

## Problem

Legacy EMS solutions focus mainly on tracking the consumption (effect) and ignore the underlying process dynamics (cause) that influence the energy efficiency of a production line. Also, these solutions lack the necessary analytics capabilities for providing advanced energy insights to help drive higher efficiencies.

## Solution

4PointX EMS is a process-aware energy analytics solution that helps align consumption with production by benchmarking against past production scenarios. The solution tracks wastage due to equipment idling, how consumption varies with the product, and what process parameters are impacting efficiency the most.

### BENEFITS OF A PROCESS-AWARE EMS

#### Better Planning

– of energy capacity to match production demand

#### Lower OpEx

– increases competitiveness and sustainability

#### Increased Asset Life

– EMS can help create a business case for VFDs

#### Reduced CO<sub>2</sub> emissions

– comply with regulations and protect environment

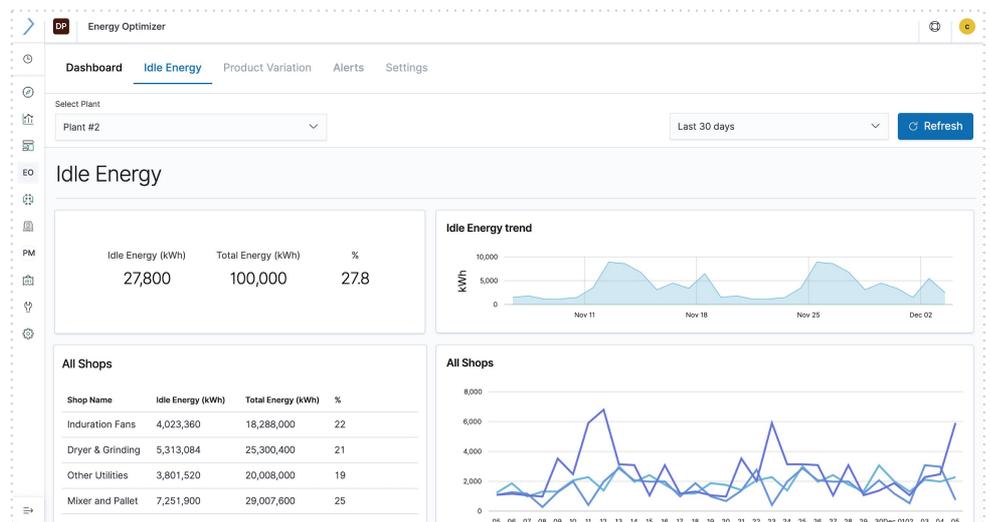
### 4POINTX EMS ADVANCED CAPABILITIES

**Scalable** for multiple plants and multi-vendor metering infra

**Big Data stream analytics engine** for merging energy data with process data

**Self-service dashboards** for visualizations and custom energy KPIs

**Data Science Workbench** for advanced energy analytics and ML models



## Features and key performance indicators

### Track consumption

- Total consumption (kWh)
- Total production (ton)
- Consumption per ton (kWh/ton) by plant, function and equipment

### Track idle energy

- Idle energy (kWh)
- Idle energy as a % of total energy by plant, function and equipment

### Alerting

- Dynamic alerts on abnormal consumption
- Static (rule-based) alerts

### Energy benchmarking

Process-sensitive benchmarks on energy consumed per ton (kWh/ton) for various combination of:

- Product specs (thickness, width etc.)
- Process parameters (speed, temp, cooling etc.)
- Raw material (grade, size etc.)

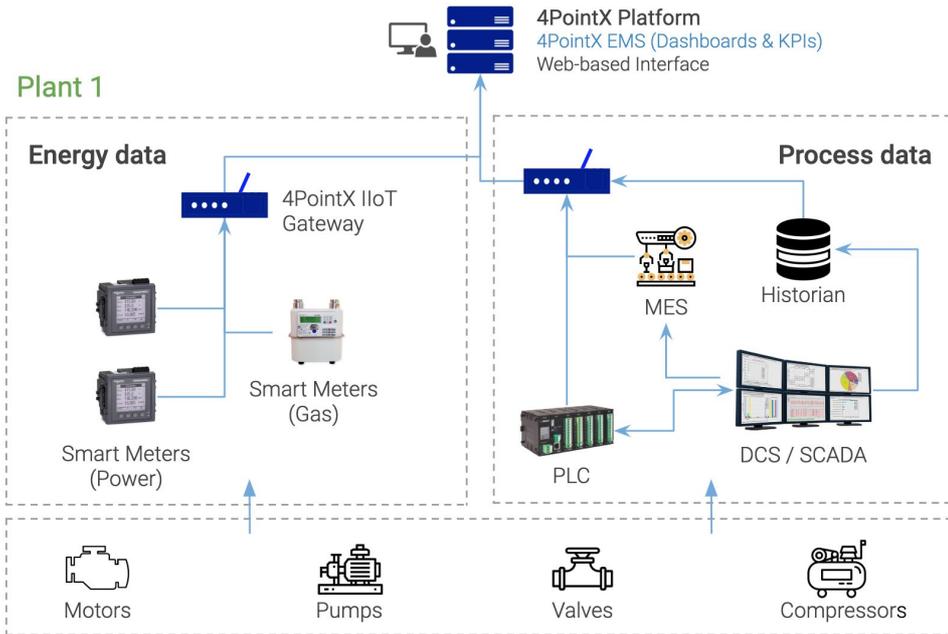
### Demand planning

Forecast future energy demand based on orders in pipeline and plan your production accordingly.

- Forecast consumption (kWh)

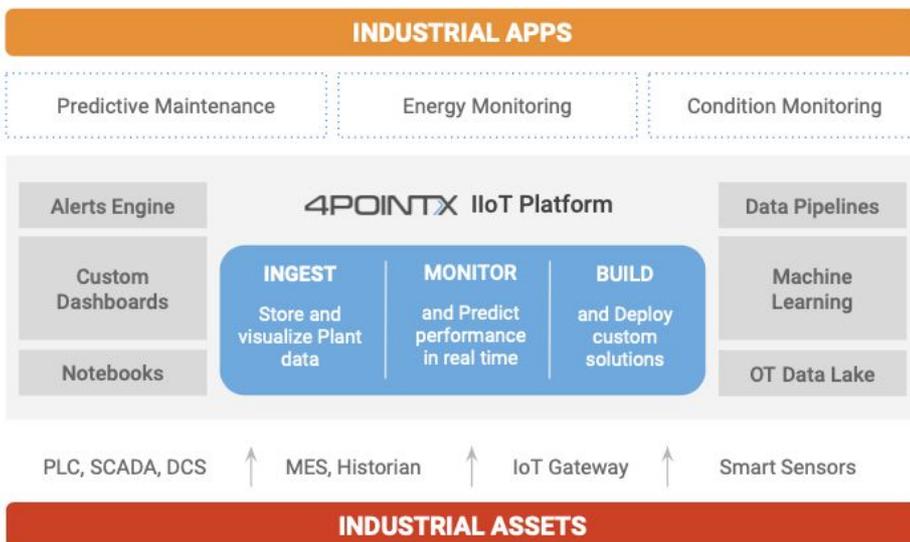
## Data acquisition is seamless & vendor-agnostic

4PointX EMS is one of the many I4.0 apps on the 4PointX IIoT Platform that integrates with your Plant's automation systems and smart metering infra for collecting Process and Energy data. The platform supports a wide range of PLCs, SCADA/ DCS and smart meter vendors.



## 4PointX IIoT platform for industrial analytics

The 4PointX IIoT Platform simplifies industrial analytics by bringing the best of IT capabilities to OT allowing Plant operations managers to build and deploy data-driven solutions at ease. The Platform integrates with existing OT systems and provides a scalable analytics layer with visualisation and predictive capabilities.



# 4POINTX

## Case Studies

**A Large Steel Plant** contacted 4PointX to optimize the energy cost per ton in Mills - HSM, CRM etc.

*4PointX EMS Idle Energy* tracker helped create a case for investing in VFDs that brought down the specific energy cost by 5 kWh/ton.

*4PointX EMS Benchmarking* tool gave additional needed insights to understand the energy variation by product and plan the production accordingly.

**Energy cost** reduced by 5.4 kWh/ton

**Equipment life** enhanced

**A Large Steel Wires Manufacturer** contacted 4PointX to consolidate their legacy EMS's into a unified process-aware integrated EMS.

*4PointX EMS Benchmarking* tool guided the operators on ideal consumption for a given product/process spec. Timely alerts on abnormal consumption helped minimize wastage.

*4PointX Platform Data Science Workbench & Self-service Reporting* helped deliver advanced energy insights for continuous monitoring.

**Energy cost** reduced by 7.2 kWh/ton for WRM mill

**Energy Demand Variation** (plan vs. actual) reduced to 6%

**CONTACT US**

Visit: [www.4pointx.com](http://www.4pointx.com)  
 LinkedIn: [linkedin.com/company/4pointx](https://www.linkedin.com/company/4pointx)

Email: [info@4pointx.com](mailto:info@4pointx.com)  
 Phone: (+91) 98860 16564