



INDONESIA

GEOHERMAL TARIFF RENEGOTIATION

From July 2015 to July 2016, SRUC provided technical assistance to Indonesia's state-owned utility, Perusahaan Listrik Negara (PLN), to develop guidelines for renegotiating tariffs for geothermal power projects. SRUC also trained PLN staff in implementing these guidelines and supported PLN through their first live renegotiation with a geothermal independent power producer.

WORK ASSIGNMENT SUMMARY

The Sector Reform and Utility Commercialization (SRUC) Task Order (TO) supported Perusahaan Listrik Negara (PLN), the state-owned electric utility in Indonesia, to develop formal policies and procedures to support the renegotiation of tariffs for geothermal power generation facilities. This was a collaboration between SRUC and the second iteration of USAID's Indonesia Clean Energy Development (ICED II) Project.¹ This work helped build PLN's capacity to effectively engage with developers through training and direct technical support during the first renegotiation process. This strengthened PLN's ability to undertake procurements of new generation facilities, plan for and manage reverse auctions, and grow reliable baseload generation in the country.

¹ The Indonesia Clean Energy Development II (ICED II) is a five-year (2015-2020) bi-lateral program funded by USAID/Indonesia and implemented by Tetra Tech, Inc. – <http://www.iced.or.id/en/>

CHALLENGE

Indonesia uses less than five percent of its 29 GWe of potential geothermal capacity. The Government of Indonesia (GoI) seeks to increase this utilization nearly fivefold by 2025. The SRUC team was approached by USAID/Indonesia to bolster the growth in geothermal power by supporting the state-owned electric utility, PLN, in the renegotiation of eligible Independent Power producer (IPP) geothermal projects according to parameters set out by the Ministry of Energy and Mineral Resources (MEMR). Recognizing the need to renegotiate with developers on the tariff structure in order to move geothermal projects forward, MEMR had established in 2014 a new regulation (Permen 17 ESDM/2014) which directs PLN to conduct negotiations with eligible IPPs on the adjustment of a given project's established electricity price, set in its original Power Purchase Agreement (PPA), after exploration.

This presented a number of challenges for PLN given they had limited experience with renegotiating PPAs through an open and transparent process and needed to determine the risk sharing that the GoI (and thus PLN) were able to take on in order to advance sustainable geothermal development across the country. As such, USAID/Indonesia requested that SRUC and ICED II assist in developing the renegotiation framework and assist in its implementation. At the core of this work was the need to establish consistent, open and transparent parameters to determine risk allocation and judge the technical attributes of geothermal projects for renegotiation.

APPROACH

In collaboration with PLN and ICED II, the SRUC team carried out the following two phases of activities to boost PLN's capacity to renegotiate geothermal tariffs:

PHASE I

- Met with PLN to build out the geothermal tariff renegotiation guidelines – a comprehensive set of materials for the utility to undertake all the facets of negotiations and renegotiations with private generation companies.
- Designed the renegotiation process, an associated renegotiation Road Map, and built a presentation to share key points with the broader PLN audience and leadership.
- Submitted a Best Practices Report, which contained case studies of geothermal tariff renegotiation worldwide.
- Continued to work on the renegotiation guidelines. Developed a financial model to support PLN in their renegotiations, and guidelines and templates for communicating with IPPs.
- Prioritized certain sections of the guidelines and templates to prepare for the live renegotiation of Phase II.

PHASE II

- Reviewed and revised the final renegotiation guidelines in close collaboration with PLN.
- Supported PLN through a live tariff renegotiation with a geothermal IPP, which involved development of the following work products:
 - **Data Collection and Application of Guidelines:** A summary of major compliance issues found with the IPP submission, as it pertains to the guidelines, and recommended measures to be taken to improve adherence.
 - **Technical Analysis:** A review of PLN's technical due diligence and a comparison of PLN's process of analysis with the process set out in the guidelines.
 - **Financial Analysis:** Review of, and recommendations related to, PLN's financial analysis of the proposed tariffs' associated costs.

KEY RESULTS

SRUC and ICED II's collective support to PLN resulted in the following results:

- **Provided guidelines for tariff renegotiation that are** consistent with the Gol's energy policies and all relevant laws, and ensure long-term sustainability of both the project and PLN.
- **Increased PLN's capacity to:**
 - Engage with IPPs by providing a financial model to determine cost of electricity.
 - Understand technical concepts behind geothermal generation and development.
- **Developed a framework for geothermal development** that balances incentives and risk allocation as well as management tools attractive to leading global investors. Given the fact that PLN's PPAs were signed with the companies before any physical geothermal exploration occurred, renegotiation allows for the government to take on some of the up-front exploration risk, while at the same time incentivizing developers to explore prudently and within the bounds to keep costs low for Indonesian consumers.

M&E INDICATORS²

- Clean energy generation capacity supported by U.S. Government assistance that has achieved financial closure – **440 MW**. (Standard Indicator: EG.12-5)
- Greenhouse gas (GHG) emissions, estimated in metric tons of CO₂e, reduced, sequestered, or avoided through clean energy as supported by USG assistance – **318.56 tCO₂e**. (Standard Indicator: EG.12-6)
- Amount of investment mobilized (in USD) for clean energy as supported by USG assistance - **USD \$1.76B**.³(Standard Indicator: EG.12-4)

PARTNER MISSIONS

SRUC worked together with USAID/Indonesia to carry out the Phase I and Phase II activities with PLN. This work was funded by USAID/Indonesia and USAID/Washington's Energy Division. Development and review of PLN's renegotiation guidelines was conducted in close collaboration with an embedded advisor from the U. S. Department of the Treasury. The technical assistance provided collaborative by SRUC and ICED II was fully transitioned to ICED II for integration into its programming and continued support to the Gol and PLN.

FOLLOW-ON WORK

The renegotiation guidelines developed by SRUC have since been applied to the renegotiation process on a number of geothermal projects across the country, including the original 220 MW PT. Supreme Energy Muara Laboh project in Solok Selatan, West Sumatra and the 220 MW PT. Supreme Energy Rantau Dedap project in Muara Enim, South Sumatra.

² For Standard Indicator reporting purposes, the activity contributions to EG.12-5, EG.12-6, and EG.12-4 have been divided and attributed equally to SRUC and ICED II.

³ Assuming \$4M/MW and 440 MW coming online, this is the amount of funding that would on average be deployed for developing the geothermal power in Indonesia from these renegotiations.