Department for Energy Security & Net Zero

Annex B – TI API Technical Specification

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Introduction

1. This annex provides a link to the updated TI API Technical Specification for TI Phase 1a.

2. Information on the changes that have been made following review of responses to the August 2026 consultation and further engagement with industry is set out in Annex A with further information on the introduction of gzip compression, Etag and Last-Modified Requests below.

3. A guide to navigating the TI API Technical Specification can be found in Annex B of the August 2026 consultation[1].

Link to update TI API Technical Specification

4. The proposed TI API Technical Specification for TI Phase 1a is an OpenAPI specification hosted on the REC Developer Portal and can be found at the following link:

APIs | Developer Portal

Use of GZIP Compression and Etag and Last-Modified Requests

5. In addition to the changes referenced in Annex A, the following enhancements have been made to the TI API Technical Specification following consultation in August 2026:

    a. The HTTP 200 code has been updated to include the header and associated information needed around gzip compression.

    b. The HTTP 304 code has been updated to include the headers and associated information needed around Etag and Last-Modified so TI Users are not required to call and process the same payload if no changes have occurred.

[1] https://retailenergycode.co.uk/alt/wp-content/uploads/2026/08/TI_Phase_1a_Technical_Consultation_Annex_B-TI-API-Technical-Specification-v2.pdf

6. The changes made in paragraphs 5a and 5b are described in more detail below.

GZIP Compression

7. Concerns were raised that there were no maximum payload sizes or pagination mechanisms. To address these concerns, government has decided to facilitate file size compression for the Get Tariffs Response and Get Tariff Details Response market messages.

8. The proposed changes have been made based on consultation feedback that file sizes could be large and compression will improve performance for both the TI Energy Supplier and TI Users.

9. TI Energy Suppliers will support gzip compression where requested by TI Users via the Accept-Encoding header. The details of which are outlined in the HTTP 200 code. Where a response has been compressed, the response includes the header Content-Encoding: gzip. Gzip compression is proposed as the default compression method as it is a feature frequently used in API layers and it is not expected to require additional building into the API layer.

10. Tariff response lists in the Get Tariffs Response market message will typically compress by 85-95%, so for an uncompressed response of around 20MB, the transferred file would be approximately 2-3 MB.

Etag and Last-Modified Requests

11. Concerns were raised around repeated API message traffic with no clarification on when a TI Energy Supplier would need to trigger a HTTP 304 response in the event that there was not a change to a previously responded to request.

12. TI Energy Suppliers will be required to support Etag headers and allow for the use of If-None-Matching and If-Modified-Since headers to reduce requests to send unchanged tariff lists.

13. TI Energy Suppliers can return Etag and Last-Modified headers on every response to the Get Tariffs Request market message. On subsequent requests, the TI Users can send If-None-Match [Etag] or If-Modified-Since: [Last-Modified value] in the header.

14. If the tariff data remains unchanged, the TI Energy Supplier responds with a HTTP 304 Not Modified and no JSON body. Otherwise, it returns a HTTP 200 response with the updated data and new header values. Where both headers are sent, If-None-Match takes precedence.

15. The details of the Etag and Last-Modified headers are provided in the HTTP 304 code in the API Technical Specification.

16. Both the compression and conditional Tagging outlined above allow TI Users to poll for changes without repeatedly downloading unchanged tariff pricing data, reducing bandwidth and response times for TI Users and reducing the load on TI Energy Supplier systems.