

# Commencement of Open Call for Tritium Separation Technology in Cooperation with a Third- Party

**TEPCO**

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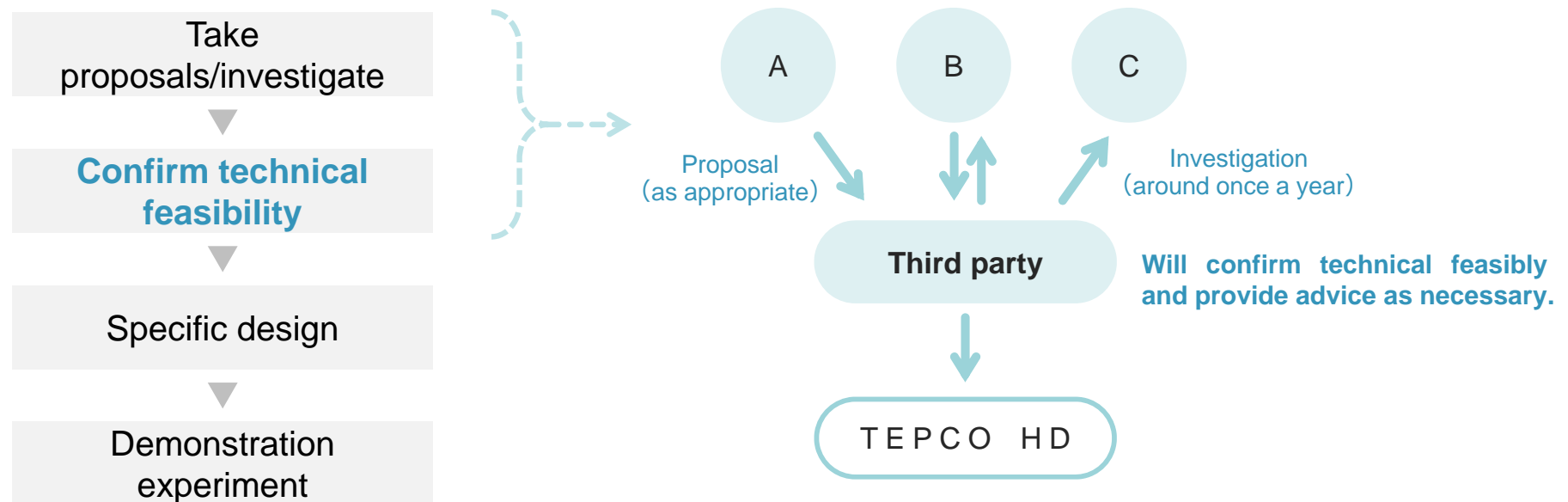
May 27, 2021

Tokyo Electric Power Company Holdings, Inc.

# 1 . Investigation Regarding Tritium Separation Technology **TEPCO**

We will continue to keep a close eye on new technological developments in tritium separation technology.

- In accordance with TEPCO's plan announced on April 16, we have devised a new model for eliciting proposals and promoting widescale research on tritium separation technology that employs the help of a third party in order to ensure transparency.
- NineSigma Holdings, Inc. has been selected as our third-party partner and today (May 27), NineSigma posted links on its website that give details on the open call project and where to apply. This marks the commencement of our public appeal to Japan and the rest of the world for proposals and research related to tritium separation technology.
- Links: (Japanese) <https://www.ninesigma.com/s/TEPCO-galleryJP>  
(English) <https://www.ninesigma.com/s/TEPCO-galleryEN>
- Going forward, when technologies are proposed via NineSigma's website, NineSigma shall confirm/evaluate the details of such technology and provide advice as necessary. The results will then be examined by TEPCO, and if it turns out that the technology is able to be realistically applied to water purified with multi-nuclide removal equipment (ALPS treated water, etc.), detailed designs will be drawn up and verification tests of the technology conducted with the aim of establishing the technology.



# 【Reference】 Overview of technology being sought **TEPCO**

- Proposed technologies will be assessed based on the following criteria first by NineSigma and then subjected to secondary assessment by TEPCO.
- All of the following requirements need not be fulfilled at the time the proposal is submitted, but must be fulfilled at some point in the future.

## <Requirements>

Separation/  
measurement

All of the following requirements must be met:

- The concentration of tritium after treatment must be less than 1/1,000 of that prior to treatment. (Technology that can reduce the concentration of tritium to 1/100 or less at present is anticipated, which was required in the government's Demonstration Project for Verification Tests of Tritium Separation Technologies)
- The reliability of measurement of tritium concentration can be explained.
- The material balance of tritium throughout the tests can clearly be indicated.

Treatment  
capacity

- There is a technical prospect that is able to be increased to target operating capacity levels (50~500 m<sup>3</sup>/day)

## < Recommended items >

Principle

It is recommended that one, or both, of the following conditions be fulfilled:

- The principle of separation technology has been widely recognized at academic conferences, etc.
- The principle of separation technology has been recognized by third parties, e.g., included in peer-reviewed papers.

- Regarding Technologies for which practical application has been deemed feasible by the primary and secondary assessments, nature and volume of waste generated, compliance with the Nuclear Reactor Regulation Law, and the size of the area required for equipment installation, etc. will be reviewed by TEPCO.