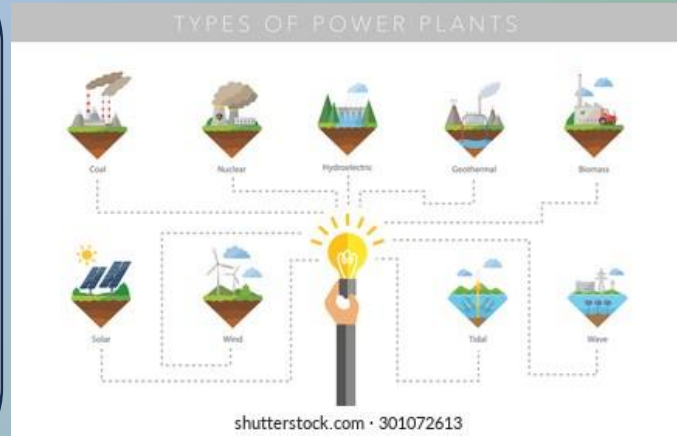


Jenga or Not – Is Our Power Grid Ready?

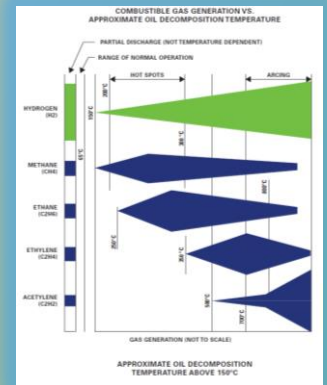
The US has spent years hardening the electrical grid, assessing potential issues and taking strategic actions to proactively mitigate these risks. As the country moves to more renewable and sustainable energy generation alternatives, it must also re-evaluate what it means to “harden” the grid. From decreasing dispatchable loads and increased requirements for distribution, to aging transformers and supply chain delays, what can the industry do to make sure the electrical grid is ready for the future of energy.



A Changing Energy Grid And New Technologies

With the push towards renewable and sustainable energy generation alternatives along with the added strains on the existing power grid of EV charging stations, extended lead times for new transformers, and aging infrastructure, is the grid ready? This poster explores the current strains on the existing infrastructure and how shifts in energy generation and usage could impact this.

North America is currently seeing a shift away from coal, fossil fuels, and even nuclear generation, and relying more on solar and wind for energy generation. The variable loading of solar and wind generation can cause stress on transformers unlike more traditional power generation loads.



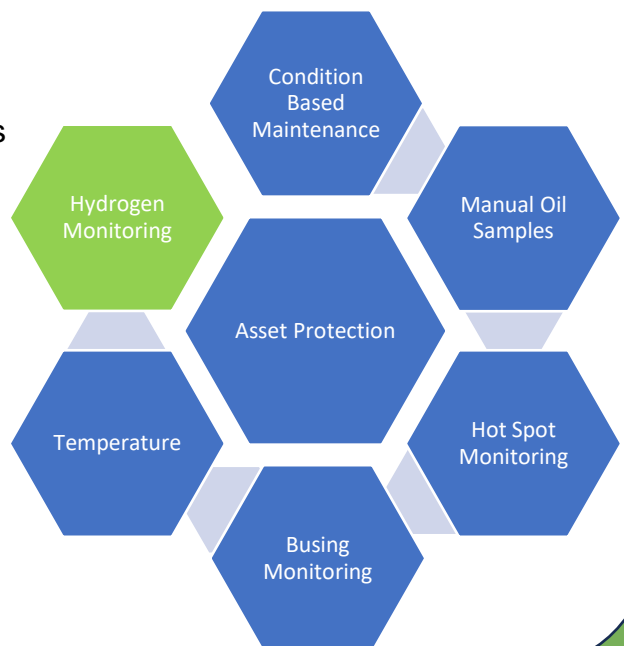
IEEE C57.104 2008



How Does Hydrogen Monitoring Fit Into The Picture?

Real-time hydrogen monitoring of transformer assets can help utilities transition to a condition-based maintenance cadence.

- Low initial cost – fleet-wide implementation
- Minimal cost of maintenance after installation
- Long lifetime
- Accuracy of detection
- Easy integration to existing protection scheme



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- References:
- Monitoring Hydrogen in Transformer Fleets (<https://tinyurl.com/a3rbf277>)
 - IEEE C57.104-2019

