RETAIL ENERGY CODE

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01	Proposal Plan
02	Impact Assessment
03	**Consultation**
04	Final Recommendation

CHANGE REPORT

R0179 - PROPOSAL FOR LIMITING QUERIES IN EES API CALLS (SINGLE QUERY PER API CALL)

DOCUMENT VERSION	1.0
PROPOSED IMPLEMENTATION DATE	7 NOV 2025
IMPLEMENTATION APPROACH	BIG BANG

RESPONSIBLE COMMITTEE	CHANGE PANEL	**CHANGE PATH**	SELF-GOVERNANCE
PRIORITY STATUS	LOW	**URGENCY**	STANDARD
IMPACTED STAKEHOLDERS	EES SERVICE PROVIDER, EES USERS		

LEAD ANALYST	SUBJECT MATTER EXPERT
HOLLY LAW	GLENN SHEERN
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OVERVIEW

This Issue has been raised proposing to establish a limit on the number of queries permitted within a single Application Programming Interface (API) call.

The Code Managers minded to position is that the Change Panel:

- **APPROVE** the proposed change solution;
- **APPROVE** the proposed implementation approach; and
- **APPROVE** the proposed implementation date of 07 November 2025.

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BACKGROUND

1 SUMMARY

This Issue has been raised proposing to establish a limit on the number of queries permitted within a single Application Programming Interface (API) call. APIs are designed to be used for small amounts of data often, rather than infrequently for large volumes of data. APIs are typically used synchronously within a business process, rather than asynchronously.

As there is potential for the occurrence of performance degradation and system instability when a large number of queries are made in a single API call to the Electricity Enquiry Services (EES) API, the aim would be to prevent overwhelming the system and ensuring consistent response times and reliability.

This proposal originally suggested implementing a limit of 1000 queries per single API call, however after conversations with the EES Service Provider, the proposal is now to implement a limit of one query per single API call. This adjustment is intended to enhance the Enquiry Service's capacity to consistently meet user demands without impacting its operational performance.

2 PROBLEM STATEMENT

The absence of a limit on the number of queries (batch processing) within a single API call could cause performance issues and system instability. As a result, system responsiveness may degrade when a large number of queries are made in a single call, impacting user experience and hindering the ability of the EES API to consistently meet user demands.

3 IMPACTS

CONSUMERS
N/A

REC SERVICE PROVIDERS
EES Service Provider

REC PARTIES AND SERVICE USERS
EES Users

REC DOCUMENTS / PRODUCTS
EES API Technical Specification

The EES API Technical Specification will need to be updated via a sperate change if the solution is approved for implementation.

MHHS DESIGN	MHHS DATA SPECIFICATION	MHHS CODE DRAFTING
No Impact	No Impact	MHHS Drafting Releases expected and as such, both the EES Service Definition and EES API Specification will need to take any interim changes into account.

A direct MHHS impact is not anticipated, however it is expected that the implementation of MHHS will increase the volume of API requests (for Migration and the addition of the Annual Consumption item). This may mean that Parties are intending to put more queries into a single call.

4 CROSS-CODE IMPACTS

No Cross-Code impacts have been identified.

5 PROPOSAL PLAN

Milestone	Activity	From	To
Definition		**01 Mar-25**	**29 May-25**
	Solution Development	Completed	Completed
	Impact Assessment	April	May
Change Proposal		**30 May-25**	**14 Jul-25**
	Business Case Assessment	June	June
	Consultation	June	June
	Solution Refinement	July	July
	Final Determination	July	July
Voting		**15 Jul-25**	**15 Jul-25**
	Appeal Window	16 Jul-25	30 Jul-25

6 STAKEHOLDER ENGAGEMENT

On 21 June 2024, the Code Manager issued an information request to industry to seek feedback on this proposal. The request was open for 10 Working Days and received three responses. These responses can be found here.

This change was then presented at the Change Issue Group on the 01 August 2024 where attendees were invited to share views and feedback on the submission. This will be

incorporated by the Code Manager in the development of this Issue, and by the EES Provider during their impact assessment.

7 PRIORITY STATUS AND URGENCY

Category	Significance / Resource impacts / Urgency	Further selection / breakdown	Score (0-3)	Weighting	Weighted Score
Impacts	Consumer Impact	Indirect	1	27	27
	Retail Markets Impact	Innovation and Market Arrangements	1	17	17
	RECCo / REC Party / REC Service Provider Impact	Operational Effectiveness and Efficiencies	2	7	13
		Legal and Regulatory Compliance	0	14	0
Resource	Complexity / Effort / Duration		2	9	18
Strategic Alignment	Contribution to/ Alignment with the objectives of the REC		1	17	8
	Contribution to/ Alignment with RECCo's Forward Work Plan		2		17
Urgency *(The need to progress a change to meet a targeted date)*		Other Planned Activity	0	10	0
				Overall Priority Score (rounded)	100

Priority Status	LOW
Change Proposal Type	STANDARD

SOLUTION

8 PROPOSED SOLUTION

The proposal is to implement a limit of one query per single API call.

This adjustment is intended to enhance the Enquiry Service's capacity to consistently meet user demands without impacting its operations. Additionally, the introduction of this limit would necessitate revisions to Section 3 (Service Functionality) and Section 5 (User Limits) of the Electricity Enquiry Service (EES) Service Definition and relevant sections of the EES API Interface Specification.

Upon implementation of a hard limit, the following notification prompts would be implemented;

- The EES API would return a specific error message indicating that the user has exceeded the rate limit.
- Exceeding the rate limit could cause slower response times for your queries.

Additional information provided by the Service Provider can be found here.

PRELIMINARY ASSESSMENT

9 SUMMARY OF IMPACT ASSESSMENT ACTIVITY

9.1 SERVICE PROVIDER IMPACT ASSESSMENTS

SERVICE PROVIDER	• The Service Provider has provided impacts data that shows that there is a clear correlation on number of queries that are put into a single API call and the response time. • The higher the volume of queries into one API call, the higher the response time

	• This adversely impacts the performance of other users generating calls in a standard one query to one call approach. • The following costs were identified: Design Phase: £2,358, Build Phase: £10,924, Test Phase: £5,854 • The Service Provider would need the following for implementation timescales: Design: 2 days, Build: 10.5 days, Test: 6.5 days • No dependencies or technical risks were identified.

9.2 REC PARTY IMPACT ASSESSMENTS

Two impact assessment responses were received from 2 Energy Suppliers.

ENERGY SUPPLIERS	• Both Energy Suppliers acknowledged that API latency is an issue, and this solution would improve this. • One of the suppliers fully supports the solution as the increase in performance timescales would be of benefit to them. • One respondent believes the proposed solution is overly prescriptive and may negatively affect user performance in other areas. • One supplier said there would be a small, limited cost to implement this change, but did not provide any amount, and the other supplier said there would be no cost. • One supplier provided further information on benefits and impacts to the business; however, these responses were marked confidential.

The non- confidential responses can be found here.

10 BUSINESS CASE ASSESSMENT

10.1 COSTS

COSTS	DESIGN/ DEVELOPMENT COSTS	TESTING COSTS	ONGOING OPERATIONAL COSTS
[SERVICE PROVIDERS]	£13,282	£5,854	£0 PER ANNUM

10.2 BENEFITS

TANGIBLE BENEFITS	
REDUCTION IN LATENCY ISSUES	Limiting queries to one per single API call, will see an improvement to performance between 49 to 249 seconds.
INTANGIBLE BENEFITS	
ALIGNEMENT ACROSS FUELS	It is best practice for APIs to have a one query per API call ratio and this change would bring this in line with the Gas Enquiry Service (GES), creating alignment across the fuels.

10.3 COST BENEFIT ANALYSIS

Considering the low relative Service Provider cost to implement, and the limited to no cost to Parties, the Code Manager believes that the tangible benefits outweigh the cost.

11 CASE FOR CHANGE

SELF GOVERNANCE

The Code Manager considers that there is a positive case for change for implementing this Change Proposal on the basis that the proposed solution:

- Effectively resolves the problem statement;
- The cost and effort of implementing and operating the proposed solution is proportionate and cost-effective and
- Brings EES in line with GES, creating alignment across the fuels.

12 APPENDIX

CHANGE PROPOSAL	Link
CONSULTATION REGISTER	Link

13 GLOSSARY

TERM	DEFINITION
Electricity Enquiry Services (EES)	means the service described as such in the EES Service Definition.
Electricity Enquiry Service Provider	means the provider of the Electricity Enquiry Service.
Gas Enquiry Service (GES)	means: (a) until CSS Go-Live Date, the enquiry service provided pursuant to the UNC which allows authorised users to access Gas Retail Data; and (b) from CSS Go-Live Date, the service of that name procured by RECCo pursuant to the Data Access Schedule.