

NZGW - Industry Update

Year in review and looking forward

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Geothermal and AECOM

35 years multidisciplinary experience starting with NZ Govt. supported projects in Indonesia in 1978.

Export business with Energy teams (NZ, Indonesia and Philippines) led by Engineers educated in New Zealand.

- New Zealand – 800 staff / 100 staff on Energy projects
- Indonesia – 150 staff / 30 staff on Energy projects
- Philippines – 150 staff / 10 staff on Energy projects
- Kenya – 10 staff / 5 on Energy projects

AECOM's Geothermal Activity 2015

Typical Type of Work

Currently **over 20+ Geothermal projects** in Indonesia & Philippines covering one or more of the following:

- FEED Designers
- Owners Engineers
- SAGS Design
- Control System Designs & Upgrades
- Transmission Connections, Protection Designs
- Power Station Efficiency Improvement
- Civil and Mechanical Detailed Design & Enabling Works
- Site Supervision
- Environmental Permitting
- Due Diligence

AECOM Typical Geothermal Projects 2015

- EDC
 - Efficiency Upgrades
 - BacMan 3 Owners Engineer
 - Malitbog and Tongonan C&I & Protection Upgrades
 - Turbine Re-rotoring,
 - Project Management & Detailed Design
 - Leyte Control Centre Upgrade
- Supreme – Rantau Dedap – Feasibility and Option Studies
- Star Energy – Detailed Design for replacement of landslide damaged 2 phase lines to both power stations
- HDEC – Process, Control and Commissioning support to Sarulla 3 x 110Mwe
- Client A – Exploration, Design and building roads, well pads for exploratory drilling
- Client B – Field Development Feasibility Studies and assistance with PPA bidding
- Client C – Design and building roads and well pads for production drilling

Demonstration of multiregional capability after natural disaster



Star Energy 2 x 36” two phase lines redesigned, replaced and recommissioned in 12 weeks for 1x 110 MWe + 1 x 117MWe



2016 - Looking forward

Strong pipeline of opportunities – mostly offshore

- Indonesia – new builds, detailed design support to EPC contractors
- Philippines – new builds and upgrades, owner's engineer
- Kenya - new office in Kenya with already 10 staff, roles covering transaction advisory, new builds, detailed design, infrastructure

Thank You

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