The State of the Nuclear Industry

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Abstract:
In many ways, nuclear power has never been more needed than right now, but the challenges that nuclear power is experiencing in many parts of the world are substantial and largely tied to economics. In the U.S., plants are shutting down before the end of their licensed lifetime. There are several factors at play, but their sustainability and longevity are largely reflective of their inability to compete in their marketplace. Outside of the U.S., plants are experiencing similar pressures to reduce costs. The industry is exploring technology to increase competitiveness and have recognized a few successes and a number of additional opportunities. They are also looking beyond electricity to markets such as hydrogen and ammonia.

Nuclear power is also an important consideration for the future, and models of the future generation generally point to a significant role for nuclear. However, new nuclear construction projects have experienced a series of cost overruns and schedule challenges. New designs that can be built more quickly and at lower cost are needed to compete in an environment that demands lower total life cycle costs.