate fields and documents associated with the Retired TIGRs. *Once TIGRs are Retired, they cannot be moved or transferred out of the Retirement Sub-account to any other Account or Account Holder.*

The Registry's system validations ensure that TIGRs deposited into a Retirement Sub-account are no longer transferable to another party or another Sub-account. System reports allow Account Holders to show evidence of the Retirement to Program Administrators or the public.

4.4 Managing Errors to Retirement

An Account Holder has two methods for recourse if an error has occurred in Retirement.

1. If reported immediately to the Administrator, the Administrator may reverse the Retirement
2. If reported anytime thereafter to the Administrator, the Administrator will need to confirm with any participating certification program or Beneficial Owner (for named Retirements) that the Retirement can be undone.

4.5 Group Retirement Sub-Accounts

In order to provide full transparency to markets and regulators, as well as maintaining the integrity of the Registry's ownership records, as a general matter Account Holders cannot hold Active TIGRsSM on behalf of any other party. Holders of General and Retail Aggregator Accounts wishing to Retire TIGRs on behalf of others may apply for the Aggregator Retirement Exception. If approved by the Administrator, holders of such Accounts may Retire TIGRs on behalf of Beneficial Owners for whom they are authorized to act.*

There are two types of Group Retirement Sub-accounts, a **Corporate Retirement Sub-account** and a **Retail Retirement Sub-account**. Each Corporate Retirement Sub-account is intended for Retirements on behalf of a single, large-scale Beneficial Owner. Each Retail Retirement Sub-account is intended to aggregate Retirements carried out on behalf of smaller Beneficial Owners.

The establishment and use of a Group Retirement Sub-Account are subject to the following provisions:

- J All legal title to and Beneficial Ownership Rights in any TIGR Retired in a Group Retirement Sub-account must be held by one or more Beneficial Owners that have authorized (i) the Retirement of the TIGR and (ii) the disclosure to the Administrator of information relating to such Beneficial Owner(s) and such TIGR.
- J Only TIGRs that are being Retired on behalf of a Beneficial Owner can be put into a Group Retirement Sub-account.
- J The Administrator will audit the Group Retirement Sub-Accounts from time to time, and at a minimum, annually. Account Holder must, upon request, submit supporting documentation related to the ownership of all Retired TIGRs on behalf of Beneficial Owners. Supporting documentation could include contracts and outreach to Beneficial Owners.
- J No Account Holder holding one or more Group Retirement Sub-accounts may Retire more than 499,999 TIGRs on behalf of any one Beneficial Owner during a calendar year. Any Beneficial Owner that is Retiring 500,000 or more TIGRs during a calendar year must have their own Account.[†]
- J Beneficial Owners on behalf of which an Account Holder Retires or expects to Retire 1,000 or more TIGRs during a calendar year must be assigned their own Corporate Retirement Sub-account.

* Applicants for a Retail Aggregator Account must qualify for the Aggregator Retirement Exception at the time of Account opening.

[†] Note that in such a situation, an Account Holder can designate another party to manage the Account on their behalf by submitting a Declaration of Agency to the Administrator.

- J To establish a Corporate Retirement Sub-Account, the Account Holder shall provide the following information with respect to that Account's Beneficial Owner:
 - 1) Name;
 - 2) DUNS, Tax ID or other identifying number;
 - 3) Address, including country;
 - 4) Web site URL;
 - 5) Contact Name;
 - 6) Contact Email; and
 - 7) Contact Telephone.
- J For Retirements in a Corporate Retirement Sub-account, the Account Holder shall report, concurrently with each Retirement, the following information:
 - 1) Reporting year for the Retirement; and
 - 2) the reason for such Retirement of TIGRsSM.
- J For Retirements in a Retail Retirement Sub-account, the Account Holder shall report, concurrently with each Retirement, the following information:
 - 1) Reporting year for the Retirement; and
 - 2) the reason for such Retirement of TIGRs.

4.6 Transfers Between Accounts

General and Asset Owner Account Holders may transfer Active TIGRs to other Account Holders at any time. TIGRs being transferred will be specified by their serial numbers. The transferring Account Holder will select the recipient from a pull-down list of Account Holders. After the transfer has been initiated, the TIGRs that are pending transfer will be marked as "transfer pending" in the Account Holder's Outbox. This will have the effect of "freezing" the TIGRs so that they cannot be moved to another Sub-account or to another Account Holder (though the transfer can still be cancelled, as discussed in the next paragraph).

After the transfer has been initiated, the system will send an electronic notification of the transfer request to the proposed receiving Account Holder. The transfer recipient can review the TIGR transfer details from the Account Holder's Outbox and must confirm or reject the transfer within fourteen (14) calendar days of when it was requested by the transferor. If confirmed, the transfer recipient must designate the Sub-account into which the TIGRs are to be delivered. As soon as the recipient has confirmed or rejected the transfer, the Registry will send an electronic notification to the transferor indicating the action taken. The transferor may cancel any transfer before such transfer has been confirmed by the recipient by withdrawing the transfer from the Account Holder's Outbox in the

Registry. If the transfer is withdrawn, the Registry will notify the previously intended recipient of the action.

5 Access to Accounts and Confidentiality

5.1 Account Access

An Account Manager is established as part of the Account registration process. The individual listed in the initial Account application will be considered the Account Manager and have the ability to establish and manage additional logins and login privileges for Users from his or her organization. The Account Manager will have full access to the organization's Account. Login permissions can be designated to allow view-only access to information or to allow activities such as performing transfers and submitting or updating information. Such privileges can also be further attached to specific Sub-accounts or Assets. This provides Account Holders with significant flexibility when assigning logins. Login setup can be done during the Account registration process or at any time the Account Manager wishes to add additional Users to the Account. The Account Manager will supply contact information for each User as well as designate the login name and password.

NOTE: The Terms of Use shall apply to any person who receives access to an Account from an Account Holder or Account Manager.

Once a login is established, the Registry will send an email with the login name to the login contact specified by the Account Manager. The Account Manager is required to separately communicate the password. Upon logging into the Registry for the first time, the new User will be prompted by the Registry to change his or her password. The new User will then be able to perform the functions or view the information per the permissions granted by the Account Manager. The Account Manager or the Administrator may at any time remove or add permissions to a login by using the Account administration screens.

The My Event Log report tracks and displays all actions performed within the Account by login name and timestamp. Account Managers will have access to the My Event Log report for their Account(s).

5.2 Levels of Account Access

When an Account Manager creates an additional User, the Account Manager assigns one of two levels of access-specific rights:

5.2.1 Account Holder – Supervisor

The User will be able to register Assets, manage TIGRs and create additional users, if necessary, as allowed by the Account type. The Account Manager can also give the User a subset of these privileges if needed.

5.2.2 Account Holder – View Only

This provides the User with limited view rights, with no ability to make changes to the Account. The Account Manager identifies the specific Sub-accounts and TIGRs that the User will be able to access and view.

5.3 Confidentiality

As stated in the Privacy Policy and the Terms of Use, certain Account information will be held confidential. Account information will only be used and released in aggregate through the public reporting process.

6 Asset Registration

Within the Registry and all related Registry documents, the term “Asset” is used to refer to (1) a Renewable Energy Asset and (2) an Aggregated Asset. An Asset is registered by an Account Holder by entering Static Data into the Registry describing the attributes of the Asset, subject to the review and approval by the Administrator. Assets that are jointly owned must have a single party, privately appointed among the owners, to act as the Account Holder. Once an Asset is approved, dynamic data is entered to identify monthly renewable energy generation for which TIGRs are to be issued. Step-by-step instructions for registering an Asset can be found in Appendix B.

Note that registration with the Registry does not imply or confer acceptance into or eligibility for any voluntary certification program or any compliance program.

Any Asset not approved within the Registry within a year from the time such Asset is listed therein shall be deactivated in the Registry, unless a grace period of up to three (3) months is requested by Account Holder and is granted by Administrator. Deactivation does not preclude Account Holder from registering the Asset with the Registry at a later date, but until such time as the Asset is registered, the Asset will no longer be viewable in the Registry.

6.1 Registering a Renewable Energy Asset

To ensure that double-counting does not occur, Renewable Energy Assets being registered in the Registry must have 100% of their output tracked by the Registry. If the Renewable Energy Asset or the Generating Unit underlying the Renewable Energy Asset was registered in another tracking system at any time, the Administrator should be notified of this during the registration process and the Account Holder should be prepared to provide documentation to prove removal from the previous tracking system.

To register a Renewable Energy Asset and its underlying Generating Units, the owner or the Responsible Party must:

-) Have an approved Account;*

* The Responsible Party is an entity to whom the owner of a proposed Renewable Energy Asset has given Registration Rights, as described in detail in Section 6.10.

-) Submit a completed on-line registration form containing information related to the characteristics of each Generating Unit;
-) Submit proof of title and/or additional documentation proving the Account Holder is either the owner of the Generating Unit(s) or has the owner's permission to act as the Responsible Party and register the Generating Unit(s) in the Registry in order to receive TIGRs; and
-) Pay any applicable registration fee.

The Administrator will review the submitted documentation and may require additional documentation to be submitted before a Generating Unit is accepted as an Asset. The Administrator will provide country specific registration checklists to prove the project meets the validation checks.

6.2 Multi-Fuel Assets

A "Multi-Fuel Asset" is one that is capable of producing energy using more than one Fuel Type, excluding fuels used for start-up (which in any case cannot exceed 1% of the fuel used annually on a total heat input basis). Such facilities must register with the Registry as a Multi-Fuel Asset. If the relative quantities of electricity production from each fuel cannot be measured or calculated, and verified, the facility is not eligible to register in the Registry.

For Multi-Fuel Assets, the owner or Responsible Party is required to indicate the percentage of electricity output coming from each Fuel Type for each period of generation reported. The Registry system will use total electricity output and this percentage to issue fuel-specific TIGRs for the electricity output associated with renewable generation. Account Holders with Multi-Fuel Assets may be asked by the Administrator to produce documentation supporting the indicated electricity output by Fuel Type. Supporting documentation could include third-party verification reports.

6.3 Small Generator Reporting & Aggregation

A group of small Generating Units that are not metered together and do not share the same location but that are located within the same geographic region and otherwise share the same Essential Generating Characteristics can be registered as an Aggregated Asset in the Registry under the following conditions:

-) The nameplate capacity of each Generating Unit is less than 250KW;
-) The Generating Units being aggregated are located in the same geographic region (as determined by the Administrator);
-) The Generating Units being aggregated utilize the same Technology/Fuel Type. More specifically all generators must utilize the same child Technology/Fuel Type within a given parent

* As previously noted in Section 3, Project, General, Retirement and Retail Aggregator Accounts can register Renewable Energy Assets.

Technology/Fuel Type, e.g., all generators within an aggregation shall be Biogas – Animal Waste generators and NOT Biogas – Animal Waste AND Biogas – Liquid Biofuels; and

-) The Generating Units being aggregated have the same set of TIGRs program eligibilities

If the Generating Units being aggregated became operational in different years, the Aggregated Project will be assigned the oldest operational year.

When registering several Generating Units into one Asset (Aggregated Project flag set to “yes”), the Administrator will:

- (a) Collect project-level information that is shared across all Generating Units; and
- (b) Collect Generating Unit-level registration information for each Generating Unit aggregated in the Aggregated Project

Please refer to Appendix C (Essential Generation Characteristics for Aggregate Metering) for additional details.

6.4 Additional Requirements for Projects Moving from other Registries

Based on the standard controls APX has in place to ensure against double-counting and our rigorous review for projects, the Administrator will require the following process for projects moving from a different registry applying for approval on the Registry to issue TIGRs. This applies to all registry tracking systems.

An Asset must be delisted from a previous registry before the Administrator can complete the validation process resulting in a TIGR Asset. The information that must be provided in order to commence the validation process will include:

- a) The name of the registry where Asset has been previously registered;
- b) Asset ID from the previous registry;
- c) Date removed/delisted from the previous registry;
- d) Evidence of all vintages issued on the previous registry (Upload Registry Report);* and
- e) Previously generated validation, monitoring and verification reports issued within the last two years that provide documentation suitable to pass the Asset validation approval by the Administrator.

The Administrator will confirm all data submitted with any publicly available information. If all details cannot be confirmed publicly, the Administrator will

* If only part of the Verification report was issued under a different registry, the Administrator will accept a letter from the administrator of the prior registry acknowledging the vintages issued and those that will not be issued thereon.

require a letter from the administrator of the prior registry for proper verification of all details before approving the registration in the Registry.

In all cases, the Administrator will communicate with the administrator of the prior registry providing awareness of the proposed move to the Registry with a last date of issuance.

No Asset being transferred can be subject to any agreement requiring the sale or transfer of Environmental Attributes by delivery of any instrument representing such Environmental Attributes other than a TIGR.

TIGRs can be issued for vintages not more than 12 months prior to the date of Asset registration and only if the vintages have not led to issuance of renewable energy credit, carbon offset or similar instruments in the previous registry. All new vintages are issued through the standard TIGR issuance process.

6.5 Verification of Static Data Submitted During Asset Registration

Upon completion of the Asset registration process, the Administrator will review attestations, contracts, grid connection forms and other data sources as required for each country to verify the information provided to the Registry by the Account Holder.

In the event data submitted is found to be incorrect or if there is a discrepancy between the information submitted during the on-line registration process and the materials provided to verify the information, the Administrator will notify the Account Holder that the information could not be positively verified. The Account Holder will then be able to revise and resubmit the information. No Asset will be accepted unless and until the Administrator is satisfied that the information provided meets the Registry's standards for accuracy.

In some cases, the Administrator may require the Account Holder to contract with a third-party verifier to perform a site visit to further verify information as needed, with the cost borne by the Account Holder.

6.6 Updating Static Data

After the initial Asset registration in the Registry, Account Holders shall notify the Administrator of any of the following events, each of which have the effect of changing Static Data tracked by the system:

- (a) A change in Fuel Type for a Generating Unit, and the date on which the change occurred, within thirty (30) calendar days from when the change is implemented.
- (b) A change in Asset ownership, and the date on which the change occurred, within thirty (30) calendar days after the change occurs. A change in ownership must be confirmed in a writing signed by both the prior and new owners of the Asset and provided to the Administrator. Neither the Registry nor the Administrator will be liable for depositing TIGRs into an Account that no longer represents an Asset if the incorrect deposit occurs

as a result of a lack of notification by the prior and new owners of the Asset.

- (c) A change to Asset-eligibility for any programs or certification tracked by the Registry. This must be communicated by the Account Holder before any TIGRs affected by the change are issued or within thirty (30) calendar days after the change occurs.
- (d) A change to any of the Essential Generating Characteristics of the Asset.
- (e) Withdrawal of the Asset from the Registry.

6.7 Misrepresentation of Static Information:

Account Holders can be removed from the Registry for cause, which includes without limitation willful misrepresentation of Static Data. The Registry reserves the right to withhold issuing TIGRs, to freeze an Account associated with a particular Asset, or to withhold participation in the Registry for Assets that have misrepresented Static Data.

6.8 Terminating an Asset's Participation

If an Asset's owner or Responsible Party wants to remove an Asset from the Registry, they can do so by notifying the Administrator and specifying the following:

- (a) The date the Asset should be/will be removed from the Registry;^{*}
- (b) The Sub-account to which TIGRs have been deposited (if the usual Account for deposit is being closed as well).

The Registry will issue TIGRs for an Asset up to the date of Asset termination as instructed by the Asset's owner or Responsible Party. No TIGRs will be issued for adjustments that occur after the termination date.

If the Administrator has cause to suspend an Asset's participation in the Registry, no TIGRs will be created while such Asset is under suspension.

6.9 Changing the Account with Which an Asset is Associated

The owner or Responsible Party of an Asset can change the Account with which it is associated by notifying the Administrator and providing the information requested, including, but not limited to:

- (a) The new Account number with which the Asset will be associated;
- (b) The date the change will be effective; and
- (c) Any documentation required for legal purposes or to meet certification requirements.

TIGRs from the Asset that were created up to the day the Account change takes effect will remain in, or be deposited into, the Account that the Asset was

^{*} This is the same as the final date of generation for which TIGRs are to be issued.

associated with at the time the generation occurred. For example, if an Asset's owner changes the Account with which the Asset is associated from Account A to Account B, and the change is effective on March 1, then the TIGRs relating to generation that occurred prior to March 1 will be deposited into Account A (even though the date of deposit will likely be after March 1, given the expected time delay between actual generation and TIGR issuance).

When changing the Account with which an Asset is associated, there cannot be any time where the Asset is not associated with an Account. If there is such a lapse, this will be treated as a de-listing and re-registration of the Asset instead of a change of Account, and the relevant fees will be assessed.

6.10 Responsible Party Designation; Registration Rights

An Asset's owner may assign a Responsible Party to an Account Holder for the purposes of allowing that party, the "Responsible Party", the ability to control and manage the disposition of any TIGRs resulting from the operation of the Asset. This assignment will give the designated Account Holder *full and sole* management and authority over the transactions and activities related to the Asset within the Registry. For the purposes of the Registry, this Account Holder will be considered the Responsible Party for that Asset.

The Registry will require both parties to confirm an assignment of Registration Rights, the date the assignment will be effective and the date the assignment will be terminated, if there is one.

6.10.1 Termination of Registration Rights

Registration Rights may be terminated by either the Asset's owner or Responsible Party. Termination of Registration Rights has the effect of deregistering the Asset from the Registry. If the Registration Rights assignment has been terminated, no new TIGRs will be issued from that Asset until it is registered again.

7 Dynamic Data

7.1 Generation Data Requirements for Generating Units

TIGRs are issued for any renewable energy production that otherwise would have been served by a non-renewable resource if not for the generator. The Registry will not create TIGRs for generation supplying station service (also known as parasitic load). Data used to issue TIGRs must be derived from a Revenue-Quality Meter and communicated to the Administrator by a Qualified Reporting Entity unless the generation qualifies to be self-reported under requirements in Section 7.1.8.

7.1.1 Revenue Metering Standards

All Generating Units participating in the Registry must use a Revenue-Quality Meter. For Generating Units that are interconnected to a utility or Control Area

Operator, a “Revenue-Quality Meter” is any meter used by the reporting Control Area Operator for settlements/invoicing. The data must be electronically collected by a meter data acquisition system, such as an MV-90 system, or pulse accumulator readings collected by the Control Area’s energy management system, and verified through a Control Area checkout/energy accounting or settlements process. The preferred source for the data is a meter data acquisition system. If the Control Area does not have an electronic source for collecting revenue meter data, then manual meter reads will be accepted. Manual meter reads must be performed by a QRE.

For generators that do not go through a Control Area settlements process and that are not Customer-Sited Distributed Generation, the data must be from a Revenue-Quality Meter adjusted to reflect the energy delivered into the transmission grid at the high side of the transformer and communicated to the Administrator by a QRE if the Nameplate Capacity is 1 MW or more. For Customer-Sited Distributed Generation, the original data source for reporting total energy production must be from Revenue-Quality Metering at the AC output of an inverter, adjusted, if applicable, to reflect the energy delivered into either the transmission or distribution grid at the high side of the transformer. In the absence of a meter measuring production as described above (i.e., if there is no meter at the inverter), the original data source for reporting total energy production must be from Revenue-Quality Metering placed to measure only the positive generation flowing to the distribution system on at least an hourly basis, adjusted, if applicable, to reflect the energy delivered into either the transmission or distribution grid at the high side of the transformer. If the Customer-Sited Distributed Generation uses all of the energy produced on site, then no adjustment for transformer losses is needed.

7.1.2 Measurement of Generation and Adjustments

The output from each Asset registered in the Registry will be measured at the point of interconnection to the transmission or distribution company’s facility, or adjusted to reflect the energy delivered into either the transmission or distribution grid at the high side of the transformer. Losses occurring on the bulk transmission or distribution systems after the metering point are not reflected in the TIGRs created. The Registry will not create TIGRs for that portion of the generation that is used to supply station service. Generation data must be netted of station service supplied from the generator’s side of the point of interconnection.

If adjustments are needed, due to metering, reporting, error or any other reason, the Qualified Reporting Entity must report the adjustment as soon as possible to the Administrator. If TIGRs have not yet been created for the original generation amount to which the adjustment applies, the credit or debit will be posted to the Generation Activity Log, and will be reflected in the number of TIGRs created that month. If TIGRs have been created, the adjustment will be treated as a prior period adjustment described in Section 7.1.4 below.

7.1.3 Onsite Generation versus Grid delivered Generation

For wholesale generators also serving onsite loads, the Registry is capable of creating TIGRs for both the onsite load and grid-delivered generation output. Generators who can provide clearly distinguished meter data for both will utilize the Multi-Fuel Type to have TIGRs distinctly issued for both and marked as an attribute of the TIGRs.

7.1.4 Prior Period Adjustments

Prior period adjustments can be made by an Account Holder after the data is reported and used to issue TIGRs in the Registry. The Account Holder will access the Project Output Data Review screens to submit an adjustment to the Administrator. If accepted by the Administrator, the credit or debit to the generation volume reported in the current month will post to the Generation Activity Log. Consequently, the adjustment will be realized when TIGRs are next issued. If new TIGRs are created, the vintage of the TIGRs shall reflect the actual generation period. The Administrator will not accept adjustments for generation reported more than two years prior.

7.1.5 Notification of Adjustments

The Account Holder will be informed of all credit or debit adjustments as soon as the adjustment has been posted to the Generation Activity Log. Once the Registry informs the Account Holder of a need for adjustment, the Account Holder then has ninety (90) calendar days to dispute or accept the adjustment. If after ninety (90) days the Account Holder has failed to respond, the Administrator will automatically accept the adjustment.

7.1.6 Data Transmittal

Data files are to be electronically transmitted to the Registry using a secured protocol and a standard format specified by the Administrator. The data shall reflect, at a minimum, the month and year of the generation, monthly accumulated MWhs for each meter ID and the associated meter ID(s) for each resource. The owner of the Asset, as the owner of the metered data, or the Responsible Party, has the responsibility to direct the Control Area Operator or utility to release generation data to the Registry.

The data must be transmitted by a single entity, which must be either (1) a QRE or (2) a Self-Reporting Asset (See requirements in 7.1.8).

7.1.7 Requirements of Data Reporting Entities

The Registry will accept generation data from QREs and Self-Reporting Assets. The *TIGRs Registry Requirements for Qualified Reporting Entities* document describes the terms and conditions under which the QRE agrees to exchange information and conduct business with the Registry. This document identifies the protocols for collection of information such as meter IDs, data format, communication protocols and timing, and security requirements for data

collection. The document also outlines the necessary requirement to qualify as a QRE.

7.1.8 Special Requirements for Self-Reporting Assets Only

To qualify for self-reporting, the Asset must be under 1 MW nameplate capacity or receive approval due to special circumstances within a supported country. In such a case, a specific protocol for providing material such as metering records and certifications will be developed. A Self-Reporting Asset must enter actual cumulative meter readings measured in kWh or MWh and the date of the meter reading via the Self-Reporting Interface. Actual cumulative meter readings must be entered no less frequently than annually. Self-Reporting Assets that do not enter meter readings via the Self-Reporting Interface as required will receive a reminder notice from the Administrator at least annually. A Self-Reporting Asset must submit metering records to substantiate generation reporting.

7.1.9 Multi-Fuel Assets

For Multi-Fuel Assets, TIGRs will be created for the renewable Fuel Type(s) only.* Each TIGR issued for a Multi-Fuel Asset will reflect only one fuel source, with the total number of TIGRs issued for a Fuel Type being proportional to the overall output for that reporting period.

The Asset or its associated Account Holder must submit supporting documentation related to the derivation of the proportion of electric output per Fuel Type for each period for which the Asset or Account Holder is issued TIGRs. The Administrator will require copies of such calculations, and supporting documentation may be subject to audit by the Administrator, state regulators, QREs, certification organizations or their agents.

For purposes of creating TIGRs reflecting the fuel source mix of Multi-Fuel Asset, the proportion of TIGRs attributable to each Fuel Type shall be determined consistent with the following rules:

- (a) For biomass co-fired with fossil fuels or using fossil fuels for startup or supplemental firing: In each month, the TIGRs for each Fuel Type in such Multi-Fuel Asset will be created in proportion to the ratio of the net heat content of each fuel consumed to the net heat content of all fuel consumed in that month, adjusted to reflect differential heat rates for different fuels, if applicable.
- (b) Other: Multi-Fuel Assets not fitting the descriptions provided by certification organizations should request from the certification organization a decision on allocating output for each Fuel Type for their situation. Such a decision will set a precedent for similarly situated Assets. Any new methodology must be approved by the certification organization

* For example, a coal-fired generator that uses 1% of biomass co-firing can be considered a Multi-Fuel Asset and have biomass TIGRs issued in respect of that biomass-fired generation.

and presented to the Administrator prior to TIGRs being issued for that Asset.

In addition, upon registration, all Multi-Fuel Assets must submit to the Administrator a report prepared by an independent professional engineer containing documentation for measuring and verifying the quantities of each Fuel Type, the net heat content of each fuel source, and the heat rate, if applicable. More details on this requirement are found in Appendix D.

7.2 Generation Activity Log

Each Asset Owner, Retirement, General and Retail Aggregator Account registered in the Registry will have a Generation Activity Log associated with it. The Generation Activity Log is an electronic ledger where generation data is posted prior to TIGR creation. Each time data is received by the Registry for a particular Asset, the date and quantity of MWhs is posted to the Generation Activity Log. Adjustments received will likewise be posted. The status of each entry in the Generation Activity Log will be noted:

) **System Accepted:** Used for all data that has been reported to the Registry, has passed the Registry's data validity test and has been logged to the Generation Activity Log, but has not yet been accepted or disputed by the Account Holder.

) **Pending:** The Administrator is waiting for the resolution of a situation before TIGRs can be issued. For example, if the Administrator is waiting to receive a Fuel Type allocation from a Multi-Fuel Asset or some other update from an Account Holder.

) **Account Holder Accepted:** The Account Holder has accepted the posted generation, but the TIGRs have not yet been issued.

) **Admin Accepted:** The Administrator has accepted the posted generation, but the TIGRs have not yet been issued.

) **Account Holder Disputed:** The Account Holder has disputed the posted amount of generation.

) **Admin Disputed:** The Administrator has disputed the posted amount of generation.

) **TIGRs Issued:** TIGRs have been created.

The status of each entry in the Generation Activity Log will be changed consistent with the information received by the Administrator. TIGRs will be issued based on the total whole number of MWhs on the Generation Activity Log that are marked "Account Holder Accepted" or "Admin Accepted." Any fractional MWhs will be rolled forward until sufficient generation is accumulated for the creation of a TIGR. Each time an item is posted to the Generation Activity Log, the Account Holder will be notified electronically.

The Generation Activity Log will include the following entries:

- (a) Account Holder's Name;
- (b) Activity Date;
- (c) Registry Asset ID for associated data posted;
- (d) Activity description identifying Data Submitted, fractional Data remaining, TIGRs created, etc.;
- (e) Reporting Period start;
- (f) Reporting Period end;
- (g) MWh of generation reported to the Registry during the current month;
- (h) Fuel Type;
- (i) Status; and
- (j) Note (displaying serial numbers or data upload file names).

8 Creation of TIGRs

8.1 TIGR Creation

The Registry will issue one TIGR representing all of the Environmental Attributes for each MWh of renewable energy that is generated by an Asset. TIGRs are issued based on the number of whole MWhs listed in the Generation Activity Log for a given reporting period and, once created, no changes can be made to them. Each TIGR shall have a unique serial number containing embedded codes. The table below identifies the serial number format used in the Registry.

Registry Serial Number Identifiers

Identifier	Display Order	Range of Codes	Comments
Originating Registry	1	TIGR	Used to identify originating registry.
Unit type	2	TIGR = represents 1MWh from a Renewable Generating Unit.	Used to identify instrument type
Asset ID	3	1-999999	Unique ID assigned to each Asset record in the Registry.
Country	4	2-Letter Country Code	Abbreviation identifying the country in which the renewable energy generation occurred.
Subdivision	5	2-3-Letter Subdivision Code	Abbreviation identifying the more specific political subdivision, if any, in which the renewable energy generation occurred.
Vintage Month	5	01-12	The month in which the renewable energy generation occurred.

Identifier	Display Order	Range of Codes	Comments
Vintage Year	6	2015 as an example	The year in which the renewable energy generation occurred.
Batch Number	7	Numeric value assigned to each batch of TIGRs created, 1 to 99,999 per originating generator or project per vintage.	
Serial Block Start	8	Numeric values assigned by the Registry from 1 - 999,999,999.	A number to identify the first certificate in a block of TIGRs.
Serial Block End	9	Numeric values assigned by the Registry from 1 - 999,999,999.	A number to identify the last certificate in a block of TIGRs.

8.2 Process and Timeline for TIGR Creation

Historical generation data can be submitted for Assets for vintages up to one year prior to when the Asset was first registered in the Registry in accordance with the online date. Reporting of such historical data has to take place within three months of registering the Asset in the Registry. Reporting of generation data for vintages after the date when the Asset was registered in the Registry has to be completed within one year of when the generation took place.

Once generation data is received by the Administrator and a data validity check is performed by the Registry, it will post in the Account Holder's Generation Activity Log and the Registry will notify the Account Holder via email. The posting will be marked "System Accepted" on the Generation Activity Log. Once the data is accepted by the Account Holder, the generation posting will be marked "Account Holder Accepted." and TIGRs will be issued immediately. If the Account Holder takes no action, data in "System Accepted" status will result in TIGR issuance 14 days after the data was reported. The exception to this schedule is if the generation data is in 'TIGR Pending' status due to it failing data validation (see Section 9.1 below) or if Multi-Fuel allocations are required.

The Account Holder must notify the Administrator if it believes the generation recorded on the Generation Activity Log is inaccurate for any reason. The Account Holder may register a dispute any time after the generation is posted and will have 14 calendar days to do so. While the generation posting dispute is being resolved, the generation posting will be marked "Account Holder Disputed." If the Account Holder does not register a dispute with the Administrator, the TIGRs will be created in 14 days.

For Multi-Fuel Assets, TIGRs will not issue until the Account Holder both accepts the generation data and supplies supporting fuel allocation data. The Account Holder must submit to the Registry the proportion of energy output to be allocated to each Fuel Type. The Account Holder provides the Fuel Type allocation via the Generation Data Review screen located in the Account Holder's Asset Management Module. The fuel allocation information will remain available

in the Registry for audit purposes. Account Holders must retain for audit the work papers demonstrating how they determined the fuel allocation for each reporting period.

For Self-Reporting Generators, there are two ways to load data for TIGRs issuance. Data can be manually submitted to the Registry using the portal and as long as it passes validation checks, the data will be in “Account Holder Accepted” status and TIGRs will be issued the next day. If the data is batch-uploaded and passes validation checks, the data will be in “System Accepted” status. The Account Holder can accept the data and TIGRs would be issued the next day or taking no action would result in issuance in 14 days.

8.3 TIGR Creation for Accumulated Generation

Generation data from generators that have a Nameplate Capacity under 25kW and that are not reported to the Registry on a monthly basis may be accumulated over one or more months prior to submittal to the Registry for TIGR issuance. The vintage on the issued TIGR will be the last month and year of generation contributing to an accumulated MWh. TIGR creation for accumulated generation will occur on the same schedule as all other generation in the Registry and required to be within the same calendar year.

8.4 TIGR Issuance based on Retirements of Other Environmental Instruments

An Account Holder may request issuance of TIGRs for a vintage for which other environmental instruments were issued if the following requirements are met:

- a) The Asset has been registered and approved in the Registry;
- b) Evidence that the issued instruments have been retired with the reason “Retired to Issue TIGRs in the TIGRs Registry;”
- c) Verification report and other supporting documentation for the specific vintage is submitted to the Administrator; and
- d) Any instruments previously created as carbon offsets must utilize the verification report’s emission factor to convert back the reported verified MWhs of production to the quantity of TIGRs for issuance, rounding down in all instances.

8.5 TIGR Issuance for Parallel Registration

Parallel issuance may be allowed under certain tight restrictions. Parallel issuance is defined as an Asset being kept Active on another registry but for which the Account Holder requests an original issuance for TIGRS for a specific vintage which will never be issued in the other registry.*

No dual issuance for the same vintage period reported by the third-party verifier will be permitted. A vintage period is defined within the verification report

* This process is currently only available to projects listed on the APX VCS Registry.

developed for the Asset, where there can be one or more vintages within a given verification period. For Assets originating in a carbon standard, the verification reports will have a final assessment with a final calculated avoided emissions total for the vintage period(s) contained in the report. These vintage periods can be for a full year, six months or by month. For example, if the verification report spans a year and only has a yearly total of production (i.e., annual vintage), the entire period must be issued on a single registry. For assets utilizing a third party with monthly reporting (i.e., monthly vintage), each month is considered a vintage. Again, only entire vintages can be issued in one registry or another.

8.6 Data Fields Carried on Each TIGR

Each TIGR carries a list of data fields. These fields include those listed below and additional fields may be added in the future:

DATA FIELD	COMMENTS
Registry ID	Unique ID assigned to each Asset in the Registry.
Asset Type	Used to identify if the issuance is based on a Generating Unit.
Asset Name	Name of Asset.
Primary Facility Name	Name of facility.
TIGR Vintage	Vintage of Generation.
TIGR Serial Numbers	See details above in Section 8.1.
Quantity of TIGRs	Total TIGRs.
Meter Data From:	Begin Date of metering period.
Meter Data To:	End Date of metering period.
TIGR Creation Date:	Date certificates were issued in the Registry.
Asset Documents/Attestations: View	Any associated documents (e.g., metering records). These would be made available to any owners of associated TIGRs issued from the Asset.

STATIC ASSET DATA:	COMMENTS
Country	Country facility is located in
Subdivision	Political subdivision (if any) facility is located in
Power Grid Interconnection	Listed Power Grid to which site interconnected
Utility to which Facility is interconnected	Utility Interconnect
Commenced Operation Date	Date the facility commenced operation
Fuel Type/Energy Source	Fuel Type abbreviation
Nameplate Capacity	Nameplate Capacity of facility
Reporting Entity Type	QRE or Self-reporting
Reporting Entity Contact Company or Organization name	Name of QRE, if applicable
Repowered Indicator (Y/N)	Denotes whether facility is Repowered
Repowered Amount:	Denotes the portion, if applicable, of unit that is repowered
Repower date (required if Repowered Indicator = Y)	Date of repowering
ELIGIBILITY FOR VOLUNTARY PROGRAMS:	

9 Generation Data Errors and Correction

9.1 Generation Data Validity Check

All generation data received by the Registry will undergo an automatic data validity check to ensure that erroneous and technically infeasible data is not entered into the Registry. The data validity check will compare reported electricity production to an engineering estimate of maximum potential production, calculated as a function of technology type, associated maximum capacity factor, Nameplate Capacity, fuel (if relevant) and time period since the previous cumulative meter reading entered. If data entered exceeds an estimate of technically feasible generation, the Administrator will be notified and the generation will be posted to the “Generation Activity Log” report. The Administrator will contact the Account Holder if the generation data entered is infeasible.

9.2 Generation Data Errors Discovered After TIGR Issuance

Once a TIGR is created, no changes can be made to that TIGR. In the event that an error is discovered after TIGRs have been issued, the Administrator will take measures to rectify the problem depending on the nature and the egregiousness of the error. If the error is related to the number of TIGRs issued, the Registry Administrator will first attempt to rectify this by making an adjustment to the Generation Activity Log associated with the Asset. If the error is found in one of the fields on the TIGR, the Administrator will handle each situation on a case-by-case basis. Examples of actions that could be taken include, but are not limited to, notifying purchasers of the erroneous TIGRs, freezing the Account of the offending party, levying an administrative fine or banning participation in the Registry.

10 Reports

10.1 Public Reports

There are four public reports provided by the Registry:

-) **Participating Companies:** This report contains a listing of all Account Holders with some limited contact information.
-) **TIGRs Issued by Asset:** All Assets will have TIGR issuance details available to the public aggregated by year.
-) **Summary of TIGR Issuance:** This report lists the aggregate number of TIGRs issued in the Registry by Fuel Type, country and year.
-) **Listed Assets Report:** This report contains a listing of all Assets in the Registry with eligibility information.

Public reports are accessible to anyone via the Resources page on the Registry’s website. It is expected that additional public reports will be added to meet future needs of Account Holders and Program Administrators using the Registry. Public

reports are carefully designed to maintain the confidentiality of Account Holder data per the Terms of Use and the Privacy Policy.

10.2 Account Holder Reports

Account Holder reports for a specific Account will only be accessible to the Account Holder, Account Holder's designated Agents and the Administrator. Account Holders can view up-to-date data in these reports at any time. Current reports include:

- J **Forward Transfer:** A transfer of TIGRs arranged in advance to be effectuated on a specific future date.
- J **My Account Holder Registration History.** This report provides a list of all the changes to the Account Holder registration data.
- J **My Asset Registration History.** This report provides a list of all the Assets that have been registered in the Registry and includes the date of registration, the Registry ID and a link to the Asset registration screens.
- J **My TIGR Transfers.** This report provides a comprehensive list of TIGR transfers between Sub-accounts and with other Account Holders in the Registry.
- J **My Event Log.** This report lists all of the events that have taken place in the Account.
- J **My Generation Activity Log.** This report provides a summary of all TIGR data loaded into the Registry for all of Account Holder's Assets.
- J **My Generation Report.** This report provides a summary of all TIGRs created in the Registry. It is filtered by vintage year.
- J **My Sub-Accounts.** This provides a list of TIGRs held in the Account's Sub-accounts and allows the Account Holder to filter data by specific Active or Retirement Sub-accounts.
- J **Assets by Status.** This report provides a comprehensive list of an Account Holder's Assets, listing the Assets by status and summarizing data such as Fuel Type. This report also provides links to the transfer screen for each block of TIGRs.
- J **Program Administrator Access Selection.** This report allows the Account Holder to assign Account access to specific Program Administrators who may have to verify TIGR Retirement activity.
- J **Retirement Compliance Report.** The Retirement Compliance Report provides Account Holders the ability to view all TIGRs Retired to each certification program and an effective date of Retirement. This report can be provided to third parties wanting to verify Retirement of TIGRs.

11 Data Security

The following are a minimum set of security practice requirements for the Registry to ensure data integrity and confidentiality:

- (a) Secured web portal interface with password protection for Static Data collection, User access and reporting.
- (b) Restricted access privileges based on participant and User roles using digital certificates.
- (c) Well-defined system backup and recovery processes.
- (d) Secured file transfer and data upload processes using encrypted communications for all data interfaces.

Appendix A: Account Holder Registration Process

The following information will guide you through the steps necessary to create an Account for TIGRs on the TIGRs Registry. The Administrator is available to assist you throughout the registration process. Please call +1 (408) 517-2100, option 1 or email TIGRsAdmin@apx.com.

STEP 1 – Review Registry Operating Documents

You should first review the Registry Operating Documents including the Terms of Use, Fee Schedule and the Standard & Procedures. The documents are found at <http://tigrs.apx.com>.

STEP 2 – Online registration.

Follow the “Register for an Account” link which takes you to the Registry’s application page. Here you will select the “Register Here” link. A pop-up window will appear with a checklist describing the steps required to register for an Account. Select the appropriate Account Type and click the “Continue Registration” button.

The Accounts Types are:

The *General Account* is for Account Holders who will participate in the Registry as Asset owners, brokers, marketers and traders. This Account provides the full functionality to register Assets, to have TIGRs issued or transferred in and to transfer TIGRs to other Account Holders.

The *Asset Owner Account* is for Account Holders who will participate in the Registry primarily as Asset owners. This Account type provides functionality to register renewable Assets and transfer TIGRs to other Account Holders. An Asset Owner Account cannot accept incoming REC transfers.

The *Retail Aggregator Account* is for Account Holders who are buying TIGRs to Retire for their own use or on behalf of others. This Account type provides functionality to accept REC transfers from other Account Holders and to register Assets. A Retail Aggregator Account cannot transfer TIGRs to other Accounts.

The *Retirement Account* is for Account Holders who are buying TIGRs to immediately Retire on their own behalf. A Retirement Account can register Assets; however, they may not transfer TIGRs to other Accounts.

The *Qualified Reporting Entity Account* is for entities that are qualified to provide data for Assets registered in the Registry. This type of Account cannot hold TIGRs or register Assets.

The *Program Administrator Account* is provided to Certification and Compliance Programs to verify eligibilities related to a specific program. This Account type can also be used by Certification and Compliance

Programs to verify compliance with certain mandates and policies. This type of Account cannot hold TIGRs or register Assets.

STEP 3 – Accept the Terms of Use

Read and agree to the Registry Terms of Use (this is your next step after clicking “Continue Registration”). Acceptance of the Terms of Use must be indicated by reviewing all terms; checking each section; and lastly, agreeing to the Terms of Use by pressing the “I Agree” button.

STEP 4 – Complete Account Application

Upon accepting the Terms of Use, the next screen shows the online New Account Application Form. You will need to complete all required fields which are noted by an asterisk (*). Note: It will be possible for the public to view the Organization Contact information you provide when your Account is approved. Mark the Account as a Private Account if you would prefer that no one other than the Administrator knows of your Account.

Upon completing the New Account Application form and clicking SUBMIT, you will receive an Email notification to validate your registration. This validation must occur before the Administrator is notified of your pending Account.

STEP 5 – Account Review

The Administrator will review the Account application utilizing know-your-customer best practices. Identity checks, incorporation documents and other requests as warranted will be requested in the application review process. If the Account application is complete and approved, an email notification of Account approval will be sent to the Account Manager’s email address provided in the New Account Application form. If materials are incomplete or additional information is required, the Administrator will notify the party completing the registration. Approved Account Holders may begin using all functions of the system available to their type of Account.

STEP 6 – Billing

Applicable Account Subscription and Registration Fees will be billed when the Account is approved. Once the invoice is created, the Administrator sends the Account Manager an email notification with the invoice and payment details. The Invoice is also made available online via the “My Invoices” report within the Registry for downloading and printing. Invoices must be paid within thirty (30) days. Failure to pay will result in Account deactivation.

STEP 7 – Create Sub-account(s) & Additional Logins

All types of Account Holders must first create an Account for their organization. After Account approval, Sub-accounts can be created and logins added to an Account. Owners of Assets, in addition to creating an Account, must also register each one of their Assets and designate a Qualifying Reporting Entity for each of them.

Appendix B: Asset Registration Process

The following information will guide you through the steps necessary to register an Asset in your Account. The Administrator is available to assist you throughout the registration process. Please call +1 (408) 517-2100, option 1, or email TIGRSAdmin@apx.com.

STEP 1 – Review Registry Operating Documents

The Registry's operative documents detail the requirements and definitions of different types of Assets. The documents are available on <http://tigrs.apx.com/>

STEP 2 – Register Asset

Log in to your Account and select the "Register New Asset" link. Fill out the information on the New Asset Registration page and select "Next". Continue to fill out the information on the subsequent pages of the Asset Registration screen and press "Submit". The Administrator will then be notified of the New Asset Registration. At any time during this process you can save the form and return to complete it at a later time if you do not have all the required information.

STEP 3 – Asset Review

The Administrator will review the Asset registration. If the Asset application is complete and approved, an email notification describing Asset approval will be sent to the Account Holder. At this time an invoice will be issued for any applicable registration and subscription fees. If materials are incomplete or additional information is required, the Administrator will notify the Account Manager.

STEP 4 – TIGR Issuance

TIGRs can be issued as often as once a month if the metering data has been communicated to the Registry. An invoice will be issued for each month where TIGRs are issued and payment will be due before TIGRs are released into an Active Account

Appendix C: Documentation Requirements for Multi-Fuel Assets

Upon the registration of a Multi-Fuel Asset, the Account Holder submitting the Asset must provide the Administrator with a report prepared by an independent professional engineer containing documentation of a methodology for calculating the electricity production associated with each fuel used by the Asset. Following the Administrator's review and acceptance of the proposed methodology, the Asset Owner may seek creation of TIGRs. This requirement will be waived for Assets that provide fuel-split information to a state, provincial or other regulatory authority.

Documentation of the following information used to calculate the proportion of electric output per Fuel Type generated by the Asset during a calendar month must be maintained by Multi-Fuel Assets seeking TIGRs, using the best available sources of information. If the Multi-Fuel Asset already provides documentation to regulatory entities addressing each of the items below, this documentation may substitute, upon approval of the Administrator, for the requirements listed below.

1. Quantities of each Fuel Type must be measurable and verified by documentation provided to Control Area Operators or other regulators, if available. If such documentation is not available, verifiable documentation of fuel quantities consumed during the month may be considered, such as metered liquid or gaseous fuel input where the meter is read by an independent third party so long as such entity has an agreement with the Administrator, or financial records of fuel supply deliveries coupled with plant reports documenting mass of each fuel consumed in each calendar month.
2. Documentation of net heat content for each Fuel Type (if applicable) must be supported by documentation of heat content measurement by an independent laboratory.
3. If specification of a heat rate is required, the heat rate must be determined according to testing certified by an independent professional engineer consistent with the protocol accepted for plant heat rate testing in the Asset's Control Area. If different heat rates apply for different fuels, the determination for each applicable heat rate must meet the requirements of this paragraph.

Appendix D: Fuel Types *

ABBREVIATION	FUEL TYPE/GENERATION TECHNOLOGY
BAM	Biogas - Agricultural Methane
BAP	Biomass Combustion - Agricultural Products
BAW	Biomass Combustion - Agricultural Waste
BCA	Biomass Combustion - Animal Waste
BGA	Biogas - Animal Waste
BGW	Biogas - Wastewater Methane
BLB	Biogas - Liquid Biofuels
BLF	Biogas - Landfill Methane
BML	Biomass Combustion - Liquid Biofuels
BA1	Biomass – Animal Waste - Swine Waste, Solid or Gas
BA2	Biomass – Animal Waste - Poultry Waste, Solid or Gas
BWP	Biomass Combustion - Wood Products
BWW	Biomass Combustion - Wood Waste
CO1	Coal (used for Multi-Fuel Assets; will not create TIGRs)
DI1	Diesel (used for Multi-Fuel Assets; will not create TIGRs)
FC1	Fuel Cells using Hydrogen derived from fossil fuels (used for Multi-Fuel Assets; will not create TIGRs)
GE1	Geothermal Energy
H2O	Hydroelectric Water - Dam/Impoundment
HRR	Hydroelectric - Run-of-River
HTI	Hydroelectric – Tidal
HWA	Hydroelectric - Wave power
HYD	Fuel cells using hydrogen derived from renewables
JET	Jet Fuel (used for Multi-Fuel Assets; will not create TIGRs)
MS1	Municipal solid waste
NG1	Natural Gas (used for Multi-Fuel Assets; will not create TIGRs)
OIL	Oil (used for Multi-Fuel Assets; will not create TIGRs)
SCP	Concentrated Solar Power
SO1	Solar Photovoltaics
SOL	Solar Serving On-Site Load
WND	Wind

* Additional Fuel Types may be added in the future.

Appendix E: List of Referenced Documents

Terms of Use – <http://tigrs.apx.com>

Fee Schedule – <http://tigrs.apx.com>

Designation of Responsible Party – <http://tigrs.apx.com>

Requirements for Qualified Reporting Entities – <http://tigrs.apx.com>

Appendix F: Glossary

Account: An Account is an account in the Registry.

Account Holder: An Account Holder is a party that has registered with the Registry and has established an Account therein.

Account Manager: The administrator for an Account Holder's Account, having the ability to, among other things, setup and manage additional logins and login privileges for Users.

Active Sub-account: A Sub-account of an Account Holder's Account where Active TIGRs are held. If the Account Holder is the owner of or Responsible Party for an Asset, their Active Sub-account will receive any TIGRs created by the Asset, unless a forward transfer is in effect, in which case the TIGRs will be deposited in the designated Active Sub-account. An Active Sub-account may be associated with one or more Assets.

Active TIGRs: A TIGR that is held in an Active Sub-account. Such TIGRs may be transferred or Retired by the Account Holder of the Active Sub-account.

Administrator: The entity with the authority to administer or oversee the administration and implementation of the Registry and these Operating Standard. APX, Inc. serves as the Administrator of the Registry.

Aggregated Asset: A group of small (200 kW or less) Generating Units share the same location but that share the same essential generating characteristics and that are grouped into one Asset.

Aggregator Exception: The authorization under Section 5(b) of the Terms of Use allowing an Account Holder holding a General Account or Retail Aggregator Account to Retire TIGRs on behalf of a Beneficial Owner in a Group Retirement Sub-account.

Asset: An Asset can be a single-sited Renewable Energy Asset or an Aggregated Asset registered by an Account Holder in the Registry.

Asset Name: The name assigned to an Asset when it is registered in the Registry.

Asset Owner Account: This type of Account can register Assets and have TIGRs issued to it for its Assets. An Asset Owner Account can hold, transfer (only outgoing transfers), withdraw and Retire TIGRs. An Asset Owner Account cannot receive TIGR transfers from other Accounts.

Beneficial Owner: A party having Beneficial Ownership Rights in one or more TIGRs held in an Account Holder's Group Retirement Sub-account.

Beneficial Ownership Rights: With respect to any TIGR, Beneficial Ownership Rights means (i) any contractual or other right to direct or control the sale or

other disposition of, or the Retirement of, such TIGR or (ii) any economic interest in such TIGR, including without limitation any contractual or other right to receive any proceeds from the sale or other disposition of such TIGR.

Listed Assets Report: A public report listing all registered Assets within the Registry.

Certification Programs: Voluntary initiative that has set criteria for what qualifies for its program.

Compliance Program: A program administered by a governmental entity or other regulator that requires load serving entities to generate, purchase and/or sell a certain amount of renewable energy.

Control Area: An electric system or systems, bounded by interconnection metering and telemetry, capable of controlling generation to maintain its interchange schedule with other systems and contributing to frequency regulation of the interconnection. For the purposes of this document, a Control Area is defined in broad terms to include a transmission system and market and load-serving functions within a single organization.

Control Area Operator: The operator of a Control Area. May be a system operator, a transmission grid operator or other similar entity.

Corporate Retirement Sub-account: A type of Group Retirement Sub-account used for Retirements on behalf of a single, large-scale Beneficial Owner.

Customer-Sited Distributed Generation: Generation interconnected behind a retail customer meter and therefore not directly interconnected with either the distribution system or transmission system (including net metered facilities).

Dynamic Data: Variable information that is associated with a specific Asset, such as date of generation and MWhs produced.

Environmental Attributes: Any and all credits, benefits, emissions reductions, offsets, and allowances, howsoever entitled, arising from the perceived environmental benefits of generation from an Asset and its displacement of conventional energy generation.

Fuel Type: Designates the type of fuel used to fire a Generating Unit being registered with the Registry.

Generating Unit: A generator, boiler, turbine, inverter or other prime mover operated to produce electric power.

Generation Activity Log: An electronic ledger where generation is posted prior to TIGR creation. Each time generation data is received by the Registry for a particular Asset, the date and quantity is posted to the Generation Activity Log. Adjustments received will be posted likewise.

General Account: This type of Account can hold, transfer (outgoing and incoming), and Retire certificates. A General Account can also register and maintain Assets and have TIGRs issued to it for its projects. A General Account

can hold a Group Retirement Sub-account or Retire TIGRs for any Compliance Program utilizing the Registry.

Group Retirement Sub-account: A Retirement Sub-account used to designate TIGRs being Retired by an Account Holder on behalf of one or more Beneficial Owners. Once a TIGR has been transferred into a Group Retirement Sub-account, it cannot be transferred again to any other Account. A Group Retirement Sub-Accounts must be designated as a Corporate Retirement Sub-account or a Retail Retirement Sub-account.

Inbox: TIGR transfers to an Account Holder are first posted in the Account Holder's Inbox. The Account Holders will then either accept or reject the transfer. Upon acceptance the TIGRs will be deposited in the Active Sub-account designated by the Account Holder.

Load-Serving Entity (LSE): Any organization selling retail electricity to end users, such as investor owned utilities, municipal utilities, and electric coops. Sometimes referred to as an "electric service provider." In the Registry, LSE can also mean organizations that aggregate for member or customer LSEs.

Megawatt-hour (MWh): One thousand kilowatt-hours or 1 million watt-hours.

Multi-Fuel Asset: An Asset capable of producing energy using more than one Fuel Type, excluding fuels used for start-up (which in any case cannot exceed 1% of the fuel used annually on a total heat input basis). See Section 6.2 above.

Nameplate Capacity: The maximum rated output of a Generating Unit under specific conditions designated by the manufacturer. Size classification is based on Nameplate Capacity.

Outbox: After initiating a TIGR transfer the Account Holder will see the TIGRs in their Outbox. The Account Holder to whom the TIGRs have been transferred will either accept or reject the transfer. If rejected, the TIGRs will be returned to the Active Sub-account from which they were transferred.

Participating Companies Report: A public report listing Account Holders registered with the Registry. This report includes limited information for contacting the Account Holder. Account Holders can choose to remain private and not appear on this report.

Privacy Policy: The Privacy Policy, located at <http://tigrs.apx.com>, providing the terms on which the Administrator will protect the privacy of information provided by Account Holders.

Program Administrators: Administrators of Compliance and Certification Programs. Program Administrators can have a Program Administrator Account.

Program Administrator Account: Account type provided to administrators of Compliance and Certification Programs that utilize the Registry and/or have eligibilities noted for certain TIGRs. It will allow Program Administrators to review eligibilities and compliance reports. Asset details will be displayed in a Program Administrator Account if the Account Holder registering that Asset has listed it as eligible according to the specific program.

Retail Retirement Sub-account: A type of Group Retirement Sub-account used to aggregate Retirements carried out on behalf of smaller Beneficial Owners.

Qualified Reporting Entity (QRE): An entity reporting meter reading and other generation data to the Administrator. Qualified Reporting Entities may include Control Area Operators and other independent parties accepted by the Administrator, and for certain Customer-Sited Distributed Generation, the generation owner or customer. The protocol for such reporting is outlined in the Requirements for Qualified Reporting Entities document.

Qualified Reporting Entity (QRE) Account: An Account Holder with a QRE Account is assigned to an Asset and is responsible for verifying generation information from that Asset. The Registry tracks the specific types of Assets for which QREs are approved to provide services, ensuring that they are suitably qualified and accredited. The QRE Account cannot hold TIGRs.

Registration Rights: The right to register an Asset in the Registry. These rights are held by the owner of an Asset or by an entity that has been designated as a Responsible Party for such Asset.

Registry: The TIGRs RegistrySM.

Renewable Energy Asset: One or more Generating Unit(s) that share one intertie with the distribution/transmission grid and are registered in the Registry.

Responsible Party: An Account Holder who has been assigned the Registration Rights for a given Asset.

Retail Aggregator Account: Account type for Account Holders seeking to Retire TIGRs on behalf of third parties. In order to open this Account type, the Account Holder must be approved for the Aggregator Exception. A Retail Aggregator Account can hold, accept incoming transfers, and Retire TIGRs. They can also register and maintain Renewable Energy Asset and have TIGRs issued in their Account. A Retail Aggregator Account cannot make outgoing transfers.

Retire, Retirement of TIGRs, or Retirement: An action taken to remove a TIGR from circulation within the Registry. Retirement may be initiated only by the Account Holder for TIGRs in Account Holder's own Accounts. Retirement is effectuated by transferring Active TIGRs into a Retirement Sub-account or a Retirement Group Sub-account.

Retirement Account: Account type for Account Holders used by Account Holders that are purchasing TIGRs solely for purposes of Retiring the TIGRs on their own behalf from Assets registered under this Account or from accepted incoming transfers. Retirement Accounts cannot hold Active TIGRs received from other Account Holders or transfer them to any other Account Holder.

Retirement Sub-account: A Sub-account used as a repository for TIGRs that the Account Holder wants to designate as Retired and remove from circulation. Once a TIGR has been transferred into a Retirement Sub-account, it cannot be transferred again to any other Account.

Revenue-Quality Meter: As defined in Section 7.1.1 above.

Self-Reporting Asset: A Customer-Sited Distributed Generation installation with a Nameplate Capacity of less than 1 MW that elects to have Dynamic Data transmitted to the Administrator via the Self-Reporting Interface.

Self-Reporting Interface: A standard internet-based data entry portal which serves as the method for a Self-Reporting Asset to communicate Dynamic Data to the Administrator pursuant to Section 7.1.8 above.

Static Data: Static data describes the attributes of an Asset. Static information generally includes information related to the characteristics such as technology type, ownership or location.

Station Service: The electric supply for the ancillary equipment used to operate a generating station or substation. Also known as parasitic load.

Terms of Use: The Terms of Use, located at <http://tigrs.apx.com>, that are applicable to each Account Holder and that govern the relationship between Account Holders and the Administrator.

TIGR: A TIGRSM represents all of the Environmental Attributes from one MWh of electricity generation from an Asset. The Registry will create one TIGR per MWh of generation that occurs from an Asset.

User: Any party that has been granted access by an Account Holder to “use” its Account, which may include viewing information, performing transactions and changing personal information. The Account Holder may at any time revoke the permissions granted to a User. The Registry will be able to track the specific activities of each User through the User’s unique login and password.

Appendix G: Country Addendums

Each Country Addendum will list how assets will qualify country-to-country for TIGRs to ensure the standard definition of TIGRs is maintained.

