NPCI/2023-24/BBPS/026 **31st January 2024**

To,
All BBPOUs
Bharat Bill Payment System,
NPCI Bharat BillPay Ltd.

Respected Sir/Madam,

Subject: Advisory on Active-Active Health Check API

NPCI Bharat BillPay Limited (hereinafter referred to as "NBBL"), with the objective to make Bharat Bill Payment System (hereinafter referred to as "BBPS") a scalable platform has adopted "Billion-a-Day architecture" (BDA), facilitating execution of more than 1 billion transactions in a day and with the Active – Active model for high availability.

In this regard, we have migrated the BBPS application to 'Unified code' supporting Active-Active for all online platforms. This will further help in achieving zero downtime and facilitate seamless customer experience. In order to support the Active-Active mode on its platform, NBBL has introduced Health Check (HC) API in BBPCU.

BBPOUs are facilitated with two end points to send BBPCU transactions across both sites in round-robin fashion. To ensure the high availability, BBPOUs should use the Health Check (HC) API at regular frequency of 5 seconds while sending the transactions to BBPCU for processing in parallel. When the site health API returns a response other than 'OK', the particular site shall be considered down and subsequent transactions shall be routed to the active site(s) till the subsequent health check of that particular site returns response as 'OK' (***Ref Annexure 2 for Site availability status response**).

The BBPOUs are advised to integrate the API as part of the BBPOU's application to connect to all the sites of BBPCU to achieve zero downtime. The API specification of the functionality has been enclosed with this circular.

The requisite developments are required to be implemented by the BBPOUs within the stipulated time i.e 15th February 2024.

Yours Sincerely,

Sd/-

Noopur Chaturvedi
Chief Executive Officer (CEO)
NPCI Bharat BillPay Ltd.

Enclosure
Annexure 1: API Specifications for Health Check API
Annexure 2: Table for Site availability status response

Annexure 1
API Specifications for Health Check API:

REQUEST
GET *https://XX.XX.XX.XX/api-admin/ping*
RESPONSE
HTTP/1.1 200 OK
XX.XX.XX.XX denotes NPCI-BBPS site0 and site1 endpoints IP address.

Annexure 2
Table for Site availability status response

Health check status time-frame	Site A status	Site B status	Site C status	Expected site for traffic routing
T0	OK	OK	OK	Site A- Site B -Site C
T0+ 5 secs	**NOT OK**	OK	OK	Site B -Site C
T0+ 10 secs	OK	**NOT OK**	OK	Site A -Site C
T0+ 15 secs	OK	OK	**NOT OK**	Site A -Site B
T0+ 20 secs	OK	**NOT OK**	**NOT OK**	Site A
T0+ 25 secs	OK	OK	OK	Site A- Site B -Site C

Note: While the BBPOUs implement this API to support two current sites live with BBPCU, the implementation should be generic to support more than 2 sites similar to the above table depiction of scenarios of 3 sites in active-active-active model.