



Operational Excellence Services

Decarbonization
Energy Optimization



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 <https://www.jgc.com/en/business/epc/operation-maintanance/service/>

Energy Optimization

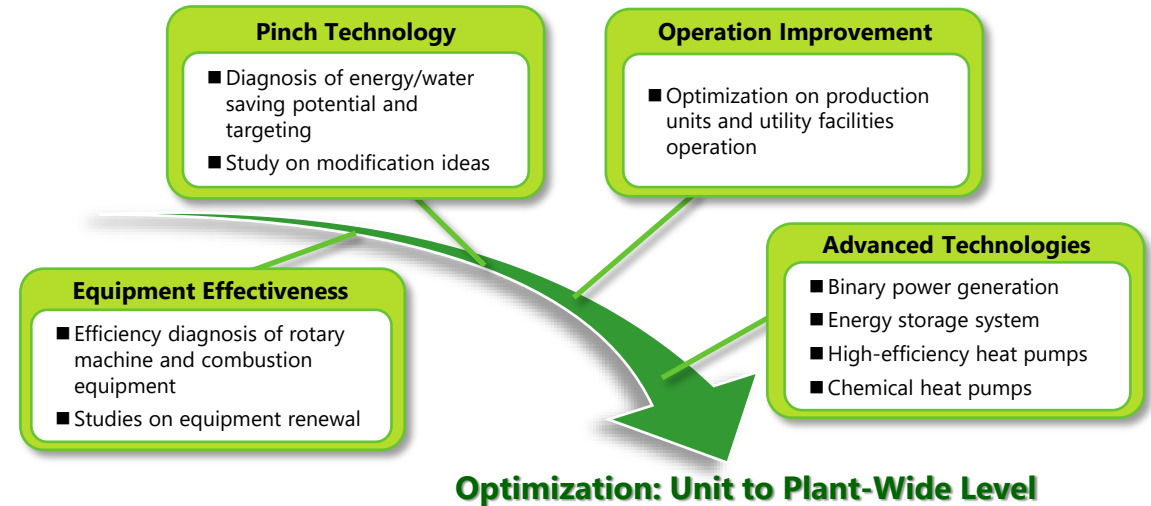
Do you have any of these issues?

- ☹️ **How to reduce energy consumption?**
- ☹️ **How to eliminate equipment bottlenecks?**
- ☹️ **What kind of equipment should be updated to improve efficiency?**

What is our service ?

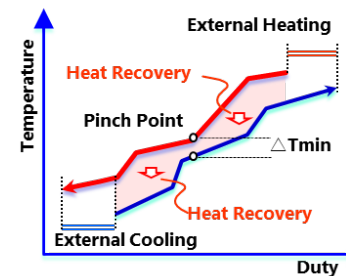
- **Equipment Effectiveness:** Diagnosis to identify the efficiency of existing facilities to be improved and suggestions for types of equipment to be modified.
- **Pinch Analysis:** Identify heat recovery target and create solutions such as heat recovery networks that balance the trade-off between investment costs and energy savings.
- **Operation Improvement:** Studies on unit operation and utility facilities modifications to improve energy efficiency.
- **Advanced Technology:** Studies and proposals on the introduction of high-efficiency equipment and new heat recovery technologies.

Our Approach

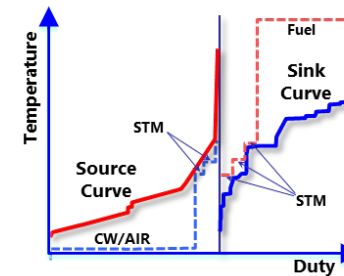


What is Pinch Analysis?

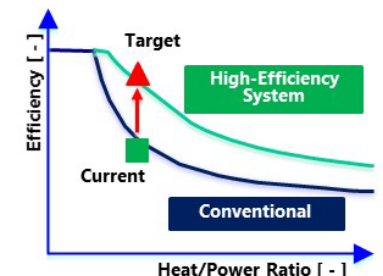
Systematic and Visualization Methods to Identify the Target



Energy Utilization and Optimization of Heat Recovery System



Optimization of Site-Wide Energy Usage

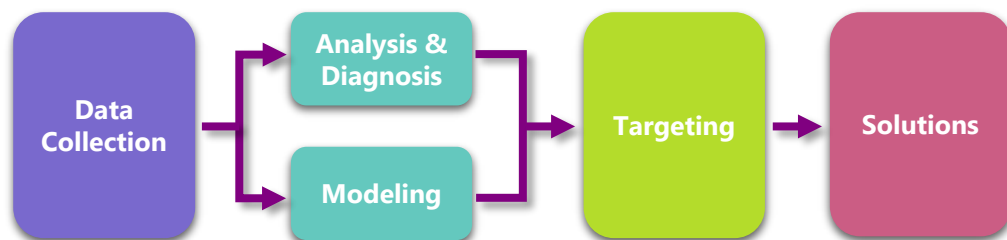


Optimization of Power-Steam Supply System

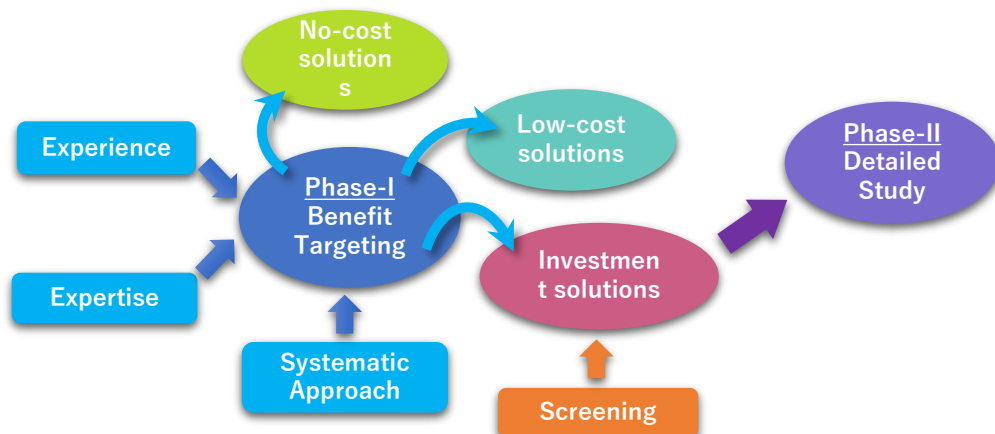
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[Return to
Decarbonization
menu](#)

Workflow & Result



- Plant Data collection(Operating Data, Climate Data)
- Analysis and diagnosis
- Modeling for Pinch Analysis, and Targeting
- Prioritization of solutions into tree categories as Phase-I
- As Phase-II, detailed study to materialize the investment solutions proposed in Phase-I



Our Strengths

- The proven and successful experiences in executing similar consultancy services.
- Extensive technical knowledge and know-how for energy and water conservation.
- Qualified professionals.
- Collaboration between overseas EPC-capable group companies and out-sourcing for consultancy services.

Our Experiences

50+
Projects

Industry	Japan	Overseas
Petroleum Refinery	26	11
Petrochemical	6	4
Chemical	5	-
Steel	1	-
Total	38	15

- Contributed to over 50 projects in various phases (FS, Pre-FEED, FEED, EPC, Revamps) for Petroleum Refinery, Petrochemical, Chemicals, etc.
- We are certified by a national oil company as an energy consultant.