The nuclear accident that assailed Fukushima, Japan, on 11 March 2011 cast a harsh spotlight on nuclear safety. Within Japan, it stimulated safety governance reforms, which included the creation of an independent nuclear regulatory agency, the Nuclear Regulation Authority (NRA). At the same time, the Japanese government continued promoting nuclear power as essential for Japan's economic development, energy security, and climate-friendly electricity generation. Strikingly, however, nuclear power looks set to play only a minor role in Japan's future energy supply despite apparent political and administrative support. Florentine Koppenborg shows that the establishment an independent and transparent safety regulator has failed to restore public trust in nuclear energy and to bolster support for restarting nuclear reactors, quite the opposite. The newly established NRA introduced safety measures that greatly increased regulatory costs. Expanded regulation and transparency practices increased public accountability and galvanized anti-nuclear protests, raising social acceptance costs. The NRA thus weakened the power structure that had buttressed the development of nuclear power in Japan: low costs, a safety administration captured by the regulated industry, and a tightly controlled information regime that limited public scrutiny and participation. These findings about regulatory costs and social acceptance costs highlight how independent and transparent safety governance can shift nuclear politics to such an extent that previously powerful pro-nuclear actors lose the power to implement their preferred policies.