

MPW Utility service vs owning & maintaining your current system

When an organization can save more of your company's cash flow and profits by outsourcing any service, you should choose that path every time.

For example:

- Your plant cannot generate its own electric at a lower cost than the electric utility
- Your plant cannot provide its own natural gas at a lower cost than the public utility
- The same concept may hold true for your organization's compressed air needs

A Compressed Air Utility Service Solution delivers all of these benefits to your organization:

- Guaranteed supply of compressed air
- Consistently superior air quality, up to class 0, ISO8573
- Lowest overall compressed air cost
- No maintenance cost
- No emergency rentals
- No capitalized cost required
- Tax advantages as a monthly expense
- Energy-efficient equipment and controls
- Allows personnel to focus on plant production

CHEMICAL COMPANY EXAMPLE

The following is a classic example of a chemical company that was providing its own compressed air (oil free system) for decades without considering other options, until an Internal Engineer researched the concept of outsourcing the company's compressed air needs.

Cost to **Own and Maintain** compressed air system:

- Price of air prior to outsourcing – 5.3 KWH/1000 MCF (1000 cubic ft of air made)
- Reason: oversized equipment continuously venting compressed air

Total Energy Cost	\$1,504,267.00/year
Annual product losses from downtime due to low air pressure	\$2,340,000.00/year
Annual cost from 2 employees dedicated to compressed air	\$250,000.00/year
Internal/Outsourced maintenance cost and rental cost average	\$780,000.00/year
Total Cost	\$4,874,267.00/year

Cost to **Outsource** their compressed air needs:

- Energy efficiency with outsourcing – 3.2 KWH/1000 MCF (1000 cubic ft of air made)

Total Energy Cost	\$908,237.00/year
Annual product losses from downtime due to low air pressure	\$0/year
Annual cost from 2 employees dedicated to compressed air	\$0/year
Internal/Outsourced maintenance cost and rental cost average	\$0/year
Cost of Outsourced compressed air system	\$916,969.00/year
Total Cost	\$1,825,206.00/year

That's a 62.5% Total Cost Savings!

Outsourced vs Own/ Maintain Checklist

1. Man-hour cost savings.
 - a. How many operations and maintenance costs will be eliminated with an outsourced solution?
2. Maintenance staffing cost savings.
 - a. What are the annual maintenance costs for the air system?
 - b. How much cost incurred when you have a failed air end on your existing compressors?
 - c. How much outside service costs are incurred to perform major maintenance on the existing equipment (when you no longer have that internal expertise).
 - d. What are the annual maintenance costs for all of the air dryers?
 - e. How much does it cost per year for your daily monitoring and light maintenance?
3. What are the costs to the downstream process when the instrument air system is not reliable?
 - a. Wintertime freeze up that results in process unit down time (from Water in instrument air system components).
 - b. Chemical process plugs in pipelines due to shut down from loss of instrument air pressure (resulting in materials solidifying during shut down).
 - c. Costs related to failure to start compressors/low system pressure (energy loss if you let them run in unload mode).
4. Power Savings
 - a. What is the current energy cost for compressed air: KWH/MCF (1000 Cubic Feet)? Do you have old, oversized air compressors that blow off to atmosphere?
 - b. Energy efficiency of owned equipment compared to the ideal system with an outsourced solution. What is your cost per KWH?

PLANT FEEDBACK

What prompted the Internal Engineer to look at a compressed air system in the first place?

The engineer was originally asked by upper management to look at the existing site. So, all utility services were reviewed within that plant. The challenge was simple; find a way to make it profitable or the plant may have to be shut down or sold.

The categories were water supply systems, compressed air, electrical system, and boiler feed steam system. Energy waste was prevalent in all these systems.

What was the internal response to your recommendation to move towards a utility service solution?

Recommendations were received very well by upper management. The capital expenditures were approved quickly. Plant management personnel accepted the change as necessary to improve their profitability and remain viable.

Was the option of purchasing an entirely new system ever considered during the process?

Not really. Outsourcing was the answer to their needs. Purchasing a whole new system with all new equipment was expensive and cost prohibitive, especially with the existing costs they already identified.

Your Top 3 benefits to your decision to go with utility service solution?

1. Class 0 air 24/7. Note: Current system could not deliver that standard.
2. Elimination of the high cost of maintenance and Internal cost of service/overhead.
3. Annual Power savings. Prior 5.3 KWH/MCF vs new 3.2 KWH/MCF (a 40% savings)