# ENSEK Test Plan

## Introduction

### Purpose

This document outlines a test plan for the ENSEK testing website to ensure the websites functionalities (registration, login, buying energy and selling energy) work as expected.

### Scope

The scope includes testing of the main functionalities of the website such as, registration, login and buying energy, as well as other essential pages such as the home screen.

## Objectives

* Ensure that the website’s core functionalities work as expected.
* Verify that the registration and login processes and pages work as expected.
* Confirm that users can successfully buy and sell energy
* Validate the accuracy of energy prices and the availability of energy types

## Testing Scope

* Functional Testing: Core functionalities like registration, login, buying energy and selling energy
* UI/UX Testing: Ensuring the layout is user-friendly and simple to navigate
* Performance Testing: Confirming that the website performs well

## Test Approach

* Manual functional testing of all core functionality
* Cross browser testing (Chrome, Firefox and Edge)
* API testing for energy buying and selling
* Automated UI testing once manual testing has been completed

## Test Environment

* Operating Systems: Windows 11 and 10, macOS
* Browsers: Latest versions of Chrome, Edge, Firefox and Safari for macOS testing

## Test Cases

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | Test Name | Test Description | Priority | Test Type |
| TC\_001 | User Registration | Verify if a user can register with valid credentials | High | Functional |
| TC\_002 | User Login | Verify if a user can log in with valid credentials | High | Functional |
| TC\_003 | Buy Energy (Gas) | Verify that a user can buy gas energy and units are updated correctly | High | Functional |
| TC\_004 | Energy Price Display | Verify that energy prices are displayed correctly for all energy types | Medium | Functional |
| TC\_005 | Error Handling for Zero Energy Units | Verify that entering 0 units of energy displays an error | Medium | Functional (Negative) |
| TC\_006 | Pages load correctly | Verify that all pages load correctly | High | Functional |
| TC\_006 | Spelling across the website is correct | Verify all pages and details have correct spellings | Medium | UI/UX |
| TC\_007 | User Login (Invalid Credentials) | Verify if a user cannot use invalid credentials to login | High | Functional |

## Test Suspension and Entry / Exit Criteria

### Entry Criteria

Testing can start when the following conditions are met:

* The test environment is fully set up and accessible by the testers.
* The test plan, test cases and reviewed and approved.
* The website build to be tested is ready for testing.
* Any necessary test data has been created.
* Test tools and resources are available and ready to use.

### Exit Criteria

Testing will be considered complete when the following conditions are met:

* All planned test cases have been executed.
* All high-priority and critical defects have been identified, documented and either resolved or deferred.
* No unresolved blocker defects remain that would prevent the website from going live.
* All test reports have been prepared and delivered.

### Test Suspension Criteria

Testing will be suspended if any of the following conditions occur:

* A critical blocking defect is identified that prevents further test case execution (e.g. the website crashing).
* The test environment is unavailable of unstable, preventing further progress.
* Significant changes to website functionality are introduced, requiring rework of test case.
* Required test data is unavailable, incorrect or corrupted.
* Performance issues arise that degrade the system’s ability to operate under normal testing conditions.

In the event of suspension, testing will resume once the issue has been resolved.