



## Energy sector sample Business Case: Smart ORC (Organic Rankine Cycle) power plants

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**ORC power plants** must operate at varying loads and some of their components are subject to fouling and performance degradation. The **simevo Process Simulation technology** can be used to create a first-principle, steady-state process model of the ORC power plant. The model can analyze the performance, detect anomalies and optimize the operating point. Thanks to the flexibility of the simevo technology the model can be deployed directly onto the control system.

**Costs:** The development effort for the solution is in the range of a few man-months and can be spread over the small-series production of ORC power plants. The software license is perpetual and the fee is charged on the basis of the number of plants installed. The cost impact is in the range of 2% of the total installation cost of each power plant.

**Soft savings:** The self-diagnose and smart features increase the customer-perceived value of the ORC power plant.

**Hard savings:** Timely maintenance maximizes uptime and reduces cleaning costs and spare parts consumption; efficiency at part-load is increased.



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