

SIHWA TIDAL POWER PLANT

Name of person filing the form (can opt to omit from on-line form)

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Date submitted

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Project name: Sihwa Tidal Power Plant

Project description:

Project Developer: K-WATER (Korea Water Resources Corp.) – Project Owner

Technology type: tidal barrage

Resource: tidal

Project scale: full scale; commercial

Installed capacity: 254MW (25.4MW per turbine, 10 units)

Additional Description: The tidal barrage makes use of a seawall constructed in 1994 for flood mitigation and agricultural purposes. Technical details: 10 Turbine / Generator units; Runner diameter 7.5 m; Turbine Output 26 MW; Generator Output 26.8 MVA; Rated speed 64.3 rpm; Rated head 5.82 m; Rated discharge 482.1 m³/s; Rated voltage 10.2 kV; Rated current 1515 A; Annual energy production ~ 550 GWh.

Project Website:

Location:

Ocean/Water body: North of Republic of Korea

Closest city: Seoul

Country: Korea

Coordinates:

Depth:

Process status: the construction of the Sihwa tidal barrage power plant (TBPP) was completed in 2011 and its operation started in August.

Licensing information:

Key Environmental issues: After the seawall was built, pollution built up in the newly created Sihwa Lake reservoir, making its water useless for agriculture. In 2004, seawater was reintroduced in the hope of flushing out contamination; inflows from the tidal barrage are envisaged as a complementary permanent solution. The tidal power station is providing indirect environmental benefits as well as renewable energy generation. During commissioning

of the project a diffusion of pollutants to the sea was expected. To reduce this effect a gradual increase in power generation was implemented as part of commissioning procedures.

Environmental webpage: not available

Available reports:

- Environmental management in Korea: insights and observations. Available at: <http://www.derm.qld.gov.au/register/p02500aa.pdf>
- http://cdm.unfccc.int/filestorage/K/3/L/K3LFY0NNFBKO6THXCG2D7X0WBY69M3/PDD_Sihwa_ver02_final_060328.pdf?t=dXN8bTZxandqfDDpOAHhrJCqe1VyoGAo_ILO