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Assessment of solar power potential at abandoned mine promotion districts in South Korea

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This study assessed the solar power potential at 7 abandoned mine promotion districts in Korea such as Taebaek, Samcheok, Jeongseon, Yeongwol, Mungyeong, Hwasun and Boryeong. The photovoltaic system with a capacity of 99 kW was considered at each abandoned mine promotion district. The estimated electric power productions and economic effects of photovoltaic systems were analyzed using RETScreen software developed by Natural Resources Canada(NRC). The results showed that the Boryeong district is the highest photovoltaic potential where the estimated electric power production is about 83.43 MWh/year, the net present value is 69.2 million KRW, and the payback period is about 13 years.