

Overview of Feasibility Study

1. Project Title

Under NEDO's "Next Generation Thermal Power Generation Technology Development Project / Next Generation Thermal Power Generation Technology Promotion Project / Advanced Research on Technology for Ammonia Co-firing Thermal Power Generation / Research and Development on Multi-Burner Ammonia Co-firing Technology for Pulverized Coal Boiler" project, feasibility study targeting commercial thermal power plants which is an additional scope.

2. Project Overview

In order to use ammonia, which does not emit carbon dioxide when combusted, as a fuel in power generation, the project will conduct technological studies necessary for demonstration on commercial thermal power plants. Additionally, the project will identify challenges and study the economics of ammonia production and transportation to evaluate potential applications for ammonia co-firing.

3. Parties and Roles

- IHI Corporation (Headquarters: Koto-ku, Tokyo, President and CEO: Tsugio Mitsuoka)
Evaluation of thermal efficiency of ammonia co-firing using numerical analysis. Study on ammonia storage and supply facilities, as well as ammonia co-firing burner related facilities, for demonstration on commercial thermal power plants.
- JERA Co., Inc. (Headquarters: Chuo-ku, Tokyo, President: Satoshi Onoda)
To identify and solve challenges related to the application of ammonia co-firing in commercial thermal power plants, conduct studies on specifications for ammonia storage, vaporizer, etc., and economic evaluation for ammonia cost, capital investment, etc.
- Marubeni Corporation (Headquarters: Chuo-ku, Tokyo, President and CEO: Masumi Kakinoki)
Study and identify challenges related to ways to reduce carbon dioxide footprint of ammonia and improvement of transportation efficiency including utilization of larger-sized vessels to reduce transportation cost.
- Woodside Energy Ltd. (Headquarters: Perth WA, Australia, CEO and Managing Director: Peter J Coleman)
Study and identify challenges related to realizing large-scale ammonia production plants and ways to reduce ammonia production cost, etc.

4. Term of Project

March 23, 2020 to February 28, 2021

5. Flow of Ammonia Production to Power Generation

