Payback and Cost Savings of a 10 MW Power Station

Infinity Turbine LLC

[TEL] 1-608-238-6001

[Email] greg@infinityturbine.com

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Discover the payback period and cost savings of a 10 MW power station operating at $0.10 per kilowatt hour. Learn the revenue potential per hour, day, month, and year, and see how quickly a $10 million investment pays for itself.

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Payback and Cost Savings of a 10 MW Power Station

What is the return on investment for a 10 MW power block priced at $10 million? By analyzing electricity values at $0.10 per kilowatt hour, we can calculate revenue and payback timelines that highlight the financial advantages of this scale of energy generation.

Introduction

Large-scale power generation is a capital-intensive business, but the financial returns can be significant when electricity is valued at standard market rates. A 10 MW power station offers not only a substantial supply of electricity but also rapid investment recovery under favorable pricing conditions.

Revenue Calculations at $0.10 per Kilowatt Hour

Operating at full capacity, a 10 MW system produces 10,000 kilowatts each hour. At $0.10 per kilowatt hour, the cost savings or revenue potential is straightforward to calculate:

Per Hour: $1,000
Per Day (24 hours): $24,000
Per Month (30 days): $720,000
Per Month (31 days): $744,000
Per Year (365 days): $8,760,000

Payback Period on a $10 Million Investment

With annual gross revenue potential of $8.76 million, the capital investment of $10 million is recovered in approximately 1.14 years, or about 417 days. This translates to just under 14 months for a full payback under continuous operation.

Strategic Impact

The economics demonstrate the strength of deploying 10 MW scale power blocks for applications where stable pricing and high capacity factors can be achieved. Whether supplying a data center, grid support, or industrial demand, this size of installation can deliver rapid financial returns while ensuring long-term energy reliability.