



SCENARIOS WORKSHOP: SCENARIO SYNOPSES



This workshop uses hypothetical scenario narratives to help participants explore ways in which the operating environment for critical infrastructure owners and operators may evolve over the next three to seven years, and how this evolution may affect the security and resilience of critical infrastructure systems. The workshop's three scenarios center on plausible future changes pertaining to the following topics: (1) advanced manufacturing; (2) information and communications technology supply chain resilience; and (3) water availability.

SCENARIO #1: WATER WOES

Different regions of the United States increasingly find themselves threatened by either too much or too little water. In 2029, extreme weather has come to feel like the norm; the country is a patchwork of regions either inundated with floods and hurricanes or parched by drought and choked by wildfires. Three issues have exacerbated the challenges that jurisdictions face with water: (1) the growing effects of climate change; (2) aging water infrastructure; and (3) breakdowns in public trust. To date, efforts to address these issues have proven insufficient. Transitioning to clean energy, for example, to reduce greenhouse gas emissions and address climate change has been hindered by slower-than-expected adoption of electric vehicles, challenges with workforce development and reskilling, and a failure for new materials and greener processes to be incorporated at scale. A more moderate future will require an immoderate effort to address these issues moving forward.

SCENARIO #2: GREAT POWER DISRUPTION

In the 2020s, the United States finds itself in a new chapter of great power competition, this time driven by competition for technological leadership. Efforts to control key technologies such as semiconductors leads to partial decoupling internationally, onshoring of production for critical sectors, and tensions over supply chains. By 2030, despite achieving considerable gains in onshoring the manufacture of critical technologies, the United States faces an uncertain future about whether its policies and investments over the past decade will be sustainable absent permanent government subsidies and continued protectionism. Furthermore, protectionist trade and investment policies have limited U.S. access to several international markets. Meanwhile, the emergence of artificial intelligence has reshaped the landscape for both cyber offense and defense.

SCENARIO #3: DAY ZERO

The city of Monroe declared that it has less than six months of water supplies remaining and must make drastic cuts that will harshly impact both citizens and businesses. However, Monroe is just one of many cities in the United States facing a likely water crisis. There are many stresses on water systems, but an underappreciated one is the demand from the energy sector. As the United States pursues the clean energy transition (i.e., investing in alternative fuels, photovoltaics, electric batteries, etc., with the goal of reducing carbon emissions), demand for energy is increasing and, at least in the short term, this is causing increased dependence on traditional sources of energy. Energy production is a water-intensive process, as is the production of necessary equipment. The author of the scenario's fictitious essay advocates for approaching water resources more holistically: examining demand and exploring solutions across jurisdictions (where they draw from the same water sources) and sectors, most critically the energy and agriculture sectors.

For more details, please contact SecureTomorrowSeries@cisa.dhs.gov.