Ensek Energy Test Portal -Test Plan

| **DOCUMENT INFORMATION** | |
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| **APPROVALS** | | | |
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| **Name** | **Title** | **Signature** | **Escalation** |
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| **DOCUMENT CIRCULATION** | | | |
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| **Version** | **Date** | **Person/Group** | **Author** |
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**1. Objective** To evaluate the ENSEK Energy Portal’s front-end application for functionality, usability, and UI consistency, ensuring that core workflows such as purchasing energy and interacting with stock and pricing logic behave as expected. Supporting API calls (from Swagger) may be referenced to validate data integrity where needed.

**2. Scope**

**In Scope:**

* Energy type selection and purchase workflow (e.g., Gas, Electricity, Oil)
* Validation of energy stock availability and pricing
* Visual consistency and responsiveness (layout, alignment, styling)
* Error handling (e.g., invalid inputs)
* Stock reset mechanism
* Backend validation via API (e.g., verify stock change after purchase)
* Validation of New User Registration (Layout,form behavior, validation rules)
* Validation of Login functionality (Layout,auth flow, validation rules)
* Navigation flow testing, ensuring all pages and links function as expected

**Out of Scope:**

* Full backend/API testing (covered under a separate effort)
* Load and performance testing
* Accessibility (WCAG) compliance validation
* Mobile or cross-browser compatibility testing
* Security testing (e.g., authentication bypass, vulnerability scans)

**3. Test Environment**

* **Browser**: Chrome (V 138)
* **Operating System :** Windows
* **Environment**: ENSEK Test Portal (URL: https://ensekautomationcandidatetest.azurewebsites.net/)
* **API Base URL** : https://qacandidatetest.ensek.io/

**4. Test Approach**

* **Manual UI Testing**: Risk-based testing focusing on key business scenarios
* **Exploratory Sessions**: Time-boxed tests focusing on high-value paths
* **Data Verification**: Cross-check UI behavior with backend data via API (where needed)
* **Bug Reporting**: Capture findings with screenshots, steps to reproduce, and expected vs actual behavior

**5. Key UI Test Scenarios**

| Scenario | Description | Expected Result |
| --- | --- | --- |
| User Registration | A new user completes the registration process with valid details | User is successfully registered and redirected or notified |
| User Login | A registered user logs in using valid email and password | User is authenticated and granted access to the portal |
| Energy Purchase | Logged-in user selects an energy type and enters a valid quantity | Purchase is completed, confirmation displayed, and stock updated |
| Stock Reset | The "Reset" function is triggered to replenish stock levels | Stock is successfully restored to initial levels |
| Price Consistency | Price per unit is noted before and after purchase | The displayed price remains consistent before and after the transaction |

**6. Negative Test Scenarios**

| **Scenario** | **Description** | **Expected Result** |
| --- | --- | --- |
| Invalid Registration Input | Attempt to register with an invalid email format and/or weak password | User receives validation error; registration is not allowed |
| Duplicate Registration | Attempt to register with an email that is already registered | System prevents registration and displays an appropriate message |
| Invalid Login Credentials | Attempt to log in with an incorrect email or password | Access is denied with a clear error message |
| "Remember Me" Session Handling | Log in with "Remember Me" checked, then close and reopen the browser | Credentials/session are securely retained per expected behavior |
| Invalid Energy Purchase Quantity | Enter a non-numeric, negative, or zero quantity | System blocks the action with a validation error |
| Promotional Information Accuracy | Promotional messages or pricing do not match actual transaction behavior | Discrepancy is logged as a defect if promotional display is misleading or incorrect |

**7. Supporting API Validation**

| **API Check** | **UI Trigger** | **Purpose** |
| --- | --- | --- |
| Check stock before/after purchase | Purchase via UI | Confirm backend reflects stock change |
| Validate energy types | Load Energy catalog page | Match UI list with API /energy endpoint |

8**. Risks & Assumptions**

* Ongoing development work may result in incomplete or unstable features during testing, impacting test coverage or accuracy
* UI may change frequently, affecting selectors or layouts
* Test data remains stable throughout test execution
* Environment instability (e.g., intermittent downtime, inconsistent API responses) may delay test execution

**9. Deliverables**

* Test case document
* Bug reports
* Summary test report (pass/fail stats, key findings, UI issues)

**10. Tools Used**

* **UI Testing**: Manual browser-based
* **API Support**: Swagger UI
* **Bug Tracking**: Excel/Word/Google Docs
* **Documentation**: Word / Google Docs