

Step On The Gas, Or Ease Off?

In the 1980's, it was illegal in the U.S. to use natural gas as the primary fuel to generate electricity. You could have a power plant that was gas-capable, but the primary fuel used had to be coal or oil.

If you are new to the electricity industry, or young and just starting out, you probably find that hard to believe given the increase in gas-fired generation over the past decade. EIA recently stated that additions to gas-fired generation in 2017 and 2018 would increase natural gas capacity by 8% from the end of 2016.

But in 1978, Congress passed a bill called the Fuel Use Act. It was a reaction to the belief at the time that a) natural gas resources (aka the "gas patch") were too limited and if anything needed to be prioritized for the domestic/commercial sectors, and b) the natural gas infrastructure (aka pipelines) was not adequate to ensure supplies would get to the generators at all times.

Today, of course, a lot has changed. Thanks to advances in extraction technology, it seems

that resources in the ground is not an issue anymore. Moreover, natural gas is seen in its own special light with respect to carbon emissions, with gas yielding around half of the CO₂ amount of its fossil cousins oil and coal.

But as you know, there are other changes rocking the electricity industry - none more than the rise of distributed energy resources (especially solar) and the decline (or leveling) of electricity demand. And the drive to reduce GHG emissions is not going away and will even accelerate, regardless of the policies of the new Administration.

Gas-fired power plants are no longer going to get a free pass as part of the country's electricity system. Proposals for large central generation stations - even if they use natural gas - are likely to see increased scrutiny from regulators and stakeholders. That scrutiny will be on costs, emissions and also risk. Assessment of the risk will be multi-faceted and not just a static analysis of those factors just mentioned but a look into trends and future scenarios that could change the underlying justification for the proposal.

So if that is the future, what does it mean in the here and now?

As I often argue, it is difficult for an industry such as electricity to turn on a dime. There are gas-fired power plants that have only just been built or are in the process of being built. There are gas-fired power plants that are fully planned and ready to go that I will assume are needed since even though electricity demand is leveling off, there are coal-fired plants that are being retired and the electrification of the US will continue on its unstoppable path. So regulators and stakeholders need to remember the "dime" principle and focus on a transition, not a punishment of investments that were made or approved.

Construction of centralized fossil-fired generation in the future will be a whole new ballgame for utilities and non-utility companies. It will be one where the opposing team has a stacked line-up and a deep bench. The players on that team will not be those that focus on home runs in exchange for accepting a lot of strikeouts. The players will instead have diverse skills and they will focus on singles and doubles. They will focus on teamwork and how all of the players meld

together via teamwork to provide a reliable output of hits and runs as well as a reliable defense.

Things have changed in electricity. They are going to change more. The time to manage that change is now. It is not a time to let change manage you. Natural gas and gas-fired generation in large plants cannot be the favored child forever. Power providers need to recognize that and get ready for it. They need to focus on grid modernization, new technologies, and a future business model that is based on a different portfolio of assets and operations.

I don't know what the speed of all of this will be. There may not be any speed limit, and there could even be a minimum speed that one cannot go below without creating unacceptable risk. A lot of players in the electricity community need to start driving more carefully than they ever have in the past. And everyone needs to keep his or her eyes on the road ahead because we are all on a journey towards a new electricity industry that is unlike any past destination.

Dan

PS - If you remember my "Smiles So Wide" column a couple of issues ago, you may want to check out a couple of things I have seen in the news since then:

<http://www.atlanticcouncil.org/blogs/new-atlanticist/china-taking-clean-energy-leadership-from-the-united-states>