

The Business Case

Tariff Interoperability Service

Building the tariff interoperability service to enable secure data sharing, supporting consumer choice, fostering innovation, and maintaining compliance



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Executive Summary

Background

The **Smart Secure Electricity System (SSES)** is a government initiative aimed at facilitating demand-side flexibility in the energy market, which is crucial for supporting the decarbonisation of electricity. As the reliance on intermittent renewable energy sources like wind and solar increases, there is a growing need for effective management of energy consumption. This includes enabling small-scale devices, such as electric vehicles and heat pumps, to optimise energy use and reduce carbon emissions.

A key component of this initiative is tariff interoperability, which will ensure that energy tariff data is standardised and made accessible to third-party service providers via Application Programming Interfaces (APIs). This will empower consumers to make more informed decisions about their energy usage and costs, fostering greater competition and innovation in the energy market.

The Department for Energy Security and Net Zero (DESNZ), leading the consultation, has positioned RECCo as the “minded to” delivery body. This business case presents our contribution to building the **Tariff Interoperability Service** required if RECCo is confirmed as the delivery body. It does not cover the broader business case for SSES Consumer, which is to be provided by DESNZ. This initiative will ensure the secure sharing of tariff data through APIs to support consumer choice while maintaining high standards of data integrity and compliance.

High-Level Objectives: Why Investment Is Needed

Standardised Tariff Data

- Develop and support the implementation of a standardised API for tariff data, ensuring consistent, secure, and accessible sharing of tariff information.

Performance Assurance Framework

- Establish a dynamic, API-based Performance Assurance Framework (PAF) to ensure ongoing compliance with the tariff interoperability standard. This framework will continuously monitor and validate data integrity, system performance, and compliance across all involved market participants. It will help to maintain transparency and trust between suppliers, third-party service providers, and consumers.

Improved Consumer Access & Choice

- Enable third-party service providers to access tariff data, enabling consumers to easily compare energy tariffs, switch plans, and optimise their energy usage, leading to more informed and empowered decisions.

Support for Decarbonisation Efforts

- Facilitate dynamic pricing and demand-side response initiatives to reduce carbon emissions by encouraging energy consumption at optimal times and reducing reliance on fossil fuels.

Enhanced Market Efficiency & Compliance

- Streamline the data-sharing process and ensure compliance with new REC (Retail Energy Code) governance standards. The PAF will play a key role in maintaining these efficiencies by continuously verifying compliance with the tariff data standards.

Investment Project Budget

The budget will be allocated to:

- Develop the REC Change to hold the governance mechanisms needed to oversee the API's functionality and ensure alignment with regulatory requirements.
- Develop and implement the standardised API and data-sharing framework.
- Establish a Performance Assurance Monitoring system to ensure near-dynamic monitoring, data integrity, and ongoing compliance with REC standards.
- Engage and train stakeholders to promote adopting the new system by energy suppliers and third-party providers.

- **FY25/26:** £548k investment project allowance.
- **FY26/27:** £548k investment project allowance.
- **For FY27/28:** the service is assumed to go live on 1 April 2027 and will be classified as a REC Service in the three-year financial projections outlined in the 2025 Forward Work Plan. The estimated annual service cost is circa £500k.

Business Need

The current energy market operates with inconsistent and fragmented approaches to tariff data sharing. Energy suppliers each have methods for handling and communicating tariff information, leading to several key challenges and limitations.

Lack of Standardisation

- There is no standardised format or process for energy tariff data across suppliers, making it difficult for third-party service providers and Energy Smart Appliances (ESAs) to access and use this data consistently. This limits the ability of consumers to compare and switch between tariffs, reducing market competition and consumer choice.

Data Inaccessibility for Smart Appliances

- Currently, ESAs – such as smart meters, electric vehicles, and heat pumps – cannot easily interact with energy tariffs across multiple suppliers. This hinders their effectiveness in optimising energy consumption and contributing to demand-side flexibility.

Fragmented Supplier Systems

- The varying methods by which suppliers communicate tariff data create inefficiencies and potential inaccuracies. Suppliers and third parties must individually manage how they provide or receive data, increasing operational costs and complexity.

Limited Consumer Empowerment

- Without easy access to tariff data through third-party platforms, consumers have limited opportunities to engage with innovative solutions that could help them reduce costs and optimise energy usage, particularly in a world of dynamic pricing and flexible energy tariffs.

The Opportunity

By implementing a standardised tariff interoperability solution, including the development of tariff data APIs and a PAF, this project presents a significant opportunity.

- **Empower Consumers:** Provide consumers with greater access to accurate, dynamic tariff information, enabling them to make informed decisions and optimise their energy usage.
- **Enhance Market Efficiency:** Streamline data-sharing processes, reducing operational burdens for suppliers while improving the accessibility of data for third-party services.
- **Support Decarbonisation:** Enhance demand-side flexibility, contributing to the reduction of carbon emissions by optimising when and how energy is consumed.
- **Ensure Compliance:** Establish a governance framework that ensures suppliers meet regulatory standards, protecting consumer data and ensuring transparency across the energy market.

Impact of Project

If RECCo is confirmed as the delivery body and the Tariff Interoperability initiative is successfully delivered, the following key impacts and outcomes are expected across the energy market, consumers, and regulatory environment:

- A standardised API will be developed and implemented, ensuring that all energy suppliers share tariff data in a machine-readable and interoperable format. This will allow greater consistency and reduced complexity for suppliers and third parties.
- Consumers will access a broader range of tariff options through third-party platforms, enabling better comparison and optimisation of their energy usage. This will allow smoother transitions to optimal tariffs and access to more dynamic pricing models.
- Smart appliances – such as electric vehicles, heat pumps, and smart meters – can interact with energy tariffs in real-time, optimising energy consumption based on price signals, optimising demand-side flexibility.
- Facilitate the provision of tariff information as the basis for innovation and new products and services to retail energy consumers and minimise any potential consumer harm from tariff data not being transparent.

Description

Objectives

Support Development of Standardised Tariff Data API

- **Goal:** Support the delivery of a fully functioning, standardised API for tariff data sharing across all energy suppliers by the end of Phase 1.
- **Measure of Success:** 100% of participating suppliers adopt and implement the API, enabling seamless communication of tariff data to ESAs and third-party providers.

Standardise Data Provided by Suppliers

- **Goal:** Ensure all energy suppliers provide tariff data in a standardised, machine-readable format, enabling seamless integration with the API and third-party services.
- **Measure of Success:** 100% of participating suppliers consistently submit tariff data in the required format, with no discrepancies or inconsistencies, and third-party platforms and ESAs successfully process all data.

Establish Near-Dynamic Performance Assurance Framework

- **Goal:** Implement a PPAF that provides near-dynamic monitoring and compliance verification for the APIs.
- **Measure of Success:** Continuous data integrity and performance monitoring for 100% of participating suppliers using the API, with zero significant compliance breaches or data failures.

Ensure Regulatory Compliance & Governance

- **Goal:** Perform the REC Change to manage tariff data-sharing standards and ensure compliance with REC requirements.
- **Measure of Success:** 100% compliance with the governance framework and REC requirements, with all participating suppliers adhering to the new standards and protocols for tariff data sharing.

Scope

In-Scope

- Develop standardised API schema
- Standardise tariff data formats
- Monitor real-time performance assurance
- Implement REC Change/governance framework
- Engage and train stakeholders (testing and early development)

Out-of-Scope

- Procure the data API (to be done by data providers)
- Develop ESAs
- Upgrade supplier internal system
- Implement consumer-facing applications
- Changes to existing Tariff structures

Key Stakeholders

- Energy Suppliers
- Third-Party Service Providers
- ESA Manufacturers
- Ofgem and DESNZ
- RECCo
- Consumers

Value for Money

The Tariff Interoperability Project addresses inefficiencies in tariff data-sharing and unlocking significant market and consumer benefits. The proposed spend is justified by the long-term gains in market efficiency, consumer empowerment, and alignment with national decarbonisation goals (which should be set out in DESNZ's business case for SSES):

Efficiency Gains for REC Parties

- Streamlined Data-Sharing Processes
- Cost-effective compliance
- Reduced errors and data inconsistencies

Increased Market Innovation & Competition

- Enabled third-party services
- Reduced barriers for new entrants

Consumer Benefits & Cost Savings

- Empowered consumers with better information
- Demand-side flexibility and savings
- Improved decarbonisation

Deliverables & Outputs

Output/Deliverable
High-Level Requirements Document
Data Specification Draft
REC Changes & Governance Framework
Performance Assurance Strategy
Risk Assessment Document
Stakeholder Engagement Plan
Dynamic Performance Assurance Service

Stakeholder Engagement

The timeline is currently driven by DESNZ, subject to stakeholder consultation. Should RECCo be selected as the delivery body – which we anticipate will be before the start of the financial year – RECCo will adapt as required. However, for transparency, this is our current thinking on activities that should take place to meet DESNZ's challenging timeline in the financial years 2025/26 and 2026/27.

Timeline

FY2025/26

- **Complete Design & Requirements Gathering**
 - Complete detailed requirements gathering from energy suppliers, ESA manufacturers, and third-party providers.
 - Establish a base document for REC Change.
 - Start technical design of the PAF.

- **API Development & Early Testing**
 - Engage suppliers and service providers.
 - Perform early pilot testing with a small set of stakeholders to identify technical challenges.
 - Conduct full-time API development, including the initial build of the Minimum Viable Products (MVPs) (to be done by data providers).

- **Performance Assurance & Governance Framework**
 - Develop and implement the near-dynamic PAF.
 - Develop REC Change.
 - Mid-point review with the Working Group to gather feedback and make necessary adjustments.

- **Full Pilot & System Testing (July to December 2025)**
 - Conduct broader pilot testing across multiple suppliers and third-party providers.
 - Ensure API functionality and compatibility with third parties.

FY2026/27

- **Go-Live & Rollout**
 - Finalise and deploy the fully operational API for tariff interoperability.
 - Launch near-dynamic performance monitoring across all participating suppliers.
 - Post-launch support and troubleshooting.

- **Post-Implementation Monitoring**
 - Conduct initial post-go-live performance reviews.
 - Monitor system adoption and usage metrics.
 - Address any remaining technical or operational issues.

- **Project Close**
 - Review the final project and report on lessons learned.
 - Transition ongoing monitoring and governance to Business as Usual.

Risk Analysis

Supplier Non-Compliance with API Integration

- **Probability:** Medium
- **Impact:** High
- Energy suppliers may face technical or operational challenges in adopting and integrating the standardised API, leading to delays or incomplete implementation.
- **Mitigation:** Engagement through the TIWG and REC Change process to support organisations in making changes and considering changes or phasing to create a realistic implementation timeline.

Delays in API Development

- **Probability:** Medium
- **Impact:** High
- Unexpected technical challenges or resource constraints could delay the development and deployment of the API, impacting the project timeline.
- **Mitigation:** Utilise expertise in this domain and reuse as much as possible from what suppliers and their system providers have already completed.

Data Security Breaches

- **Probability:** Low
- **Impact:** High
- As tariff data is shared across suppliers and third parties, there is a risk of data breaches or unauthorised access to sensitive consumer information.
- **Mitigation:** Include security-by-design in the design phase.

Lack of Stakeholder Buy-In

- **Probability:** Medium
- **Impact:** Medium
- Some stakeholders, such as energy suppliers or third-party providers, may resist transitioning to the new standardised tariff data-sharing framework due to perceived operational burdens or misalignment with their internal processes.
- **Mitigation:** Engage through the TIWG and REC Change process and utilise licence changes where applicable.

Technical Incompatibility with ESAs

- **Probability:** Low
- **Impact:** Medium
- There may be compatibility issues between the API and various ESAs, limiting the effectiveness of the project.
- **Mitigation:** Cross-team working in the SSES programme to help create alignment. Utilise existing standards and do not create new ones.

Regulatory Changes

- **Probability:** Medium
- **Impact:** High
- Regulatory changes or delays in updating supplier license conditions could affect the alignment between the REC Code changes and the broader regulatory framework.
- **Mitigation:** Cross-team work in the SSES programme to help create alignment. Intelligent drafting of license and REC is needed to avoid misalignment.

Expenditure Plan

Category	%	Comments
Governance & Engagement	17%	Project management, governance, and stakeholder engagement
REC Service Development	25%	REC and data specification drafting
Performance Assurance	58%	Performance assurance against the REC, plus dynamic performance assurance to support uptake

Assumptions

- Cost estimates are based on the rate cards provided for external roles.
- Full-time and part-time allocations for key roles are assumed over specific phases (e.g., Developer full-time for 6 months, part-time for 3 months).
- All energy suppliers will adopt the API and integrate it into their systems during the project period.

At a high level, the estimated costs for each financial year are outlined as:

- **FY25/26:** £548k investment project allowance.
- **FY26/27:** £548k investment project allowance.
- **FY27/28:** Circa £500k per annum annual service cost, classified as REC Services within the three-year financial projections included in the 2025 Forward Work Plan.

These costs will be supported by existing RECCo staff – and can be apportioned between the following categories for project delivery (FY25/26 and FY26/27).

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