RETAIL ENERGY CODE

REC TARIFF INTEROPERABILITY SOLUTION WORKING GROUP (TISWG)

3 JULY 2025

AGENDA

AGENDA ITEM	PRESENTER
Welcome and Introduction	Chair
Confirmation of Agenda	Chair
Review of Action Log	Secretary
Finalised Assumptions	Sarah Jones
Assumptions under Discussion	Sarah Jones
Public Tariff Pricing Data – Data Standard	Sarah Jones
Non-Functional Requirements	Kevin Redmond
Q&A	Chair
AOB	Chair

REVIEW OF ACTION LOG

ACTION REF.	ACTION	OWNER(S)	ORIGINAL TARGET (ACTUAL TARGET)	UPDATE	STATUS
RECTISWG_25_0604_01	RECCo to consider Member's suggestion to use tariff IDs instead of names for API requests.	The Chair	12/06/2025	An update will be presented at TISWG on 3 July 2025 under Agenda Item 7.	Propose to Close
RECTISWG_25_0604_03	RECCo to develop and distribute scenario-based use cases to showcase real world assumptions.	The Chair	05/07/2025	A Technical Approach to the Proof of Concept was demonstrated at TISWG on 12 June 2025. A Proof of Concept was demonstrated at TISWG on 19 June 2025.	Propose to Close
RECTISWG_25_0604_06	RECCo to share initial draft of the data set being considered for standardisation.	The Chair	Mid-July TBC	An update will be presented at TISWG on 3 July 2025 under Agenda Item 6.	Propose to Close

REVIEW OF ACTION LOG

ACTION REF.	ACTION	OWNER(S)	ORIGINAL TARGET (ACTUAL TARGET)	UPDATE	STATUS
RECTISWG_25_0604_08	RECCo to provide TISWG an update on active tariffs, clarifying the definition and customer information.	The Chair	21/06/2025	RECCo have advised that some use cases will require all live tariffs even when these are not available to new customers, whereas others will only require the tariffs available to customers. This needs to be differentiated in the API definition. An update will be presented at TISWG on 3 July 2025 under Agenda Item 6.	Propose to Close
RECTISWG_25_0604_09	TISWG Members to complete the survey for upcoming TISWG Meetings and design assumptions.	TISWG Members/Chair	18/06/2025	RECCo thanks TISWG Members for providing valuable feedback.	Propose to Close
RECTISWG_25_0612_02	RECCo to review the wording of Phase One Considerations: Customer Changes Tariff and Change of Supplier.	RECCo/Chair	19/06/2025	An update is reflected in the assumptions under Agenda Item 4.	Propose to Close

FINALISED ASSUMPTIONS

RETAIL ENERGY CODE

Through the TISWG sessions we have presented, received feedback, and refined key design assumptions which have informed the Proof of Concept and the overall solution design.

1

Any user can access Route One (Public Data) Tariff Pricing Data via the API

Changes made: *Distinguishing for Route One access only. Inclusive of all Users, not just Optimisers.*

2

Users can access Route Two (Private Data) Tariff Pricing Data once they have completed the defined registration process and have the customer's consent

Changes made: *Moving away from 'no accreditation' to the light touch registration model, the changes to the assumptions reflects this.*

3

Users who wish to access Route Two (Private Data) Tariff Pricing Data will be required to agree and adhere to terms and conditions which will be set out in the REC. Failure to adhere to the terms and conditions may result in the revocation of the User's access to the API

Changes made: *In line with light-touch registration model, introduces enforcement for bad actors enshrined within the REC, locking the User Terms & Conditions into the REC.*

4

The technical solution for delivery of the Tariff Data API solution covering Route Two will include a mechanism for consumers to consent to their tariff pricing data being accessed

Changes made: *None, retains original wording.*

FINALISED ASSUMPTIONS

RETAIL ENERGY CODE

5

The OAUTH2 protocol will be used to validate consumer consent within the Tariff Interoperability solution

Changes made: *None, retains original wording.*

6

Interactions between the customer and the User are outside the scope of the REC

Changes made: *None, retains original wording. While we acknowledge that the solution needs to protect customers, we believe this can be achieved through the supplier Requirements, User Registration, and the Access Agreement.*

7

Non-domestic suppliers will not be required to provide details of bespoke contracts, but can opt to do so if they wish

Changes made: *Additional detail to clarify this is applicable to the non-domestic suppliers only, across both Route One and Route Two.*

8

Route One (Public Access) tariff pricing data to be made available using the REST (Representational State Transfer) API style

Changes made: *None, retains original wording.*

9

Suppliers will be required to make Endpoint information available for User usage

Changes made: *None, retains original wording.*

FINALISED ASSUMPTIONS

RETAIL ENERGY CODE

10

Suppliers shall provide Endpoint details for each MPID (subject to derogations)

Changes made: *None, retains original wording.*

11

RECCo will maintain a register of Supplier Endpoints and make this available to users.

Changes made: *Removal of the alternative option which was for an obligation to be placed on Suppliers to publish and maintain Endpoints in an easily accessible location.*

12

There will be a mechanism for Suppliers to apply to Ofgem for a derogation against the requirements to provide tariff pricing data

Changes made: *None, retains original wording.*

13

Endpoints will be provided from each REC Qualified Supplier, excluding those subject to an Ofgem derogation

Changes made: *None, retains original wording.*

14

Standard error codes will be defined that all Suppliers will be required to apply. These will be documented in the API Technical Specification.

Changes made: *None, retains original wording.*

FINALISED ASSUMPTIONS

RETAIL ENERGY CODE

15

Suppliers will be required to provide User Notifications for a) change in unit price and applicable time periods, b) when a customer changes tariff, c) where there is a change in Supplier, d) when a customer has revoked consent

Changes made: *Addition of the specific contexts where a User Notification is required*

16

Suppliers will be required to hold and maintain information on the relationships between customers and Users for the purposes of enduring consent

Changes made: *None, retains original wording.*

17

The customer must be able to revoke consent, through a request to either the Supplier or the User

Changes made: *None, retains original wording.*

ASSUMPTIONS UNDER DISCUSSION

RETAIL ENERGY CODE

There are three remaining assumptions where we need to achieve consensus. Our intention is to finalise these assumptions today so that they can inform the finalised solution design.

1 Webhooks will be used for managing notifications to Users

Summary of the feedback and challenge:

- While it was noted that Webhooks were useful and generally the industry standard approach, there may be issues regarding on-premises optimisers blocking Webhooks, or the inability of Webhooks to get around firewalls.
- It was stated that Webhooks would be more expensive compared to other options.

Alternatives proposed:

- The use of MQTT on top of a message bus.

Our position:

- While we acknowledge the feedback, our position is that Webhooks offer the best option for the development of the MVP.
    - Webhooks are industry standard. Our aim should be to maintain familiarity for suppliers, allowing for the time and effort involved in building the MVP to be minimised.
    - The industry cost associated with development and implementation of a Webhook based solution would be lower than the proposed alternatives.
    - Phase Two of the Tariff Interoperability project can examine this in more detail, especially considering potential linkages with Consumer Consent.

ASSUMPTIONS UNDER DISCUSSION

RETAIL ENERGY CODE

There are three remaining assumptions where we need to achieve consensus. Our intention is to finalise these assumptions today so that they can inform the finalised solution design.

2 Under Route Two, where specific tariff information is provided, the message will include MPXN data to allow for scenarios where the customer has multiple MPXNs

Summary of the feedback and challenge:

- It was noted that inclusion of the MPXN within the payload would support multi-meter setups (i.e. home and EV)
- From a privacy perspective, the point was raised that Users could request a subscription for an MPXN, which would provide them with an opaque token from the Supplier which does not include the MPXN. The data which is then issued does not contain the MPXN, only including the User's token details.

Our position:

- The privacy risk associated with sending the MPXN data is low because the MPXN will be decoupled from all relevant customer context and is sent via encrypted message.
- While we acknowledge there are some benefits to the proposed alternative, we do not believe that this additional layer offers benefits which outweigh the additional complexity.
- Under the alternative solution, Users will still be required to receive the MPXN – in this case only once for the purposes of the token, therefore we believe the additional complexity required is not proportionate to the risk.

ASSUMPTIONS UNDER DISCUSSION

RETAIL ENERGY CODE

There are three remaining assumptions where we need to achieve consensus. Our intention is to finalise these assumptions today so that they can inform the finalised solution design.

3 Once a customer has granted consent to their Supplier to share their tariff pricing data with the User, it will be held for a period of [x]

Summary of the feedback and challenge:

- We note that there are no issues with consent, or the consent mechanism. What is for debate is the proposed length of time for which consent is held for. In the TISWG, we proposed a 12-month period, based on some relevant examples.

Alternatives proposed:

1. Consent, once granted does not expire. Consent is held for as long as the customer has a relationship with the same Supplier and User.
2. Consent expires after a period of 36 months.
3. The consent mechanism is split into separate elements, including:
    a) One-off consent for Users to access only the tariff name of a customer who knows their Supplier but not their tariff.
    b) Consent which does not expire for the purposes of Users receiving notifications from the Supplier API.

Our position:

- We believe a two-pronged approach, combining 3a and 3b, best balances customer data privacy and customer experience.
- This would allow customers to consent to one-off access allowing a User to access the customer's tariff pricing data where they do not know their tariff name.
- Where persistent access is required for the purposes of providing User notifications, the consent does not expire.

ROUTE ONE (PUBLIC DATA) DATA STANDARD

RETAIL ENERGY CODE

We are keen to confirm the required dataset for Route One (Public Data). Below we have listed the complete set of fields and formats for sharing tariff pricing data, together with additional contextual information that may be required, for discussion.

At previous working groups we aligned on the full set of tariff pricing data items, focusing on the fields and correct formats

Recent TISWGs have defined two routes for requesting data and a mechanism for event notification

Today's focus is to capture all information required within the basic 'provide tariff pricing data' message

Specifically for Route One:

1. Identification of tariff – propose inclusion of tariff name and version. Are there any other required identifiers?
2. Filtering of tariffs by location – propose including distribution network information. Are tariffs also defined separately for postcode area?
3. Tariff Status - propose including a status field to differentiate between Live and Dead tariffs
4. Import / Export metering – propose including information on whether the tariff is for import or export meters.
5. Do we need to understand whether the tariff is commodity or non-commodity?

ROUTE ONE (PUBLIC DATA) DATA STANDARD

RETAIL ENERGY CODE

The below table outlines what the data regarding tariff pricing would potentially look like.

Field (Level 0)	Field (Level 1)	Field (Level 2)	Field (Level 3)	Field (Level 4)	Type	Example	Description
tariff_schedule					object []		Tariff schedule object.
	time_of_use				string	DYNAMIC	Type of time-of-use (TOU) tariff: STATIC or DYNAMIC
	standing_charge				number	0.321	£ per day.
	months				string []	All	Array of 3-letter abbreviation on months names when the tariff is valid (Jan...Dec). "All" specifies all months.
	days_and_hours				object [] or null		null if the value of 'time_of_use' is 'DYNAMIC'
		days			string []	All	Days when schedule is valid. Options are either day numbers (1...31) or Weekday (Mon...Fri), Weekend (Sat, Sun) or All.
		hours			object []		Array of hours when the schedule is valid.
			valid_from		string	00:00:00	Hours of day from when the schedule is valid. In HH:MM:SS format.
			valid_to		string	00:00:00	Hours of day to when the schedule is valid. In HH:MM:SS format.
			rate		object []		Tariff rate array object.
				to_kwh	number or null	30.5	Specifies up to what kWh tariff applies. Used for tier-based tariffs. If tariff has no tiers, leave as null.
				value	number or null	0.12	Non-null value means £ per kWh.

NON-FUNCTIONAL REQUIREMENTS (SUPPLIERS)

RETAIL ENERGY CODE

Thank you to all stakeholders who completed the Supplier and Optimiser non-functional requirements, KPIs, and Service Level Obligations survey. We have used these inputs to inform the draft below. Other inputs include the recent NFRs defined for the MHHS DIP, CSS and EES.

Category	Requirement	Reasoning
Availability	Suppliers will expose the API with > [x]% uptime *- Options range from 99.9% (from Survey), 99.5% (EES) or 98% (DIP)*	Ensures the service is reachable almost all the time.
Performance	Suppliers shall ensure 95th percentile response time of <[x]s for typical queries *- Options range from 100ms (from Survey) or variable timeframe from 2s to 8s dependent on level of volume received.*	Ensures that in average and peak period of requests, the API responds in a reasonable timeframe
Scalability	Supplier APIs will sustain [x] requests per second in steady state, scaling to [x] requests per second for up to [x] minutes *- We are seeking stakeholder views on what would be a reasonable requirement that balances views of Suppliers and Users*	Ensures that the system can handle normal load and short spikes, such as midnight price changes
Data Freshness	Supplier must refresh the public cache at least once every 24 hours	Ensures that tariff pricing data is up to data. Suppliers can still push live updates
Data Accuracy	Suppliers must ensure data correctness > 99.99% in line with the agreed Data Standard	Ensures that errors in data and misalignment to the Data Standard are extremely rare
Error Rate	Supplier API error must not exceed 0.1%	Ensures that fewer than 1 in a 1000 request fails
Message Buffer	Supplier APIs must be able to buffer messages for a period of at least 72 hours in the event of a failure for Users to communicate with the API	Ensures delivery of messages after outages.
Filtering	Supplier APIs must support filters by DNO region, postcode, tariff type and effective date	Ensures that Users can request the specific data which they require
Security	Supplier Endpoints must be secured by TLS with OAuth2.0 tokens and enforce per-client rate limits	Ensures that traffic is encrypted and the only authorised Users have access, with specific usage quotas
Logging & Auditing	Suppliers must record request and response data for 90-day retention	Ensures that secure and auditable history of requests and response is available in the event of any issues

NON-FUNCTIONAL REQUIREMENTS (USERS)

RETAIL ENERGY CODE

Thank you to all stakeholders who completed the Supplier and Optimiser non-functional requirements, KPIs, and Service Level Obligations survey. We have used these inputs to inform the draft below.

Category	Requirement	Reasoning
Rate Compliance	Users will not exceed their allocated rate limit of [x] requests per second per Supplier, unless where the response scales to [x] requests per second for [x] minutes *- This will align with what was agreed on previous slide re: Supplier scalability*	Ensures that the Supplier API is protected from overload, ensuring fair access
Concurrency Limit	Users will have no more than [x] concurrent connections per client token *- We are seeking stakeholder views on what would be a reasonable requirement that balances views of Suppliers and Users*	Prevents a single client from exhausting server connection pools, degrading performance for others
Caching	Users must cache responses for minimum [x] seconds *- We are seeking stakeholder views on what would be a reasonable requirement that balances views of Suppliers and Users*	Ensures that the API is not overload with repeated identical requests
Back-off and retry	Where errors are received, Users must wait >[x] seconds before retrying with maximum of [x] attempts available *- We are seeking stakeholder views on what would be a reasonable requirement that balances views of Suppliers and Users*	Ensures that the Supplier API can recover without repeated immediate retries
Filtering	Users must only include the required filter parameters with each request	Minimises the server processing and bandwidth, lower infrastructure costs
Error Handling	Users must log all error responses	Helps both Users and Supplier APIs diagnose issues rapidly
Data Retention	Users must delete tariff pricing data which is held if it is older than 7 days unless explicitly required for compliance	Limits storage costs and ensures Users don't operate with outdated tariff information

QUESTIONS

RETAIL ENERGY CODE

AOB

RETAIL ENERGY CODE