Use of Artificial Intelligence and Machine Learning in the Gas and Electric Utility Space

According to the report published by the Navigant Research, utility customer information systems and their consumption will increase to $37 billion by 2023. By 2022, the utility expenditure is expected to grow to $774. In the USA, many utility companies have revolutionized the service provision with artificial intelligence which has enhanced the operation, improved the customer satisfaction rates, and the costs have been reduced.

Every utility company produces a colossal amount of data which is very tedious to handle. The artificial intelligence helps in analyzing and compressing the data. This data is used as a mean for insights which in return are a critical player when it comes to improving the strategic planning and improving the profit margins. We have outlined a few companies that have implemented the artificial intelligence to ensure the betterment in procedures and more, have a look!

- STEM – It's a California-based business which has devised the artificial intelligence system that has enabled them to keep track of energy consumption. Besides, the customers have the liberty to track the energy fluctuations to plan their consumption layout
- SIEMENS – They have launched the active network management software which helps them track the energy loading activities. This grid is responsible for mapping out the response upon the introduction of a new energy source
- SPARKCOGNITION – They have implemented the artificial intelligence to identify the infrastructure failure through the analytics, operational data, and sensors

Why IS Their A Need for Artificial Intelligence in Energy Industry?

It's been more than a century since the first power plant was launched and it served only 59 people. Ever since then, the number of customers has increased, and so have the transmission lines, power plants, and distribution centres. In the US, currently, three grids are producing and transmitting the power to ensure the development of reliable and low-cost energy. However, with the increasing demand for the infrastructure, the number of monopolies seems to be increasing at an exponential rate.

Is Smart Grid an Option?

The use of informational and communication technology is at a rise with the smart grids, which in return depends upon the power processing and computing. With the increasing demand, the number of grids is increasing along with the increase in internet consumption and green-house emissions. Again, the number of machines required will be increased to process the data for efficient operations of the smart grids.

This has become a big concern for the companies, and it is said that the artificial intelligence industry will need to take a step. It is self-explanatory that telecom, computer makers, and data centers are the key players in increasing the green-house emissions. The artificial intelligence industry has taken the right steps which include;

- Computer makers are financing the fuel cells and new hard drives
- Telecoms are devoting to fiber optics, network optimization, and solar-powered energy stations
- And data centers are capitalizing the pooling resources, cloud computing, and temperatures

The carbon footprint can be reduced to a significant level if the smart grids are enabled to design the energy production through efficient procedures. By implementing the intelligence in the energy industry, the calamitous blackouts can be reduced, and the reduction in the bills will be exemplary as well. It is needless to say the artificial intelligence and energy is a head start for the society being shaped through technological innovation.

How Artificial Intelligence Will Change the Energy Paradigms in Future

Up till now, the energy industry has undergone dynamic shifts in multiple niches, generating, selling, and distributing the energy to name a few. There are multiple concerns adhered to energy industry inclusive of management of

increased energy reduction, electricity costs, renewable energy, and customer satisfaction. It is needless to say that the demand for clean and reliable energy is at full swing and with artificial intelligence; the impacts are transformed into the long-term stuff.

When we talk about solar-powered stations, on a cloudy day, the energy production can be reduced and can lead to the electricity downfall. On the other hand, on the scorching heat day, the production can exceed the consumption. For balancing the situation, backups are required but most importantly, how will these be monitored? By implementing the artificial intelligence, the companies can track and analyze the production as well as distribution to devise optimal backup solutions. In addition, the consumers will be enabled to keep a track of their energy consumption as well.

The future of artificial intelligence is positive as it will empower the energy users with the proactive approaches.