



## **Agency Guide to the eBilling Web Services**

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September 28, 2020



This version of the *Agency Guide to the eBilling Web Services* supersedes all previous versions.

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# 1 Introduction

This document provides information about the features of Pay.gov's non-interactive eBilling Web Services and the process agencies should follow to implement them.

This guide is intended for agency users who are

- responsible for approving the decision to migrate to Pay.gov
- responsible for the migration of an agency cash flow application to Pay.gov
- users who assist with the implementation of the services
- users who need to use the information that will be collected through this service.

Technical details required by agency application developers are in a separate reference.

**Note:** Pay.gov offers the interactive eBilling Online application for use by agencies that issue small numbers of ebills, or that issue them infrequently.

Agencies should also consider the eBilling Online Web Service, which may provide a simpler standardized way of issuing large numbers of bills.

## 1.1 Related Documents

Related or supplemental agency guides and reference manuals are available on the Pay.gov Agency Documentation site at <https://qa.pay.gov/agencydocs/index.html> or by request from Pay.gov Customer Support.

See the *Agency Guide to the eBilling Online Application* for details about the application and using its Setup function to create optional bill content.

See the *eBilling Online Web Service Technical Reference* for details about that service.

**Individuals requiring technical details should request the *eBilling Web Services Technical Reference*.**



## 2 Overview

### 2.1 eBill Definition

An ebill is a web page on Pay.gov that provides details of a payment required from an individual, business, or other customer. Examples include:

- a bill requesting a single payment that includes details of how the bill was calculated based on information submitted previously
- a series of recurring ebills for loan repayment.

An ebill requiring payment is linked to a separate online Pay.gov payment page where the customer enters payment information such as the payment method and other required information.

When a new ebill is created, customers are notified by email that it is available on Pay.gov. They view it on Pay.gov's public website (<https://pay.gov/public/>) by entering an access code associated with the ebill. The agency has the option whether or not to require the customer to sign in and add the ebill to their Pay.gov account.

### 2.2 How an eBill is Created

eBills are created using a web service in which the agency submits ebilling and access information directly to Pay.gov's system via a message in XML file format. Pay.gov's replies, sent directly to the agency's system, are also in XML file format. The *eBilling Web Services Technical Reference* provides details on the construction and content of those messages.

The agency request to create one or more ebills is submitted to Pay.gov's eBillingService. The agency must also submit a separate request for the ebill's access code using the AccessCodeService.

The agency controls how many ebills are requested at a time, who receives them, and how often payments must be made (once or series of recurring ebills and payments).

If a series of recurring ebills are created, the agency submits the request to create the first ebill in the series and specifies how many more times the ebill is to be issued. eBills after the first one are automatically created by Pay.gov until the number or recurrences is reached, an end date is reached, or the agency specifically requests cancelation.

### 2.3 eBill Requirements

All ebills include:

1. An access code.  
For all new ebills agencies must request creation of a unique access code that will be used to control who can view the ebill.

2. A security question and answer.  
For all new ebills agencies must supply a security question and answer. The customer provides the answer at the time they enter the bill's access code.
3. A notification (email or other communication) sent to a customer informing them that an ebill is available on Pay.gov. The agency has the options to have Pay.gov send the notification or send it themselves. The notification includes one or more links to Pay.gov. The notification includes the access code for new ebills.
4. For new ebills, a separate email or other communication, sent by the agency, informing the customer of the ebill's security question and answer.

The result is an ebill (Figure 1) and its associated payment page online in Pay.gov.

Figure 1: A sample online ebill.



## 2.4 Types of eBills

Two types of ebills can be created:

- ebills requiring sign in to a Pay.gov account
- ebills not requiring sign in.

Agencies choose whether or not sign in is required as part of the AccessCodeService request for the ebill they submit to the eBillingService. See sections 3.3.2 and 3.3.3 for the settings.

### 2.4.1 eBill Requiring Customer Sign In (Private Bill)

This is the default for all access codes requested.

Your agency can require that customers sign in and add the ebill to their Pay.gov account before being able to view it. After this one-time process, the ebill is available in the My Bills section of the customer's account pages on Pay.gov.

Immediately after adding the ebill to their account, and every time they sign in, the customer can view and pay their ebill online, view its payment status, and view a record of all their completed ebills and associated payments. The customer does not need to use the ebill's access code and security answer again.

Pay.gov recommends this type of ebill for:

- recurring ebills, such as those for loan repayments
- any other regular or frequent ebilling
- situations where a customer is likely to require a record of their ebill payment activity
- situations where the agency wishes to know more information about the customer, such as address
- situations where the customer may want to save ebill data online so it is available for reuse for subsequent payments

#### **2.4.2 eBill Not Requiring Sign In (Public Bill)**

Your agency can specify that no sign in is required before an ebill can be viewed and paid. The customer must then enter the ebill's access code and answer its security question each time they access the ebill. This option is selected when you request creation of the ebill's access code.

Pay.gov recommends this type of ebill for one-time and infrequent bills.

If they choose to, customers can still associate this type of bill with their Pay.gov account by first signing in and then entering the access code and answering the security question.

#### **2.4.3 Hidden Public Bill**

Your agency can request Pay.gov to hide Public eBills. Your agency must give a customer the URL (address) for the ebill. After going to the URL the customer must enter the ebill's access code and answer the security question before they can view the bill. They then have the option to sign in and add the ebill to their Pay.gov account if they wish.

Hidden ebills are not included in lists on Pay.gov's Public website and will not be found by searching.

### **2.5 eBill from the Customer's Point of View**

From the customer's point of view an ebill has four parts:

- the notification that a bill is available on Pay.gov (usually email)
- a separate communication with the required security question and answer
- the online ebill, viewable on Pay.gov, containing the details of the payment request
- a separate associated payment page, if payment is required

To view an ebill, the customer must enter its access code and answer the security question. This is done once for private ebills. For public ebills, the access code and security question answer are entered every time the ebill is accessed (unless the customer chooses to add their public ebill to their Pay.gov account).

### **2.6 eBill from the Agency's Point of View**

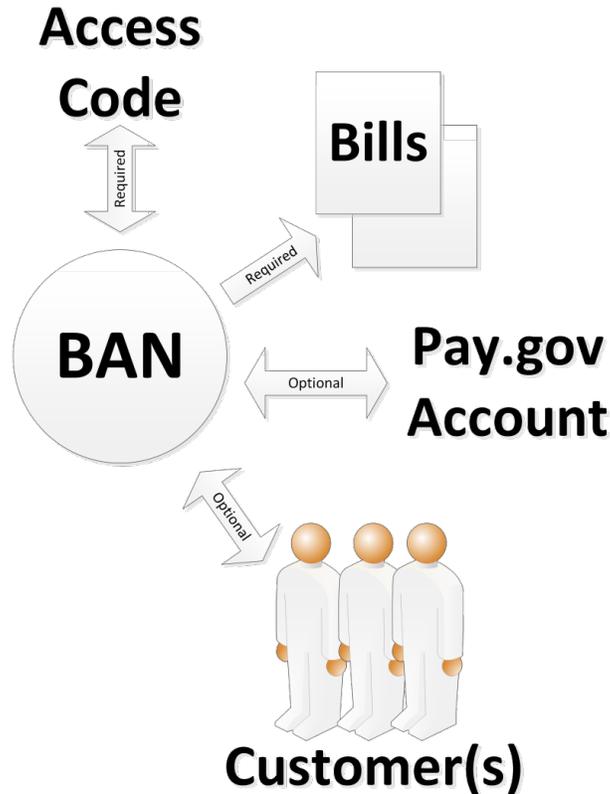
1. Work with your Pay.gov Agency Liaison to create the ebilling application. Details will be recorded in an Application Configuration Template (ACT).

2. Work with your Pay.gov Agency Liaison to create an ebill template. The template is used to display the ebill with its details online.
3. Your agency creates a Billing Account identified by a Billing Account Number (BAN). See Figure 2 for a depiction of how a BAN relates to other ebilling and access code elements.
  - The BAN associates the ebilling account with any instances of ebills created for it and with the access code that allows a customer to view and pay the ebill.
  - The BAN is defined by your agency and should be documented when completing the Agency Configuration Template for your ebilling application. The BAN may contain up to 80 alphanumeric characters.

**Note:** Never use a customer's Social Security Number (SSN) or Taxpayer Identification Number (TIN) for a BAN.

- If the customer signs in to Pay.gov before viewing an ebill for the first time, the customer's Pay.gov account is associated with the ebill's BAN.
- A BAN can have multiple access codes and multiple customer Pay.gov accounts associated with it.
- Any number and types of ebills can be associated with a BAN, but all the ebills must be originated by the agency that created the BAN. For example, an agency that has two separate Pay.gov applications, one for permit fees and another for loan repayment, could specify the same BAN when requesting that bills for both applications be made available to the same customer.

Figure 2: BAN assignment and association



4. Your agency creates an XML request to create an ebill and sends it to Pay.gov's eBillingService. Pay.gov replies that the ebill was created.
5. When the ebill is ready to be released, your agency creates an XML request for an access code and sends it to Pay.gov's AccessCodeService. The request specifies whether or not sign in is required for the ebill. Pay.gov replies with the access code.
6. A notice that the ebill is available is sent to the customer. It includes the access code and a link to Pay.gov. Either your agency or Pay.gov sends the notice, depending on the choice made when the access code is requested through the AccessCodeService.
7. Your agency sends the customer a separate communication that includes the ebill's security question and answer.

**Note:** The security question and answer must never be sent in the same communication as the access code.

8. The customer can now view and pay the ebill.

See section 6 for flowcharts showing these ebilling steps.

## 2.7 Bill Template

A bill template provides the structure used to display an ebill online. It is created when the ebilling application is configured. The template resides in the Pay.gov

system. Data is inserted into it when an ebill is created for a customer. The template can resemble an agency's existing paper form, but may be modified slightly to allow viewing online on different devices (PC, smartphone, tablet, etc.).

Your agency must work with your Pay.gov Agency Liaison to create your bill template.

## **2.8 Billing Data**

Billing data identifies who is to receive the ebill, the amount to be paid if there is an associated payment, additional data supplied by the agency, and attachment files if required.

Billing data is included in the ebill create request submitted to the eBillingService.

## **2.9 Bill Instance**

A customer's online ebill that combines the ebilling template and the specific billing data. Each new ebill is a separate bill instance; this includes each ebill in a series of recurring ebills.

## **2.10 Bill Notice**

A bill notice is an email sent to all users associated with a specific BAN. It lets them know that the ebill is available on Pay.gov. Your agency can choose to allow Pay.gov to email bill notices on its behalf (preferred) or to send the notices itself. If you choose to have Pay.gov send the notices, the customer's email address must be included in the billing data in the request sent to the eBillingService.

## **2.11 Access Code**

An access code is a random eight-to twelve-digit number generated by Pay.gov at your agency's request. (The request can include an optional value requiring sign in to access the ebill.) Pay.gov returns the access code to your agency in the reply to your request. It is part of a two-factor identification process that includes a security question and answer. An access code is created for all ebills. Entering it verifies a bill payer has permission to view ebills in a specific billing account.

When it is created, an access code is associated with a BAN, not a specific ebill. One or more ebills can then be assigned to the BAN. It is valid for up to one year or until it is used to associate the BAN with a customer's Pay.gov account.

## **2.12 Security Question and Answer**

A security question and answer is the second part of the two-factor identification process for ebill access. Your agency creates the question and answer and includes them in the request to create an access code associated with a specific BAN. Your agency is also responsible for communicating the question and answer to the customer being billed.

The customer must answer the security question each time they are required to enter the associated access code. Where the access code verifies the customer has permission to view a bill or associate it with their Pay.gov account, the question

and answer verify that your agency has given the customer permission to use the access code.

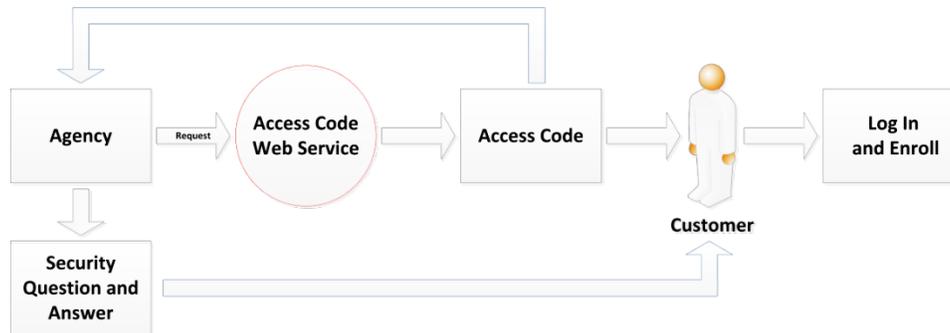
You can use the same question and answer for all your ebills, use the same question and answer for a specific period of time and then change them, or create a unique question and answer to be used by specific customers. Pay.gov recommends that agencies change the question and answer periodically.

### 2.13 Enrollment

Enrollment is the process by which an agency customer associates their Pay.gov account with an eBilling BAN (Figure 3). It consists of signing in to their account and then entering the access code and security answer for their ebill. Your agency can specify if an ebill requires log in (enrollment) or not.

Upon enrollment the customer account is assigned Pay.gov's Resource BAN User role – RBU which permits them to see all ebills issued for their BAN. See section 4 for information on the role.

Figure 3: Enrollment, if required



### 2.14 Enrollment Contact

Your agency must designate two Enrollment Contacts: a primary and an alternate.

Enrollment contacts:

- are your agency's eBilling Web Services liaisons with Pay.gov
- are responsible for managing your agency's eBilling requests
- are responsible for managing your agency's eBilling enrollments including
  - requesting new access codes
  - requesting access codes be resent to customers
  - requesting access codes be canceled
- are referenced in the initial access code email
- are referenced on your agency's eBilling online enrollment pages

### 2.15 Email Bounceback

Bounceback refers to notification returned when eBilling notices or access code email sent by Pay.gov on your agency's behalf is undeliverable for any reason. Bounceback information is aggregated by Pay.gov and made available through the Email Exceptions Billing Query (section 11.1.2).

If your agency chooses to send access code and/or billing notice emails on its own, bouncebacks for these emails will not be included in the Email Exceptions Billing Query results. You would be responsible for tracking any resulting bouncebacks.

## 2.16 Agency Tracking ID

An Agency Tracking ID is a unique identifier for each occurrence of an ebill. It is specified by the agency. A typical Agency Tracking ID might be a combination of the BAN, the invoice number, and the billing date. It may contain up to 21 alphanumeric characters.

## 2.17 Pay.gov Tracking ID

An ebill is assigned a Pay.gov Tracking ID when it is submitted to Pay.gov. The Pay.gov Tracking ID is unique to that occurrence of the ebill.

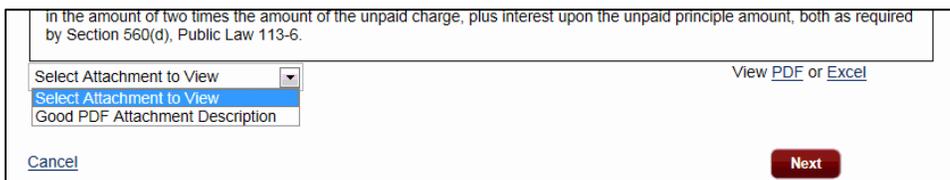
## 2.18 Attachment

An attachment is a separate file embedded in the eBillingService request sent to Pay.gov.

- The original attachment must be a PDF file.
- The PDF file is converted into the Base64 binary file, which is embedded into the web service request.
- An ebill can have up to five attachments.
- The combined file size of all attachments for an ebill must be 10MB or less. For example, an ebill could have five attachment files, each being 2MB in size, or could have only one attachment of 10MB size.

When a customer views their ebill on Pay.gov a drop down list at the bottom left lists any attachments (Figure 4). Customers click on an attachment name to open it in Adobe Reader or a similar PDF viewer

**Figure 4: Drop down attachment list**



The screenshot shows a web interface with a text box at the top containing the text: "in the amount of two times the amount of the unpaid charge, plus interest upon the unpaid principle amount, both as required by Section 560(d), Public Law 113-6." Below this is a dropdown menu labeled "Select Attachment to View" which is currently open, showing two options: "Select Attachment to View" (highlighted in blue) and "Good PDF Attachment Description". To the right of the dropdown is a link that says "View PDF or Excel". At the bottom left of the interface is a "Cancel" link, and at the bottom right is a red "Next" button.

### 2.18.1 Attachment Retention

- Pay.gov stores bill attachments for 60 calendar days from the date the ebill was created.
- eBill attachments are purged from Pay.gov after 60 days.
- After 60 days, customers must contact the agency to obtain information provided in the attachment.

## 3 Security

### 3.1 Key Technologies

The following key technologies are used to implement Pay.gov web services:

- *HTTPS*: HTTP/1.1 over TLS/1.2 (Transport Layer Security), documented by Internet RFC 2246, provides secure connections for data transmission.
- *Industry-standard technology*: Each Pay.gov web service is described by a Web Services Definition Language (WSDL) file and one or more related XML Schema Document (XSD) files. By implementing web services, Pay.gov is able to present a single, industry-standard interface to the services offered.
- *Certificate-based authentication*: Pay.gov requires the use of security certificates issued by the U.S. Treasury's certificate authority to identify and authenticate agency application servers and to communicate with Pay.gov.  
Instructions for obtaining a certificate are found in the *Pay.gov Web Services SSL Certificate Support Guide*, available by request from your Pay.gov Agency Implementation Liaison or Pay.gov Customer Support.

**Note:** Agencies already having a security certificate used with any Pay.gov web service may use the same certificate for all Pay.gov web services.



## **4 Restrictions**

The total amount of an ebill cannot exceed \$99,999,999.99.



## 5 Configuration Options

### 5.1 eBilling Notifications

You have the option to allow Pay.gov, on your agency's behalf, to send notifications to customers that an ebill is available on for them to view on Pay.gov. Or you can choose to have your agency send the notifications instead.

See section 12 for an explanation of all the ebilling notices sent by Pay.gov.

### 5.2 Automatic Bill Payment

In configuration, you can enable automatic bill payment for your ebilling cash flow application.

#### 5.2.1 Agency Customers

Enablement allows customers to:

- self-enroll in automatic bill payment, which means that Pay.gov will automatically create payment transactions for all bills issued for their BAN if the bills are not manually paid beforehand. Enrolled customers not have to take any action to pay their bills
- modify enrollment information at any time, including changing the payment account used for ebills
- cancel enrollment at any time

#### 5.2.2 Agency Users

Enablement allows agency users having access to the eBilling Online Customers page to:

- view which customers are enrolled in automatic bill payment
- cancel a BAN's enrollment

If the option is selected in configuration, your agency users could:

- Enroll customers BANs in automatic bill payment at their request, instead of the customer self-enrolling
- Modify a BANs enrollment information, at their request.

For information and instructions, see the *Guide to Automatic Bill Payment (Autopay)*.

### 5.3 Multi Bill Pay

- Agencies using the eBilling Web Services have the option in configuration to allow their bills to be included in the list of bills customers can pay together in a single payment.
- Customers may see a change to their My Bills page, Pending tab if they have bills eligible for Multiple Bill Pay. The page will have a Pay Multiple Bills button at the top of the list of bills.

- Clicking the button opens a new page listing only bills that can be paid together in a single payment. The total amount needed to pay all the bills is calculated by Pay.gov and appears at the top and bottom of the page.
- Customers can select all the bills or use the checkboxes to the left of each bill to deselect or select it individually. If a customer selects only some of the bills, Pay.gov recalculates the total amount and it is automatically refreshed at the top and bottom of the page.
- If any listed bill is eligible for Multiple Bill Pay, the Pending tab will have the Pay Multiple Bills button, even if only one listed bill is eligible.

**Note:** The customer must have at least two bills in their Pending tab, and one of them must be from an application allowing Multi Bill Pay for the “Pay All” section and button to be displayed.

- The payment page for the bills shows the total amount to be paid, and payment methods accepted by the selected bills are shown.
- The payment review and authorize page lists the bills that have been selected, the total amount of the payment, and the payment method chosen.

**Important!** This does not mean that all selected bills will be paid. Only the selected bills that allow the chosen payment method will be paid. Paid and unpaid bills will be listed on the transaction’s confirmation page.

- After the transaction is submitted, Pay.gov’s confirmation page lists which bills were paid and which were not. All bills not accepting the selected payment method will be shown with a failed payment. The amount of the payment actually submitted for settlement is reduced, and the customer will have to separately pay the unpaid bills.

Contact your Pay.gov Agency Implementation Liaison to enable this option.

#### **5.4 Minimum/Maximum Payment Amounts**

- Agencies using the eBilling Web Services have the option in configuration set minimum and maximum allowed amounts for bill payments. The minimum/maximum range is set for the entire ebilling cash flow application.
- Minimum and maximum payments can be applied to any payment method allowed for the application.
- Attempted payments outside the minimum/maximum range will not be allowed.

## 6 eBilling Web Services

Two related web services are used to create ebills: eBilling (eBillingService) and Access Code (AccessCodeService).

### 6.1 File Types and Languages

The eBillingService and the AccessCodeService accept request messages submitted to Pay.gov and send response messages back to the agency. All messages must be in XML format. See the *Pay.gov eBilling Services Technical Reference Manual* for details.

### 6.2 eBillingService

The eBillingService allows agencies to send data to Pay.gov requesting that one or more ebills be created or canceled. Pay.gov acts on these requests as the data is received.

The eBillingService allows your agency to:

- request creation of BANs
- associate one or more individuals (customers) with a billing account
- notify individuals and businesses that a payment is due from them and can be viewed and paid online
- notify customers that important information without an associated payment is available to be viewed online
- request the creation of ebills individually or in batches at any time
- request the cancellation of ebills at any time
- specify if a bill recurs and the frequency of recurrence

### 6.3 AccessCodeService

The AccessCodeService allows your agency to request that one or more access codes be created and associated with a BAN, be canceled, or that unused access codes be resent.

For example, after a BAN is created, send an XML message to the AccessCodeService requesting creation of an access code for the BAN (see section 6.5). The request message includes the BAN the access code is for, a security question that will be displayed by Pay.gov on the eBilling enrollment page, and an answer to the security question.

The AccessCodeService enables agencies to:

- associate a billing account (BAN) with an ebill
- assign and restrict access to billing accounts, their ebills and to any associated historical information
- designate whether or not a customer must sign in to a Pay.gov account before they can view their bill
- associate a billing account with a customer's Pay.gov account or their current session on Pay.gov
- cancel existing access codes at any time

- resend access codes (for example, when forgotten by the customer)

### **6.3.1 Access Code Requirements**

Before requesting the creation of an access code, your agency must have created a BAN for the account. If you want Pay.gov to send the email notifying a customer of the availability of an ebill (and including the access code) you must include the customer's email address.

Agencies should follow these steps when requesting access codes:

1. Create the BAN
2. Request creation of an ebill
3. Request creation of an access code

Following this order ensures customers have ebills to view immediately after being notified.

### **6.3.2 Requiring Sign In (Sign In)**

The default for an AccessCodeService request is to require sign in for an ebill. This forces association of a BAN and its ebills to a specific Pay.gov customer account. Requiring sign in provides an additional level of control over ebill access and also ensures the customer can keep an online record of the ebill and its payment.

This also enables customers to view and pay all ebills issued for their BAN (current and subsequent) without needing to enter an access code again.

### **6.3.3 Not Requiring Sign In (Sign In)**

If your agency will not require sign in for an ebill, it must include that option in the request message sent to the AccessCodeService (`requires_login` element with the value N).

In this case, any customer visiting the Pay.gov website can view an ebill by entering its access code and answering its security question without signing in. The BAN and ebill are associated with the customer's current session on Pay.gov only. The association is broken when the customer leaves Pay.gov and closes the session. (The customer has the option to sign in and then enter the access code to associate their BAN and ebill with their Pay.gov account in the same way as for ebills requiring sign in.)

Pay.gov recommends not requiring sign in for one-time bills or bills only issued at long intervals (yearly, for example). The customer always has the option to sign in and associate the ebill with their account.

### **6.3.4 Sending the Access Code to a Customer**

Your agency can send the access code to the ebill customer or can have Pay.gov send it. The choice is made as part of your ebilling application configuration with your Pay.gov Agency Liaison.

The communication (email) informs the customer that an ebill is available, includes the access code, and includes a link to Pay.gov. It does not include the security question and answer.

**6.3.5 Sending the Security Question and Answer to a Customer**

Your agency is responsible for sending the security question and answer to your ebill customers. For security, the question and answer must be sent separately from the access code.

**6.3.6 Canceling an Access Code**

Through the AccessCodeService you can request cancellation of an issued access code. The agency submits the XML request message and Pay.gov deactivates the access code upon receipt.

**6.3.7 Deactivating an Access Code When Enrollment Fails**

A customer is allowed five attempts to correctly answer to the security question for their access code. After the fifth incorrect answer the access code is deactivated (locked). The customer must contact your agency to request a new access code. You must then request the new code through the AccessCodeService.

**6.3.8 Resending an Access Code**

You can use the Access Code Web Service to request that a previously created access code be sent to a user. You might make this request when a customer did not receive the email with the access code or when a customer forgets the access code.

Only unused access codes can be resent. If an access code has been deactivated or has already been used to associate a bill with an account, Pay.gov will notify the agency upon receiving the resend request. You must then request a new access code for the ebill and BAN.



## 7 eBilling Access Roles

Table 1 details the actions available for the Resource BAN User (RBU) and Agency Customer Service (ACS) roles.

**Table 1: Role Permissions for Bills**

Bill Permissions	RBU	ACS
Application-level: View non-owned ebill data instance(s)		X
View, update, and save ebill data instance	X	
Submit/pay ebill data instance	X	
View submitted ebill data instance (completed bills available only if ebill was added to a Pay.gov account after sign in)	X	

Agency customers are automatically assigned the RBU role when they sign in to Pay.gov and then enter an ebill's access code and answer the security question. If the customer enters the access code and answers the security question without signing in (the ebill does not require sign in), Pay.gov does not assign the RBU role. Agencies do not need to perform any other action to give customers access to their ebill.

Agency customer service personnel need the ACS role to search for and view customer's ebills. Your agency must request the ACS role for them by submitting an Access Request Worksheet to Pay.gov.

For more information on Pay.gov roles and assignment, please refer to the *Agency Guide to Access Control*.



## **8 Overlaying, Deactivating and Canceling an eBill**

### **8.1 eBill Overlay**

Your agency may use the eBillingService to overlay (replace) an unpaid ebill with a new ebill.

For example, recurring ebills have been set up for an agency's customer. Each ebill is for the same amount. But the customer has not paid the first bill at the time their second bill is due. The customer now owes the amount of the first ebill plus interest and the amount of the second ebill. Instead of having two ebills pending in the Pay.gov system, the agency overlays (replaces) the second ebill with a combined ebill. The first ebill's status is changed to "Retired" and it is added to the customer accounts' Completed Bills list with read-only status. The customer can only access the second, overlay, ebill.

Pay.gov assigns a new Pay.gov Tracking ID for the overlay. The first ebill keeps its original Pay.gov Tracking ID. This allows both ebills to be listed and searched for in Pay.gov.

### **8.2 eBill Deactivation by Date Range**

Your agency can deactivate an ebill on a specified date. This is done by including a deactivation date in the ebill creation XML request message submitted to the eBillingService. This allows you to set up a "window", from the date created to the deactivation date, during which the ebill is available for payment. After the deactivation date no payments can be made against the bill.

### **8.3 Canceling a Pending eBill**

Occasionally, a single instance of an ebill may need to be canceled. For example, a user may have made the required payment outside the Pay.gov system; an ebill may have been created in error, or may contain errors. Only ebills in a Pending (unpaid/not completed) state can be canceled. Cancellation requires submitting an XML request message to the eBillingService.



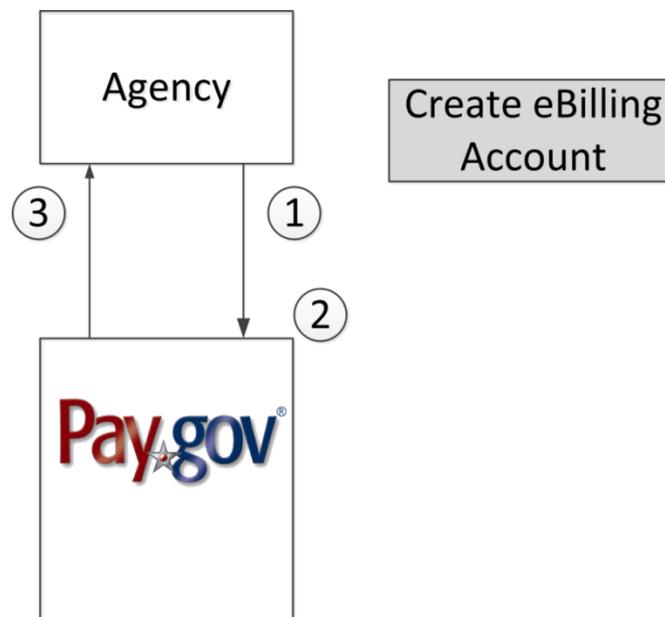
## 9 eBilling Flowcharts

Creating and accessing a new eBilling account involves three processes illustrated in Figure 5.

1. Your agency creates a BAN (section 6.1).
2. Your agency sends a request to the eBillingService to create an ebill (section 6.2).
3. Your agency sends a request to the AccessCodeService to create an access code for the BAN (section 6.3), and also sends a security question and answer to the customer being billed.

### 9.1 Creating a Billing Account (BAN)

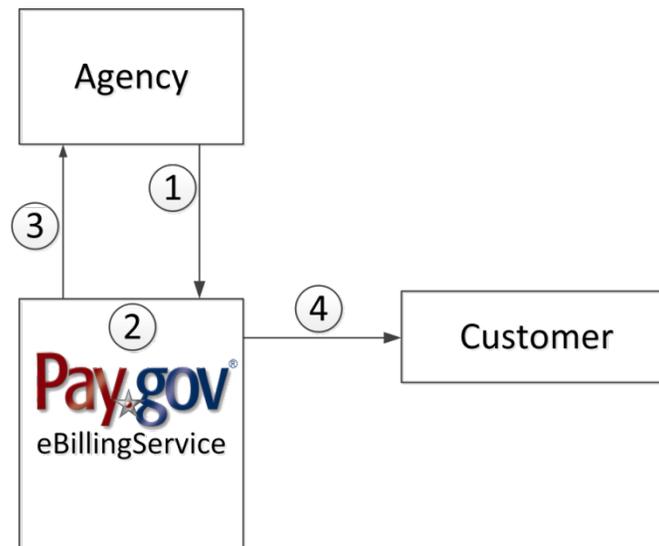
Figure 5: Creating a billing account



1. Your agency sends a request to create a billing account to the Pay.gov eBilling Web Service. The request is in XML file format and must include the billing account number (BAN) assigned by your agency.
2. Pay.gov creates the billing account at the time the request is received.
3. Pay.gov sends a response to your agency. The response confirms that the account was created and includes the BAN you submitted.

## 9.2 Creating an eBill

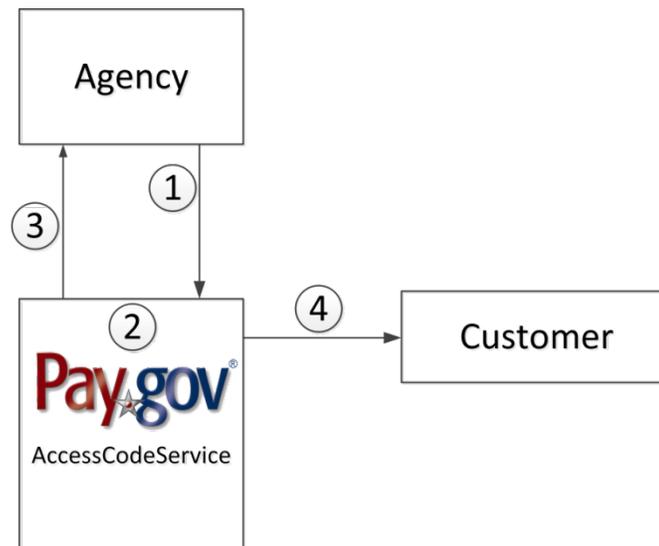
Figure 6: Creating an eBill



1. Your agency submits a request to create an ebill to the eBillingService. The request message is in XML file format. Pay.gov requires that each agency transaction has a unique Agency Tracking ID (see [Appendix A](#)).
2. Pay.gov creates the ebill at the time the request is received.
3. The eBillingService responds with a message that includes the ebill's Agency Tracking ID and its Pay.gov Tracking ID.
4. The BAN policy for each ebill is accessed by Pay.gov and an email notification that the ebill is available is sent to all customer users appearing in the BAN policy. The notification job runs three times a day at 1:15 P.M, 10:15 P.M., and 6:15 A.M. Eastern Time.

### 9.3 Creating an Access Code

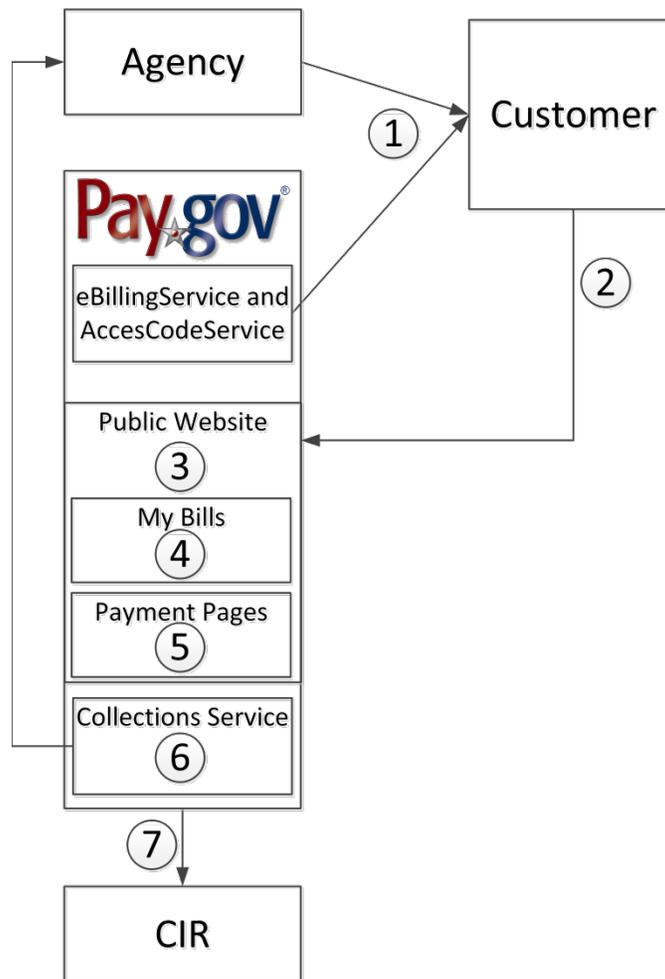
Figure 7: Creating an access code



1. Your agency submits a request to create an access code to the AccessCodeService. The request message is in XML file format and must include the billing account number (BAN) the access code is assigned to. The request can include an optional value that allows the ebill to be opened without signing in to an account.
2. Pay.gov creates the access code at the time the request is received.
3. The AccessCodeService sends a response that includes the access code to your agency.
4. If Pay.gov will send the bill notification to the customer, the notification includes the access code. The Pay.gov job that emails the notification runs three times a day at 1:15 P.M., 10:15 P.M., and 6:15 A.M. Eastern Time.

## 9.4 Paying and Processing an eBill

Figure 8: Paying and processing an ebill



1. The customer receives the ebilling notice email from Pay.gov and a separate communication from the agency that contains the security answer.
2. The customer clicks the hyperlink in the ebilling notice contains to go to Pay.gov's public website where they can sign in or just click the Make a Payment link.
3. The customer enters the ebill's access code and answers the security question.
4. The My Bills page opens with the ebill listed in the Pending tab. The customer views their ebill.
5. If the customer wants to make a payment they click the Pay Bill button. And are taken to Pay.gov's payment pages to make and submit their payment.
6. The Collections Service within Pay.gov then processes the payment, submits it for settlement and sends payment and status information back to the agency.
7. Following its schedule, Pay.gov sends payment information to CIR where your agency's account is updated.

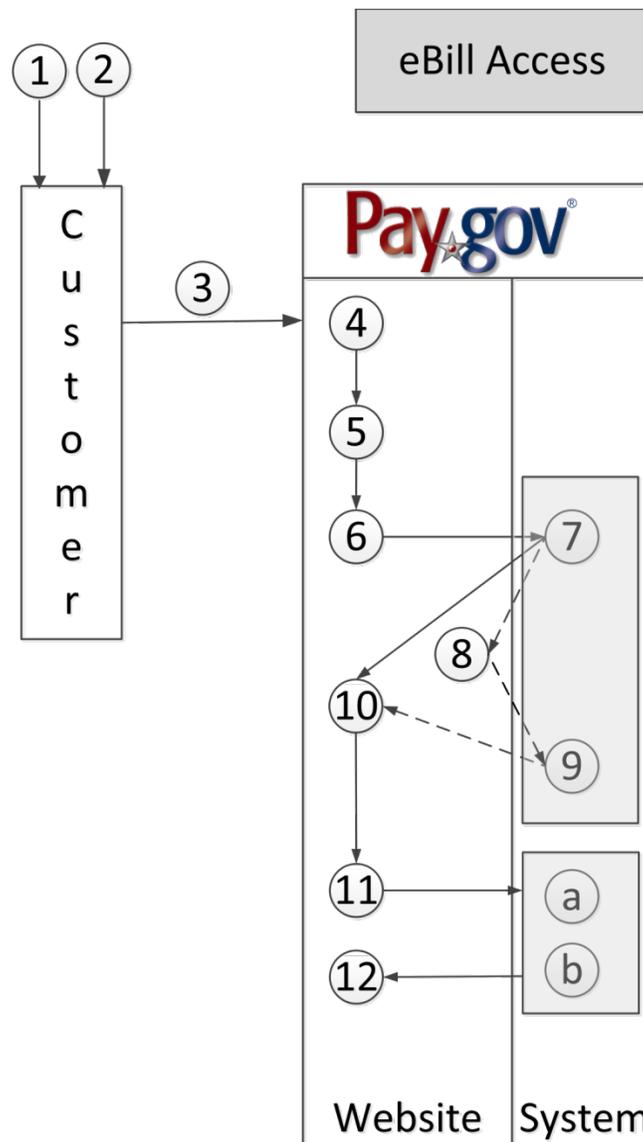
## 9.5 Customers eBill Flow

Customers must associate an ebill's BAN with their Pay.gov account or current web session before they can view the ebill. How the process is completed depends on whether or not sign in is required for the ebill.

### 9.5.1 Activating eBill Access Without First Signing In

The following diagram illustrates accessing an ebill for the first time without first signing in.

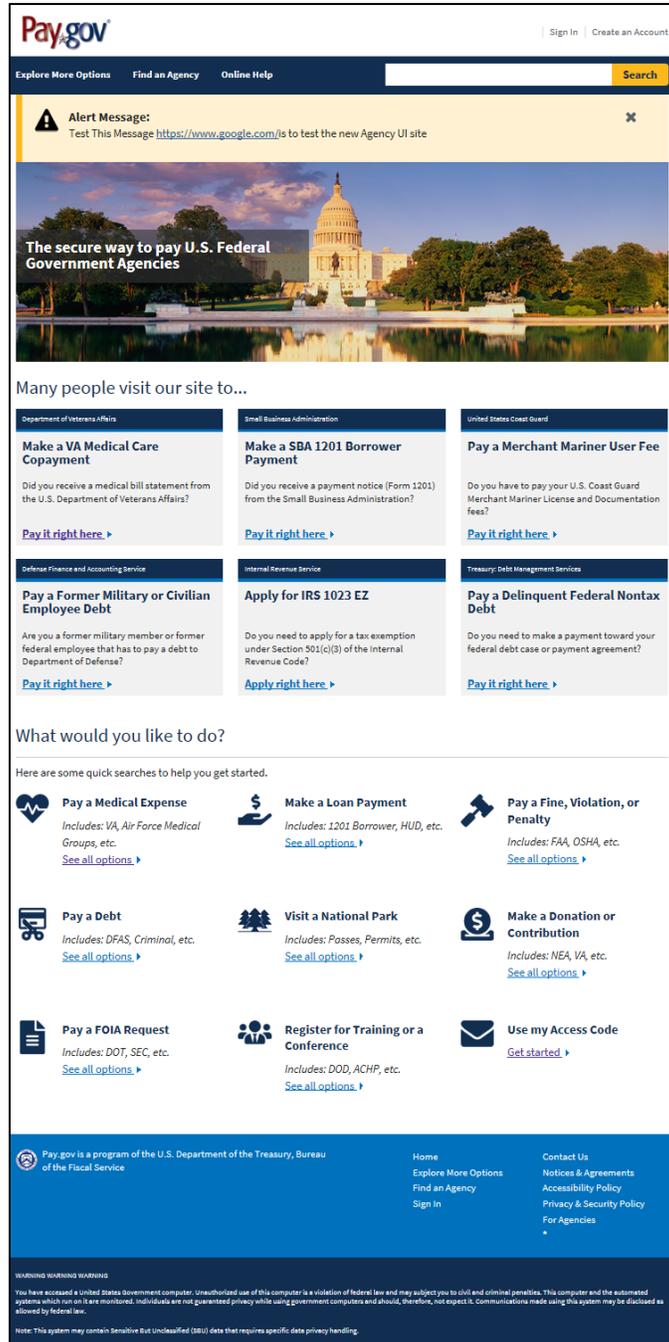
Figure 9: Activating ebill access without signing in first



1. The ebill's access code and a link to Pay.gov are sent to the customer.
2. Separately, the ebill's security question and answer are sent to the customer.
3. The customer opens the public Pay.gov website in their browser.

4. The customer clicks on the get started link under Use my Access code. payment. (Figure 10).

Figure 10: Pay.gov public home page



5. The customer enters the bill's access code.
7. Pay.gov determines if the access code requires sign in.
8. If sign in is required, the Sign In page opens. The customer enters their username and password and then clicks the Sign in button (Figure 13). If the customer needs to create an account the can click the Register Now button.

If the customer is already signed in the Enter Access Code – Step 2 page opens instead (Step 10).

9. Pay.gov validates the sign in.
10. The Enter Access Code – Step 2 page opens (Figure 14). The customer enters the answer to the security question supplied by your agency and then clicks the Submit button.
11. The action Pay.gov performs depends on whether or not the customer signed in.
  - a. If the customer has signed in, Pay.gov assigns the RBU role for the BAN to the customer's account and invalidates the access code.
  - b. If the customer has not signed in, Pay.gov allows them to view only unpaid bills for the billing account associated with the access code. The access code remains valid for up to one year or until the bill is paid and completed.
12. A My Bills page opens. What is available on the My Bills page depends on whether or not the customer has signed in and associated the ebill with their account. See section 7.

### **9.5.2 Activating eBill Access by Signing in First**

1. The customer clicks the Sign In link at the top right of the Pay.gov's public home page or they can click the Register link to create a new account.
2. The customer's My Account page opens.
3. The customer clicks on the Enter Access Code button.
4. The Enter Access Code – Step 1 page opens (Figure 12 above). The customer enters and submits their access code.
5. The Enter Access Code – Step 2 page opens (Figure 14 above). The customer enters the answer to the security question supplied by your agency and then clicks the Submit button.
6. Pay.gov assigns the RBU role for the BAN to the customer's account and invalidates the access code.
7. A My Bills page opens where the customer can view their ebill and begin the payment process. See section 7.

### **9.5.3 Viewing eBills Associated with an Account**

1. The customer signs in.
2. The customer's My Account page opens.
3. The customer clicks the View My Bills button.
4. The customer's My Bills page opens. See section 7 for details.



## 10 My Bills Page

The My Bills page allows customers to view all their current and completed bills. The page available for customer viewing a bill that was added to their Pay.gov account in has both the Pending and Completed tabs (Figure 18). Only the Pending tab is available to customers viewing a bill without signing in. (If the customer opens a bill without signing in, a My Bills page opens that shows only the bill the opened and only the Pending tab is visible.

**Note:** eBills never added to a customer's account are not included in the customer's My Bills list.

If the customer opens a bill without signing in, a My Bills page opens that shows only that bill and only the Pending tab is visible.

Additional information on the My Bills page is in the Online Help available on the public Pay.gov site.

### 10.1 Pending Tab

The Pending tab lists bills that need to be paid. It shows a summary of the bill, including the amount.

- Clicking the Pay Bill button takes the customer directly to the bill's payment page.
- Clicking the View Bill button opens the online bill where the customer may see additional information. A link on the bill takes them to the bill's payment page.

Bills paid are no longer listed under this tab.

#### 10.1.1 Multi Bill Pay

If any Pending Bills are eligible to be included in a single, bulk, payment, a "Pay All" button will be shown in the top portion of the page with a list of the bills that can be included in the payment below it. The page may show bills grouped according to the common payment type allowed for all the bills in the group. Each group would have its own "Pay All" button.

Customers can deselect any listed ebill.

If a customer chooses to make the single payment for a group, Pay.gov calculates the bulk payment amount and displays it to the customer on the payment page. The customer then authorizes and makes payment.

In the background, Pay.gov allocates part of the bulk payment to each included ebill.

### 10.2 Completed Tab

The Completed tab is only displayed for customers who have signed in to Pay.gov. It lists summaries of

- bills paid by the customer

- bills submitted by the customer (example: a bill not associated with a payment)
- Retired bills. For example, if an agency overlays a bill, the old bill is retired and listed under the Completed tab. See section 5.1 for details.

Only the View Bill button is available in the Completed tab; clicking it shows the online version of the bill.

## **11 Declined and Canceled Payments**

### **11.1 Declined Plastic Card and Digital Wallet Payments**

When a plastic card or digital wallet payment for an ebill is declined, Pay.gov returns the ebill to the pending state. The customer can attempt to pay the bill again using any allowed payment method.

### **11.2 Canceled Payments**

When a customer cancels a previously submitted one-time payment, Pay.gov returns the ebill to the pending state. The customer can attempt to pay the ebill again using any allowed payment method.

If the payment is canceled by an agency, no new payment attempt can be made.



## 12 Notifications and eMail Bounceback

### 12.1 Bill Notification eMail

Pay.gov is able to send ebilling notification emails on your agencies behalf.

Notifications include

- Bill notices  
This notifies customers that a new ebill is available on Pay.gov.
- New ebill notice with the access code  
This notifies customers that a new ebill is available to be viewed on Pay.gov and includes the access code required.
- Reminder  
For ebills that have a due date, this notifies customers that the ebill is unpaid and its due date is approaching.  
For recurring bills, customers receive a reminder email ten days before the payment draft date, which may be different from the due date if the due date is on a weekend or a bank holiday.  
For recurring bills that have been set up for automatic bill pay, customers receive a reminder email ten days prior to the due date of each bill in the series.
- ACH payment reminders for ebills with future dated, deferred or recurring payments  
This notifies customers that their savings, checking or business account is about to be debited for a bill payment they set up to be paid automatically.
- ACH settlement notification alerting customers of when their ACH ebill payment settled.  
This notifies customers that their bill payment from their savings, checking or business account is complete and the account has been debited.
- Notification confirming that an ebill has been paid
- Access code resent  
This notifies customers that the access code for their ebill has been resent to them.

All customer email addresses associated with an ebill receive a copy of these notifications. This ensures they are all aware of any action taken and helps avoid duplication, such as paying an ebill twice.

#### **12.1.1 eBill Notice eMail Bounceback**

Pay.gov tracks delivery of all ebill notification emails it sends on behalf of your agency. You can retrieve information on any undelivered ebilling notifications through the online Email Exceptions Billing Query (see section 11.1.2).

### 12.2 Paid eBill Notification

During ebilling cash flow application configuration, agencies have the option to receive email notices whenever an ebill is paid.

### **12.2.1 Paid eBill Notification eMail Bounceback**

Pay.gov keeps track of undeliverable paid ebill email notices. Agencies can view this information through the online Email Exceptions report. See the *Pay.gov Agency Guide to the Reporting Service and Activity Files* for details.

## **12.3 Unpaid Bill Reminder**

Ten days prior to the due date of an unpaid bill, Pay.gov automatically emails a reminder to the customer that their bill is still unpaid.

### **Figure 20: Sample pending bill reminder**

THIS IS A TEST TRANSACTION

This is a courtesy email to inform you that you have a bill that is due in 10 days.

You may sign in to your account at <http://> and click on the My Bills link, then go to the Pending tab. If you have any questions regarding this payment, please contact  at  or [@paygov.com](mailto:).

Application Name: app\_2001  
Agency Tracking ID: 777777  
Transaction Amount: \$16.00  
Payment Due Date: 05/31/2018

THIS IS AN AUTOMATED MESSAGE. PLEASE DO NOT REPLY.

## 13 eBilling Implementation

This section describes the steps involved to develop and implement an eBilling application for an agency.

1. Complete the Agency Configuration Template (ACT) with the Bureau of the Fiscal Service representative assigned to your project. The ACT includes a section related to eBilling where various options can be selected. In addition, Appendix D of the ACT allows the agency to define the data that will be displayed on the bill, along with the business rules to process that data.
2. As part of completing the ACT, designate two eBilling Enrollment Contacts. The Enrollment Contacts are agency employees responsible for all aspects of monitoring your agency's eBilling activity, including
  - requesting, resending and canceling access codes
  - coordinating an monitoring eBilling activity
  - receiving and acting on communications from Pay.gov regarding deactivated access codes
3. Create or amend your agency's Access Request Worksheet (ARW) for your certificate account to add the ACC and BIL roles. These roles grant your certificate account access to the Pay.gov eBillingService and AccessCodeService. You may need to contact their Pay.gov Agency Liaison to complete this process.
4. If your agency wishes to include Treasury Account Symbol (TAS)/Business Event Type Code (BETC) accounting information in your ebills, you must first set up the option with the Bureau of the Fiscal Service. For new agency implementations this is part of the ACT process. Pay.gov then includes this information in your agency's application configuration. Both credit and debit (refunds, for example) BETCs must be included for each TAS created. Please note that Pay.gov limits the number of TAS/BETCs to a maximum of 99 for an agency application.
5. Set up a Pay.gov Certificate Account for use with eBilling. For new agencies this is part of the ACT process. Agencies using a certificate with any other Pay.gov web service may use it for the eBilling Web Services.
5. Provide details on how the ebill or notice should look when it is displayed on Pay.gov.
6. Your agency's technical staff generates and formats the data file. If TAS/BETC has been implemented, the TAS/BETC label and amount elements should be included. You have the option of populating these elements with values at the time an actual billing data file is submitted to Pay.gov. Pay.gov associates them to your agency's collection applications and to detailed TAS/BETC data. The TAS/BETC data and amount are passed through to Pay.gov as part of the collection and also returned to you in your billing report(s). For details on TAS/BETC implementation see the *Agency Guide to TAS/BETC Classification*.
7. Conduct initial testing in Pay.gov's QA environment; send the web service requests to <https://qa.tcs.pay.gov/ebilling/services/eBillingService> or <https://qa.tcs.pay.gov/accesscode/services/AccessCodeService>.
8. Generate the request ebill data file and send it to Pay.gov QA via the Internet using HTTPS.

9. Your agency performs testing of the eBilling application in the QA environment. Once all tests have been performed and the eBilling application is working satisfactorily, your agency representative signs to indicate that testing has been completed and that the application is ready for production.
10. The eBilling application is moved into the Pay.gov production environment. Send the production web service requests to <https://tcs.pay.gov/ebilling/services/eBillingService> or <https://tcs.pay.gov/accesscode/services/AccessCodeService>.

### **13.1 Implementation Requirements**

To implement eBilling your agency should have resources available that have a solid understanding of the eBilling Web Service, the technical ability to develop the ebill and access code request files, an understanding of HTTPS and web services, and the technical capability to test the application by sending in files and reviewing the results.

### **13.2 Time Required to Implement an eBilling Application**

It is not possible to say exactly how long it takes to set up a bill because a number of factors affect the development time at both Pay.gov and your agency, the main factor being the complexity of the ebill being requested. Once the requirements document (ACT) is completed and signed by your agency, the Pay.gov team will provide an estimate of when you will be able to begin testing.

### **13.3 QA Testing Considerations**

We suggest that you conduct the following tests during testing in the QA (agency test) environment:

- Verify that eBilling accounts are being created
- Send in all varieties of ebills that your application uses
- Verify notifications are being received when appropriate, are being received by the correct customer, and are correct
- Verify that access codes are being created, including some requiring sign in and some not requiring sign in
- Verify that emails containing access codes are being created, are being received by the correct customer, and are correct
- Verify that misaddressed emails bounce back correctly
- Verify that ebills appear in the Pending Bills list after the customer's access has been activated
- Verify that ebills load correctly and contain all the information submitted in the XML file
- Validate that payable ebills can be paid and processed by Pay.gov

## **14 Online Reports and Activity Files**

Online reports are available detailing all eBilling activity. Reports may include information for both ebills and bills created before the adoption of eBilling. The following reports provide information on ebills:

- Billing Search
- Activity File Download
- Email Exceptions
- The Activity File Service

For information on accessing these reports see the *Agency Guide to the Reporting Service and Activity Files*.



## 15 Customer Support

Customer support is provided by the Federal Reserve Bank of Cleveland. Assistance with accessing the website, hosted forms processing, collections, and so on is provided for agency customers. Technical support is also available for problems such as balancing payments, database integrity, information security, and other issues relating to the smooth operation of the services provided to the agency.

### 15.1 Contact Information

Hours: 7:00 am to 7:00 pm Eastern Time  
Monday through Friday, closed bank holidays

Phone: (800) 624-1373

Email Address: [pay.gov.clev@clev.frb.org](mailto:pay.gov.clev@clev.frb.org)



## Appendix A Duplicate Agency Tracking IDs

**Important!** You may not assign the same agency tracking id to separate transactions, even if the transactions are for two separate collection applications. The only exception is bill overlays.

With the exception of bill overlays, each agency tracking ID assigned to your transactions must be unique within your agency, whether the transactions are for the same application or are for different applications.

For example, an agency has two ebilling applications. One application creates an ebill with an agency tracking ID of 1122334455. Later, the other application attempts to create a second ebill using the same agency tracking ID. Pay.gov will not create the second ebill because duplicating agency tracking IDs is not allowed. A Pay.gov system message informs the agency that the agency tracking ID is already in use.

### Bill Overlays: Assigning the Same ID to Two Related eBills

The same agency tracking ID can be used for an ebill that overlays a previous ebill.

1. An ebill is created with the Agency Tracking ID of 1122334455 and sent to a customer.
2. Later, the agency requests creation of a new ebill for the same customer BAN and assigns it same Agency Tracking ID of 1122334455.
3. Pay.gov validates the Agency Tracking ID and determines it has already been used for a previous ebill for that BAN.
4. Pay.gov checks the status of the first instance of the Agency Tracking ID (the first ebill).
5. If the first ebill is Pending, Pay.gov retires it, changes its status to Completed and shows it only under the My Bills Completed tab. This essentially cancels the first ebill while preserving its information for tracking purposes.
6. Pay.gov then issues the second ebill using the duplicated Agency Tracking ID. This overlays the first ebill
7. If the status of the first ebill is Paid, Pay.gov rejects the request to issue a new ebill with the same Agency Tracking ID and notifies the agency. The agency must then submit a new request for an ebill using a different Agency Tracking ID.