



A vision of a clean energy park with centralized advanced nuclear reactor.
Source: Third Way "Nuclear Reimagined"

Imagine a carbon-free community unlike any other today. At its heart lies an advanced nuclear reactor that does more than provide electricity; it provides a foundation for a fully sustainable community.

ENERGY PARKS Catalyst for clean growth

This reactor is the linchpin of a nuclear-renewable hybrid electricity grid powering the city—in cooperation with a nearby wind farm and rooftop solar installations.

Excess capacity from the reactor is used to power an onsite desalination plant that provides the city with water from a brackish underground aquifer. It also powers a hydrogen production facility that gives local factories a carbon-free source of hydrogen to make the steel and fertilizer that are driving economic development in the region.

The city's transportation is electric, powered by the fully carbon-free power.

Co-locating them in an “energy park” provides a triple benefit of electricity, heat, and steam to provide flexibility, gain significant efficiencies, and reduce costs, as well as delivering district heating and cooling to the local community. Other related sectors have also been plugged into this nuclear-renewable energy park: medical isotope production, food processing, and municipal waste-water treatment.

The complex supports hundreds of well-paying jobs, offers nearby residential living, and provides community and recreation spaces for the public. It ranks high in annual quality of life surveys, and it has one of the highest approval ratings for nuclear energy in the country. In fact, the community is participating in a voluntary process for siting a deep geological repository that will safely dispose of spent fuel from the reactor.

The concept of an energy park is one realistic vision along with the many other near-term clean-tech innovations that are poised to fundamentally change our relationship with energy.

Could this be the future?

Not for those who are already pursuing these technologies, business models, and models of public, local, and Indigenous engagement.

This is the here and now.

Author's Note: This vignette draws, with permission, from a visual story for an energy park developed by Third Way in partnership with Gensler, an architectural, engineering, and design firm. Find more at: www.thirdway.org/blog/nuclear-reimagined