

TransBnk Electricity Bill API

Version: 1.0

Release Date: 13-May-2024

2. Overview

Brief Description of What the API Does

The **TransBnk Electricity Bill API** provides functionality for retrieving electricity bill details for customers. It includes two main components:

1. Operator Code Fetch API

- Retrieves operator codes corresponding to states.
- These codes are required to identify the correct electricity provider before fetching bill details.

2. Electricity Bill API

- Fetches detailed electricity bill information such as:
 - Customer Name
 - State
 - Address
 - Mobile
 - Email
 - Bill Amount
 - Bill Number
 - Document Link
 - Requires the customer's **CA number** and **operator code** as input.
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Use Cases and Benefits

Use Cases

- **Utility Bill Payment Platforms:** Automate bill fetching for payment processing.
- **Banking Applications:** Allow customers to view and pay electricity bills directly.
- **Fintech Solutions:** Aggregate bills from multiple states and operators.
- **Customer Service Portals:** Enable support teams to verify and assist with bill details.

Benefits

- **Automation:** Reduces manual entry and errors.
 - **Real-Time Data:** Ensures up-to-date bill information for faster processing.
 - **Scalability:** Supports multiple states and operators for nationwide coverage.
 - **Security:** API key authentication and IP whitelisting for secure access.
 - **Enhanced Customer Experience:** Simplifies bill payment workflows through integration.
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3. Base URLs

UAT / Sandbox Environment

- **Operator Code Fetch API:**

<https://sandbox-api.trusthub.in/electricity-operator-code>

- **Electricity Bill API:**

<https://sandbox-api.trusthub.in/electricity-bill>

Production Environment

- **Operator Code Fetch API:**

<https://api.trusthub.in/electricity-operator-code>

- **Electricity Bill API:**

<https://api.trusthub.in/electricity-bill>

4. Authentication & Security

API Key Details

- **Authentication Method:** API Key

- **Header Parameter:**

x-api-key: [API key provided by TransBnk after activation and IP whitelisting]

Required Headers

- **Authorization:** API Key in header (x-api-key)
 - **Content-Type:**
application/json; charset=utf-8
-

Security Measures

- **IP Whitelisting:**

Access to the API is restricted to whitelisted IP addresses only.

- **API Key Validation:**

Requests without a valid API key will return:

```
{ "message": "Forbidden" }
```

5. Rate Limits & Quotas

Requests per Minute/Hour

- **Not specified in the current API documentation.**

Throttling Behavior

- **Not mentioned in the provided specification.**
 - It is recommended to confirm with TransBnk support for any applicable rate limits or throttling policies.
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6. Request Structure

HTTP Methods

- **Operator Code Fetch API:** [GET](#)
 - **Electricity Bill API:** [POST](#)
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Endpoint URLs

UAT / Sandbox:

- **Operator Code Fetch:**
<https://sandbox-api.trusthub.in/electricity-operator-code>
- **Electricity Bill:**
<https://sandbox-api.trusthub.in/electricity-bill>

Production:

- **Operator Code Fetch:**
<https://api.trusthub.in/electricity-operator-code>
 - **Electricity Bill:**
<https://api.trusthub.in/electricity-bill>
-

Required Headers

- **x-api-key:** [API key provided by TransBnk after activation and IP whitelisting]
 - **Content-Type:** application/json; charset=utf-8
-

Request Body Format (for Electricity Bill API)

```
{  
  "id_number": "String",           // CA number (Required)  
  "operator_code": "String"        // Operator code (Required)  
}
```

Request Body Parameters

Field Name	Required	Type	Description
id_number	Yes	String	CA number
operator_code	Yes	String	Operator code

7. Response Structure

Response Format

- **Format:** JSON
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Field Descriptions

Field Name	Type	Description
client_id	String	Client ID
customer_id	String	Customer ID
operator_code	String	Operator code fetched from API
state	String	State
full_name	String	Customer's full name
address	String	Customer's address
mobile	String	Mobile number
user_email	String	Email address
bill_amount	String	Bill amount
bill_number	String	Bill number
document_link	String	Link to user document
status_code	Number	HTTP status code
success	Boolean	Indicates success or failure
message	String	Response message
message_code	String	Message code

Example Response

```
{
  "data": {
    "client_id": "electricity_jBxiqjAGXuymlqlbr00b",
    "customer_id": "17000346322745",
    "operator_code": "MH",
    "state": "maharashtra",
    "full_name": "SUKHWANI",
    "address": "COLONY SOLAPUR ROAD NR LAD GIRNI SHEWALWADI 412307",
    "mobile": null,
    "user_email": null,
    "bill_amount": "1,280.00",
    "bill_number": null,
    "document_link": null
  },
  "status_code": 200,
  "success": true,
  "message": "Success",
  "message_code": "success"
}
```

8. Error Handling

Common Error Codes and Messages

HTTP		
Status	Message	Description
Code		
403	{"message": "Forbidden"}	Missing or incorrect API key, or wrong HTTP method
400	{"message": "Invalid request body"}	Empty or incorrect request body sent
401	{"Message": "User: anonymous is not authorized to perform: execute-api:Invoke on resource..."}	IP not whitelisted
504	{"message": "Endpoint request timed out"}	Upstream service provider endpoint not responding

Example Error Responses

Missing or Incorrect API Key / Wrong Method

```
{
  "message": "Forbidden"
}
```

Invalid Request Body

```
{  
  "message": "Invalid request body"  
}
```

IP Not Whitelisted

```
{  
  "Message": "User: anonymous is not authorized to perform: execute-api:Invoke on  
resource..."  
}
```

Timeout

```
{  
  "message": "Endpoint request timed out"  
}
```

9. Integration Flow Diagram

v1/electric-bill-api-flow.png

10. Pagination & Filtering

Handling Large Datasets

- **Not applicable** for this API as per the current specification.
- The API endpoints are designed to:
 - Fetch operator codes for states (small static dataset).
 - Retrieve a single electricity bill based on CA number and operator code.
- **Pagination and filtering are not supported** in the current version.

Recommendation

If future versions include bulk bill retrieval or large datasets:

- Implement query parameters such as:
 - `page` (for page number)
 - `limit` (for number of records per page)
 - `filter` (for filtering by state, operator, etc.)
 - Ensure proper response metadata:
 - `total_records`
 - `current_page`
 - `total_pages`
-

11. Versioning & Changelog

Current Version

- **Version:** V1.0
 - **Release Date:** 13-May-2024
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Changes from Previous Versions

- **First Release**
 - Initial version of the TransBnk Electricity Bill API.
 - Features included:
 - **Operator Code Fetch API** (GET): Retrieve operator codes for states.
 - **Electricity Bill API** (POST): Fetch electricity bill details using CA number and operator code.
 - Security:
 - API Key-based authentication.
 - IP whitelisting.
 - Response format: JSON.
 - Error handling for invalid API key, request body, IP restrictions, and timeout.
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Notes

- No previous versions exist; this is the first official release.
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12. Best Practices

Retry Logic

- Implement **exponential backoff** for retries in case of transient errors (e.g., network issues or timeout).
 - Avoid infinite retry loops; set a maximum retry limit (e.g., 3 attempts).
 - Do not retry on client-side errors (4xx status codes like `403 Forbidden` or `400 Invalid request body`).
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Timeout Handling

- Set a reasonable timeout for API requests (e.g., 30 seconds).
 - Handle **504 Gateway Timeout** gracefully by:
 - Logging the error.
 - Informing the user about the delay.
 - Retrying after a short interval if appropriate.
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Security Recommendations

- **API Key Management:**
 - Keep your API key confidential; never expose it in client-side code.
 - Rotate API keys periodically.
 - **IP Whitelisting:**
 - Ensure requests originate only from whitelisted IP addresses.
 - **Use HTTPS:**
 - All API calls should use secure HTTPS endpoints.
 - **Validate Inputs:**
 - Sanitize and validate CA numbers and operator codes before sending requests.
 - **Error Logging:**
 - Log errors securely without exposing sensitive data.
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Additional Tips

- Monitor API usage and set alerts for unusual activity.
 - Implement rate limiting on your side to avoid overwhelming the API.
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13. Support & Contact

UAT / PROD Portal Links

- **UAT / Sandbox API Portal:**
<https://sandbox-api.trusthub.in>
 - **Production API Portal:**
<https://api.trusthub.in>
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Support Contact

- **Email:** support@trusthub.in
 - **Escalation Matrix:**
 1. **Level 1:** API Integration Support Team
Email: support@trusthub.in
 2. **Level 2:** Technical Escalation
Email: techlead@trusthub.in
 3. **Level 3:** Account Manager
Contact via official TransBnk representative.
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Additional Resources

- API Documentation: Available on request from TransBnk.
 - SLA & Response Times: Contact support for details.
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