



Visual Design Guidelines for Web Applications

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Introduction

The purpose of this document is to provide visual design standards and guidelines for web-based applications developed for ERCOT. This guide should be used in conjunction with ERCOT User Experience Guidelines.

Note: Some of the examples may contain non-standard information because the standards may have been introduced after the example application was developed.

1. Complex Application vs. Simple Applications

If the application is self-contained with its own navigation, it is treated as a standalone application that is accessed from the Market Information System (MIS). If the application is small and contains only a few screens, it is embedded within the navigation structure of the MIS. When screens are embedded within MIS, they should not have their own navigation system and the screen size is limited to 600 pixels wide. An example of this would be a query screen and the results screen.

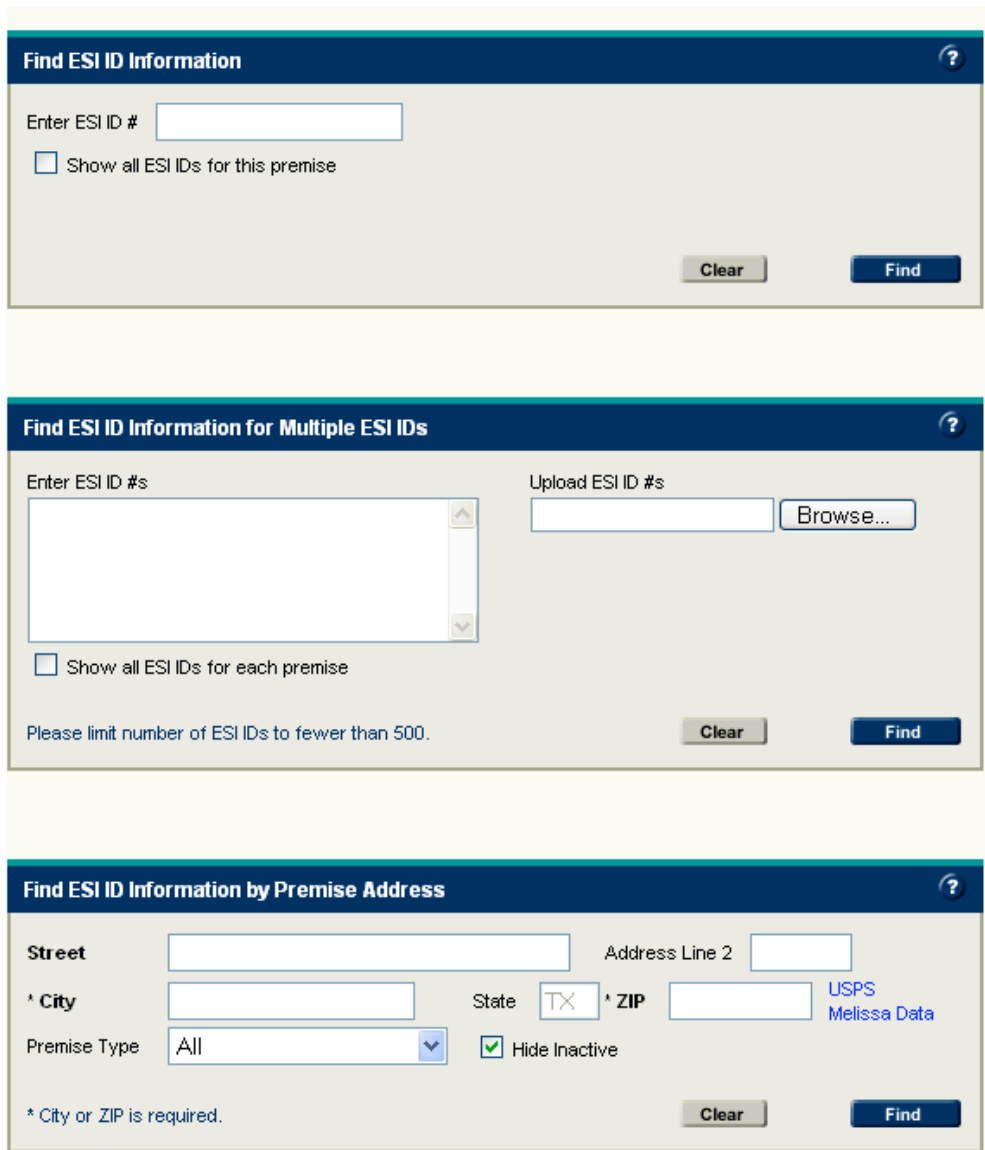


Figure 1: This example shows a simple application. Because the entire “application” consists of these screens and their resulting reports, they are contained in the content area of the MIS, rather than existing as a standalone application.

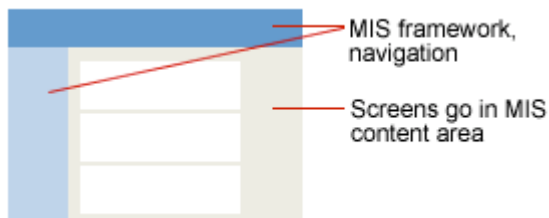


Figure 2: This diagram illustrates where the screens are displayed in the MIS. Navigation within MIS provides access to these screens.

Figure 3: This example shows the main entry page for a complex application.



Figure 4: This diagram shows the relationship between MIS and a standalone application. Users can access the application from the MIS navigation menu, but the browser window refreshes with the new application, causing the user to “leave” MIS. Of course, users may bookmark the application and accessing it without going through MIS.

2. Screen Size

If the information being presented has many columns and rows, the screen size should be set at 100%. If the information being presented is in a form or is meant to be read, then the screen size should be set at no more than 770 pixels wide. Some applications use both – a summary screen may be set to 100% and forms that open in new windows are 700 pixels wide.

The intent with this standard is to avoid horizontal scrolling at all costs and to make reading easier by limiting the screen width.

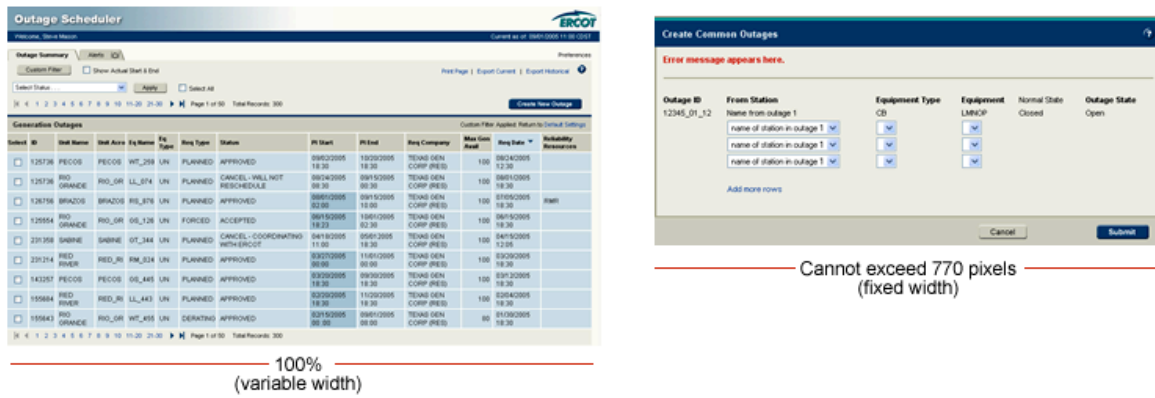


Figure 5: This example illustrates when to use variable width and when to use fixed width screens.

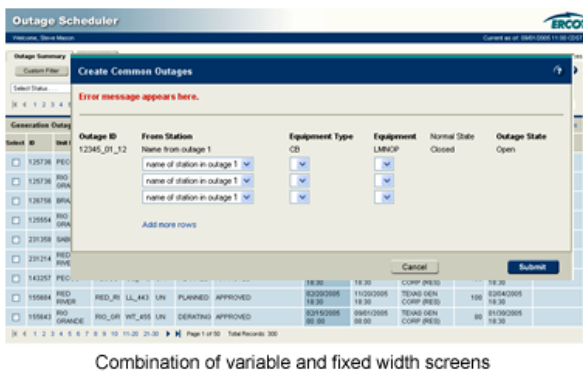


Figure 6: This example using both variable and fixed width screens in the same application. The smaller screen opens in a new window.

3. Screen Composition

Regardless of the screen width, screens generally have four components:

- Title Bar
- Banner
- Header
- Body
- Footer

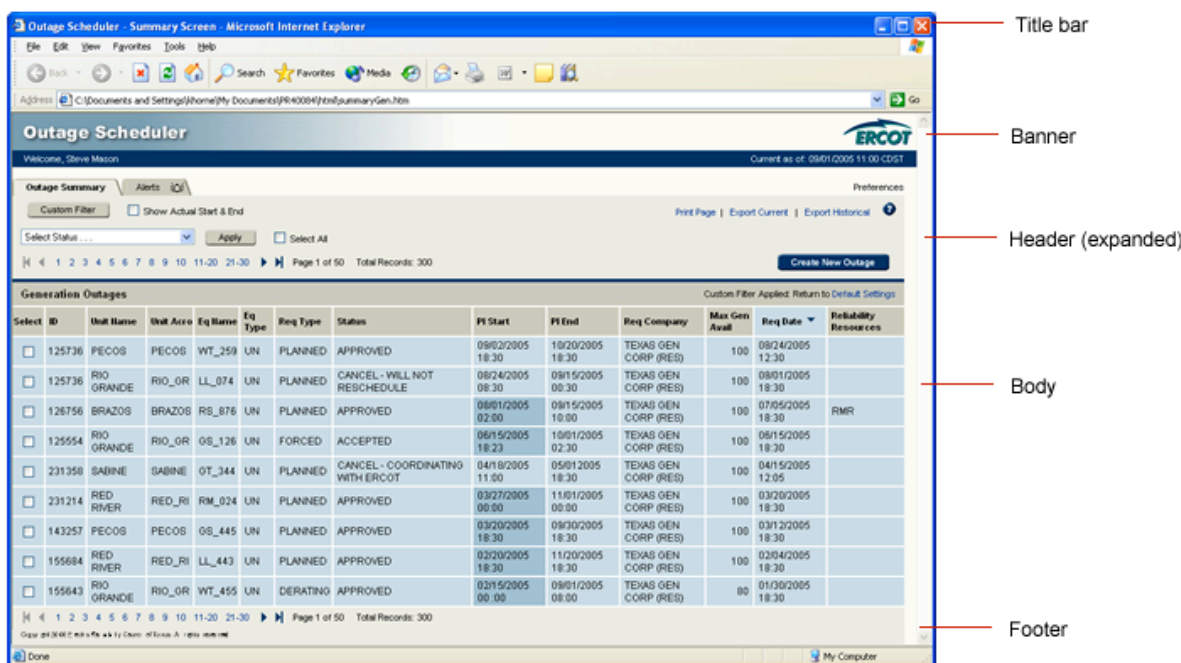


Figure 7: This example shows the five page components. In this example, the header and footer contain additional information beyond the required elements.

3.1. Title Bar

The browser title bar contains the name of the application and the name of the screen. The two names are separated by space-hyphen-space.



Figure 8: Naming conventions for title bar

3.2. Banner

The banner is used on full applications and contains the following required elements:

- ERCOT logo
- Name of the application
- Link to Texas Market Link and ERCOT.com

If the application includes a search capability, the search box displays in the upper-right corner of the banner.

A secondary banner may be used to display a welcome message, the date and time and/or logout links.

The background color may vary between applications, but must comply with the ERCOT color palette. (See ERCOT Visual Design Guidelines)

The banner appears on every screen, except popups.

Note: Some of the banners shown in other examples in this document are from earlier applications that pre-dated the standard for banners. The examples below are correct.



Figure 9: The top banner includes only the required banner elements. The middle banner shows an alternative layout when a search feature is used. The third banner shows an optional row underneath to display the user name and date.

3.3. Header

The header is used at the top of screens within MIS, popup screens (screens that open in a new window) and may be used to display multiple section on the same screen.

ERCOT uses a dark blue background in the header on screens designed for submitting information, performing a query or in some way requesting information.

ERCOT uses a taupe background in the header on screens designed to present results, reports, or other information with which the user has little or no interaction.

The header contains these elements:

- Name of the screen
- Help icon

The name of the screen should be brief, yet descriptive. On request screens, begin the name with a verb, such as Create Outage Request, Schedule an Extract, etc. On reports screens, begin the name with a noun, such as Outage Detail, Scheduled Extracts. The name on the header should match the name of the screen in the title bar.

Occasionally, additional information may be included in the header, if there is justification for doing so.



Figure 10: Simple header for a query screen.



Figure 11: Header for a report - this one also includes a button.

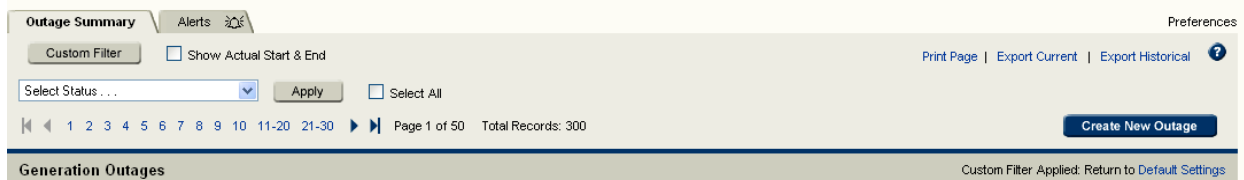


Figure 12: This example illustrates an expanded header that includes pagination, navigation tabs, and other commonly used features.

3.4. Body

The body refers to the main content area of the screen. Generally, screens will appear as forms or reports or a combination of the two. Refer to the form fields section of this document for how to display form fields and their labels.

When displaying report-type information, follow general guidelines for type and color. Avoid the overuse of rules and borders, which can make the information appear cluttered. Use color with purpose – strong colors work well for highlighting and neutral colors work well for overall background color.

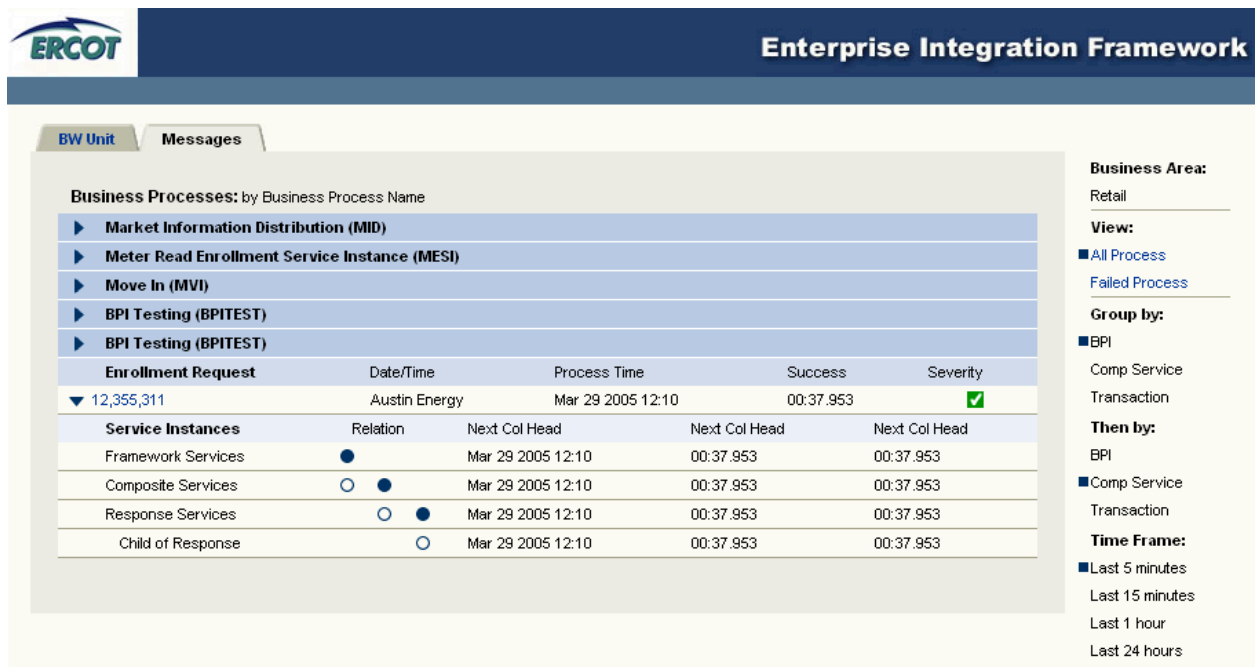


Figure 13: This example illustrates a report that expands and collapses. The column at the right allows users to filter results. Tabbed navigation at the top allows access to different reports. Neutral colors and minimal use of borders and rules maintain a clean appearance.

Outage Detail ?

Your outage request was successfully submitted.

Outage ID	12345	Requestor	Steve Carpenter
Last Updated	03/15/2005 11:00 View History	Primary Phone	512 248 1234
Request Date	03/15/2005 11:00	Secondary Phone	512 248 1234
Acknowledged	Y		

Category	Transmission	Equipment Type	CB
Request Type	Planned	Equipment	CB12345
Request Status	Received at ERCOT v	Normal State	Open
Company	TXU Electric	Outage State	Closed
Region	Region 1	Voltage	138
From Station	Station Name	Emergency Restoration	36 hrs
From Station Acro	RTYU		
To Station	Station Name		
To Station Acro	RTYU		

Planned Start	Mar	01	2005	00	00	Earliest Start	Mar	01	2005	00	00
Planned End	Mar	01	2005	00	00	Latest End	Mar	01	2005	00	00

Actual Start	Mar	01	2005	12	mm	Actual End	Mar	01	2005	12	mm
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Requestor Notes

Mar 12, 2005, G. Smith: **Here is my earlier comment.**

Mar 12, 2005, G. Smith: **Here is the one before that.**

Remedial Actions or Special Protection Systems

Reviewer Notes

Related Actions ... v
Go
Reset
Close
Update

Figure 14: This screen uses rules to break up logical groups of information.

Figure 15: This real-time monitoring screen uses an alternate color for the rows to distinguish it from the default screen.

Figure 16: This example combines forms and reports in a single screen.

3.5. Footer

The footer appears below the body. It contains:

- Any buttons used to submit, cancel or perform another type of interaction affecting the information contained in the body of the screen.
- May contain additional information, such as page navigation.



Figure 17: This footer also includes page navigation.



Figure 18: Footer with buttons

4. Form Fields

Screens that display form fields have standards for the following:

- Error/confirmation message display
- Labeling
- Field formats
- General layout
- Interaction controls

4.1. Error/Confirmation Message Display

The top of the body section of the screen should display error and confirmation messages. Whenever the user submits a form, the system should display either a confirmation or an error message. Error messages should address the specific error with instructions for how to correct it. (See Error Messages)

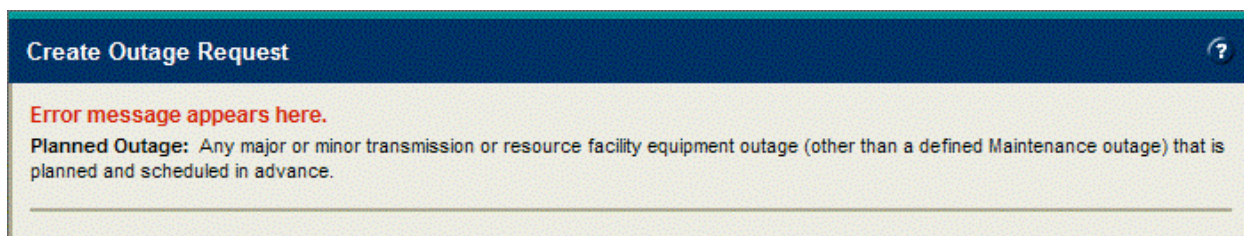


Figure 19: This example shows placement of an error message.



Figure 20: This example shows placement of a confirmation message.

4.2. Labeling

Labels should appear to the left of the form field. Labels should appear in plain text when they are optional and bold text when they are required. Labels for fields that are conditionally required appear in bold with an asterisk preceding the label, and a footnote in the footer that explains the condition.

Figure 21: This example shows required, optional and conditional fields.

4.3. Field Formats

General usability guidelines apply to the selection of form fields as follows:

4.3.1. Text Fields

Size text fields appropriately for the amount of information that will be entered. Display labels to the left of the text field, unless there are multiple rows of text fields, in which case the label would be on top.

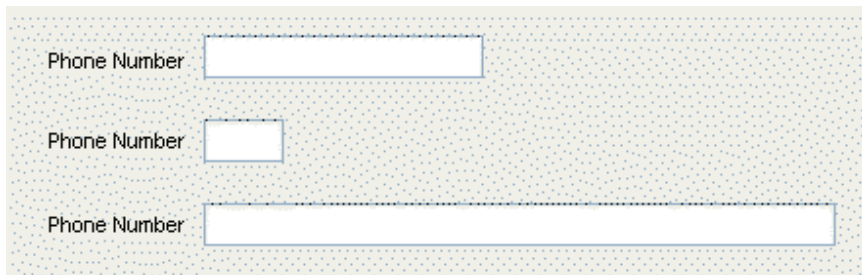


Figure 22: The first text field is the appropriate size for a phone number. The second example is too short and the third is too long.

4.3.2. Single Selection

Use radio buttons for options having a single selection. Only set a default selection when that default is selected most of the time. Display labels to the left of the radio buttons, leaving sufficient space (five non-breaking spaces or its equivalent) between radio buttons so it is clear which label describes the button.

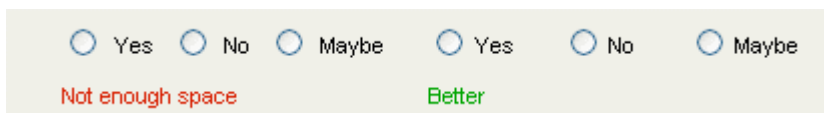


Figure 23: This example shows how spacing affects usability. This concept also applies to check boxes.

4.3.3. Multiple Selection

Use check boxes for presenting a few options. Use list boxes when presenting many options. Always include instructions for how to select multiple options in a list box.

Select Equipment

Outage Category Transmission Generation

Station Name

Equipment Types CB DISC LS MOS

Equipment

CB12345
 CB23456
 CB45678
 DIS09876
 DIS87654

To select multiple items, hold the Ctrl key while selecting the items.

Figure 24: This example shows the preferred means of displaying: 1. single select, few options, 2. single select, many options, 3. multi-select, few options and 4. multi-select, many options.

4.4. Date and Time Format

When displaying dates and times, follow these guidelines:

4.4.1. Date Format

Mmm dd, yyyy

Mmm: The month of the year. The preference is to display the month in its full form, not abbreviated.

dd: The day of the month

yyyy: The full four-digit year

- A comma appears after the day, if the month is displayed in its full form (preferred).
- No punctuation is used if the month is abbreviated.
- No dashes (-) or slashes (/) are used in this format.

Examples:

January 1, 2007 – Correct

1-2-2007 – Incorrect. This could confuse the user. Does the number 1 represent the month and number 2 represent the day, or vice versa?

1/2/2007 – Incorrect. This could confuse the user. Does the number 1 represent the month and number 2 represent the day, or vice versa?

Jan 1 2007 – Correct. This abbreviated format is used when real estate is at a premium.

4.4.2. Time Format

HH:mm:ss z

HH: The hour of the day represented by the 1 – 24 clock. This supports ERCOT’s “hour-ending” standard.

mm: The minutes of the hour. This field is optional, you are not required to display minutes unless business requirements call for them.

ss: The seconds of the minute. This field is optional, you are not required to display minutes unless business requirements call for them.

Z: The time zone, shown as CST, CDT. This field must be present when any hour is displayed. Displaying the zone distinguishes the second 1 am hour during the fallback schedule of Daylight Savings Time. You may only spell out the time zone when business requirements call for it.

Examples:

14 CST – Correct. The zone is required, the minutes and seconds are optional

14:30:56 CST – Correct. All fields are shown in their correct format.

5:30:45 p.m. CST – Incorrect. The hour shown is in non-military time. Also, a.m. and p.m. should not be displayed.

14 – Incorrect. There should be a time zone. Is this CST or CDT?

15:30 – Incorrect. There should be a time zone. Is this CST or CDT?

15:30 CST – Correct. The hours and minutes are displayed with the time zone.

When displaying date and time, the date and time are separated by a single space:

March 7, 2007 13:10:06 CDT

4.5. General Layout

Form layout should minimize scrolling. In most cases, labels and form field should be flush left. If the number of fields requires the user to scroll, consider arranging the field in two columns. If the form contains a large number of fields, consider grouping them into logical categories, separated by a rule or a secondary heading.

Forms that have an excessive number of fields may require the use of additional navigation elements, such as tabs, to break up the form.

4.6. Interaction Controls

ERCOT applications use image buttons for most types of interactions. When more than one button is used, the predominant (or most likely alternative) is blue, while the other buttons are taupe. The default button appears in the lower right corner of the footer and the additional buttons appear to the left, with sufficient spacing between.



Figure 25: The default button displays at the far right of the footer.

5. Icons

When using icons, refer to the ERCOT icon library as your first source for icons. If an icon doesn't exist that meets your needs, you may create a new one, following ERCOT visual design guidelines for style. The icon should be added to the library with a description of its purpose, so it may be leveraged for other applications.

All icons require alt text tags.

6. Error Messages

Error messages should use business language, not technical language or jargon. Error messages should use positive, rather than negative language.

Technical: **Planned Start must be equal to or greater than three days from the current date.**

Business: **Planned Start must be at least three days from today.**

Negative: **Approved outages may not be extended.**

Positive: **Approved outages may only be revised to shorten duration.**