### **Economic Planning**



**Consulting / Feasibility** *Editon* 1

#### CAPEX / OPEX and More

#### Overview



Capital expenditure (CAPEX) costs for water treatment plants primarily depend on several factors such as the source of water, product water quality, technology employed, storage and transmission, level of automation, local environmental regulations, local land costs



Operating expenditure (OPEX) costs for water treatment plants primarily depend on the local utility costs for items such as electrical power and steam, local labor costs, local chemical costs, availability of local spares and maintenance parts, and financing rates



When considering the net present value (NPV) and internal rate of return (IRR), it is important to consider societal, environmental, and geo-political risks that may impact the project's financial outcome. Let us help you.

### 6 Things to consider for you project's Water Needs

#### 1. Does my facility have an **optimized** Water Balance?

First thing is first, has your project or facility even considered an integrated water balance? If not, let us present to you the benefits of having one. If you already have one, have you considered to optimize and look for opportunities to create value? With our extensive experience and know how, we can help you explore those opportunities.

#### 2. Can I Reuse my plant's wastewater?

Did you know that the wastewater that your facility generates could potentially be Reused for your project's water needs? Share with us your project challenges and let us help you explore opportunities to have a more efficient water balance and potentially save CAPEX for capital projects and consequently operate with a lower OPEX.

#### 3. Do I need a centralized or de-centralized water system?

Does your project need water with varying quality and capacity? Do you need to build a single large water plant for all your water needs or do you have options to make up your total water demand by various means and technologies? Let us help you evaluate those options.

# 4. Can I use *renewable energy* sources or waste heat sources for more cost effective and sustainable solutions?

Have you considered the benefits of utilizing and integrating renewable energy for your water treatment systems? It can be a "match made in heaven", saving you OPEX costs and at the same time providing an environmentally sustainable solution!

# 5. Have I evaluated alternative technologies that are commercially available?

Have you considered the potential for alternative technologies commercially available versus the conventional technology that has been proposed? A technology evaluation should be considered before investing to compare the cost benefit of each technology.

# 6. Have I done my *due diligence* to ensure that my project's financial analysis makes sense?

Have you considered other risks for your project planning and financial analysis such as societal, environmental, and geo-political? What impact can an upcoming regulation have on my project? How about a drastic change in the cost of raw materials or a utility that you need such as power? We can help you look at those scenarios to determine most favorable outcomes and advise on potential risks.

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