**Energy Blog Structure**

1. Introduction
   1. Global distribution utilities socio-political - capacity trends, challenges faced
   2. Govt. initiatives (global) copanhagen example, carbon neutral time frame
   3. Introduce people – process - tech intervention a must for digitization
2. Process
   1. Digitization of manual paper work
   2. E-gov required
3. Tech
   1. Smart Grid – IoT, data analytics, BI and blockchain
   2. Focus on how data flows and how ioT is 1st step / enabler for same
   3. Journey – data collect 🡪 store and clean 🡪 analyze 🡪 visualize 🡪 Act
   4. Types
      1. Smart EMS for building segments
      2. Smart Metering / AMI for utility segment
      3. Distributed Intelligence for utility segment
4. DYM template
   1. Introduce DYM template – Energy
   2. Introduce DYM IoT PF capabilities
   3. Show business outcome – benefits and USP
5. Summary
   1. Digitization is inveitable
   2. Tech is key – IoT main player
   3. DYM can support

**ENERGY MONITORING SYSTEM**

**Problems-**

* **Poor energy management** leads to **high expenses, overloading machines** can cause **breakdowns** or under loading can **decrease productivity**. **(Poorly maintained equipment)**
* Not knowing where, when and how the **energy is getting consumed or wasted**, and also what the reason is for it, whether it is **incorrect settings, faulty timers or poorly maintained equipment**? **(Energy Wastage)**
* More often than not, industrial operations, devices e.g., reactor, pumps, machinery, etc. **operate in silo** and **data collection related to energy has to be conducted manually** which increases the risk of **human error** and is also tedious and unproductive. (**risk of human error)**
* **Unavailability of granular data** related to energy usage makes it difficult for energy managers to **discern energy consumption patterns** and results in **high GHG emissions, exorbitant utility bills**, etc. **(Improper data collection)**

**Features-**

* DYM Lab’s IoT based EMS monitors consumption for all the energy parameters in real/near-real time, and enables you to benchmark the power consumption of one’s equipment and sends an alert when there is any variation in power utilization.
* Smart Energy Monitoring System gives the health and performance reports (with the option of customizing the report to your own will) of your plant equipment daily, weekly or monthly.
* Our solution can be integrated with your current energy meters or any other electrical measuring equipment quite easily also enabling you to measure harmonics of the system allowing for the ability to do bill calculations.
* We guarantee a secure data storage and a user-friendly UI that can even run-on cell phones.

**Benefits-**

* EMS’s ability to **reduce electricity costs** by monitoring and optimizing energy used by industrial operations e.g. lighting, heating and cooling, ventilation, reactor etc. **(Reduce running costs)**
* By **collecting energy data**, it allows administrators to **predict energy usage** and budget for the same more effectively. It has **built-in cost-saving functions** including offering **revenue-generating programs**, **emit ing less power during peak times**, and **spotting any potential energy leaks**. **(predict energy usage)**
* Our EMS solution allows users to **monitor the issues in real time** so that the corrective measures can be taken immediately. For example, a short circuit possibility before it happens get notified to you via an alert. (**predictive maintenance)**
* Your plant's carbon footprint is the entire amount of greenhouse gases produced and is directly related to the amount of energy it uses. Having DYM Lab’s solution in place to **regularly monitor and manage** this can aid in **identifying energy system flaws** that can be fixed to **decrease your influence on the environment**. **(reduces energy consumption)**
* Last but not least, companies across the globe are promoting the environmental improvements they have made to their operations, and adherence to various compliances. Implementing an energy management system would not only be environment friendly and sustainable but also improve the perception of your brand among various shareholders

VOICE OF CUSTOMER

***Requirements***

1. IOT Based Energy Monitoring System monitor the Real Power and other Energy Parameters.
2. Benchmark the power consumption of one’s Equipment’s and notice when there is any variation for power consumption.
3. Know the issue in real time and take corrective action immediately.
4. Track any ***Short Circuit possibilities*** before it actually happens and provide alarm.
5. Should display the energy saving after talking corrective actions like improving power factor and using filters etc.
6. Smart Energy Monitoring System get the Performance Reports of your Plant and Equipment’s daily, weekly or monthly.
7. Have the option of customized report
8. Can measure harmonics in the system
9. Can be integrated with current energy meters or any other electrical measuring equipment’s.
10. Secured data storage.
11. Can run on mobiles.

***Measurements***

1. Voltage
2. Current
3. Harmonics
4. Energy Calculations
5. Bill Calculations
6. Fault Detection
7. Continuity Check
8. Savings