



The Ramayana Water Park is the largest such water-themed park in Thailand and needs 150 pumps to deliver 10,000 m³ of water through 150 kilometres of pipes for water pools, rides, filtration and treatment.

NEW PUMPS AT THAI WATER PARK

Pay for themselves with 30% energy savings

One of South East Asia's biggest water parks, Ramayana in Thailand, wanted to reduce its energy consumption and reduce CO₂ emissions. With the Grundfos Energy Earnings programme, it could upgrade its pumps to modern, efficient Grundfos pumps with zero upfront investment. The energy savings for the pumps – 30 percent over the previous models – pay for the upgrade. See the film and go to the grundfos.com website for more information.

The situation

Ramayana Water Park, about a two hour drive from Bangkok near Pattaya City, welcomes about a half million guests every year. It is Thailand's largest water park – and one of the largest in Southeast Asia – covering 45 acres with slides, pools and attractions.

Every month, Ramayana uses nearly 50 million watts (50 MW) to power around 150 pumps, delivering 10,000 m³ of water through 150 kilometres of pipes. The pumps are used to operate the pools, rides, water filtration and water treatment systems.

The water park wanted to reduce its energy consumption and CO₂ emissions.

"Our guests expect a sustainable experience," says Andrea Galeazzi, General Manager of Ramayana Water Park. "Our guests and our bottom line were driving us to look at CO₂ emissions and the energy efficiency of our operations to maintain a gold-class standard. We needed a better control of water management and efficiency, which translates to a better management of our business."



Andrea Galeazzi, General Manager of Ramayana Water Park, says "The Grundfos Energy Earnings program has met and exceeded our expectations."

Our customer says:

"The Grundfos Energy Earnings program has met and exceeded our expectations. We are delighted with the outcome."

- Andrea Galeazzi, General Manager, Ramayana Water Park, Thailand

CASE STORY INFO:

Topic: Energy and CO2 savings with pump retrofit

Location: Pattaya City, Thailand

Customer: Ramayana Water Park

Grundfos Energy Earnings allowed Ramayana to retrofit inefficient pumps with zero upfront investment, reducing CO2 emissions by 700 tonnes and saving 30% from previous energy costs.

Grundfos supplied:

Grundfos offered the Grundfos Energy Earnings programme to Ramayana Water Park. With zero upfront investment, Ramayana got around 20 new pumps, saving 30% energy and 700 tonnes of CO2 over the previous system. The energy savings from those new pumps financed the retrofit. [Read more about the Grundfos Energy Earnings programme.](#)

The solution

An audit of Ramayana's pumps revealed a system that could be optimised for performance to generate energy savings. So the water park took advantage of the Grundfos Energy Earnings programme.

Grundfos Energy Earnings allows customers to finance a pump system upgrade with zero upfront investment. The retrofit is funded by a share of the energy earnings over its five-year agreement from the new, more efficient system. Simply put, the energy earnings from the new pumps at Ramayana paid for the new pump system.

Ramayana and Grundfos replaced around 20 inefficient pumps with Grundfos LS horizontal split case pumps. "Retrofitting the pumps was possible without compromising the park's operation, with no loss of revenue from park closure," says Lewis Brown, Regional Service Business Developer, Grundfos. "This was all done behind the scenes to ensure business as usual."

The outcome

The pump retrofit has saved Ramayana Water Park 30 percent in energy costs, or around THB 1.5 million per year (EUR 40,000/year). It has also reduced CO2 emissions by 700 tonnes over the five-year period.

"The Grundfos Energy Earnings program has met and exceeded our expectations," says Andrea Galeazzi. "At Ramayana Water Park, we are delighted with the outcome of the project."



Lewis Brown, Regional Service Business Developer, Grundfos, with Andrea Galeazzi, General Manager of Ramayana Water Park.

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