NASSCOM®
Center of Excellence-IoT & AI
A MeitY Initiative with Govt. of Karnataka, Haryana, Gujarat & AP

SavEn
India Energy Management Pvt. Ltd.

Case study – [Air Compressed System]

Abstract : SavEn India helped to improve energy efficiency and prevent energy losses in air compressed system with its product SavEnIntel which superimposes energy engineering and AIML to generate actionable insights

Problem statement

Present specific energy consumption(SEC) of compressed air system is 0.35 kW/CFM which is higher as compared with the efficient systems.

The objective was to go beyond conventional engineering laws and find a solution to optimize the present SEC, Air demand , energy cost and operate the utility on best efficiency point.

Energy savings results in monetary and carbon emissions reduction at plant level.

Description of the solution

We digitized the system using SavEnIntel IoT Gateway, applying machine modelling on the collected data to

1. Select appropriate energy technology (VFD)
2. Identifying its correct program that finds the best combination of impacting parameters(temp, humidity, duty cycles)
3. Demand-supply match and best efficiency

to achieve best SEC through out the day across different seasons.

Business impact / RoI

The solution helped to achieve the following technical benefits:-

- **Air Demand Reduction – 10% - 15%**
- **SEC improvements (%) – 33%- 35%**

Resulted into following financial and sustainability benefits -

- **Energy Cost Reduction – 30% - 35%**
- **Operational maintenance improvements – 3% - 5%**
- **Payback - 7- 8 Months**
- **Carbon emission reduction – 10.59 Tons/Month**

Case study – [Compressed Air System]

Photographs / Videos of Solution deployed : ***The average SEC achieved was 0.23 kW/CFM from 0.35 kW/CFM (average 34% savings over the baseline)***