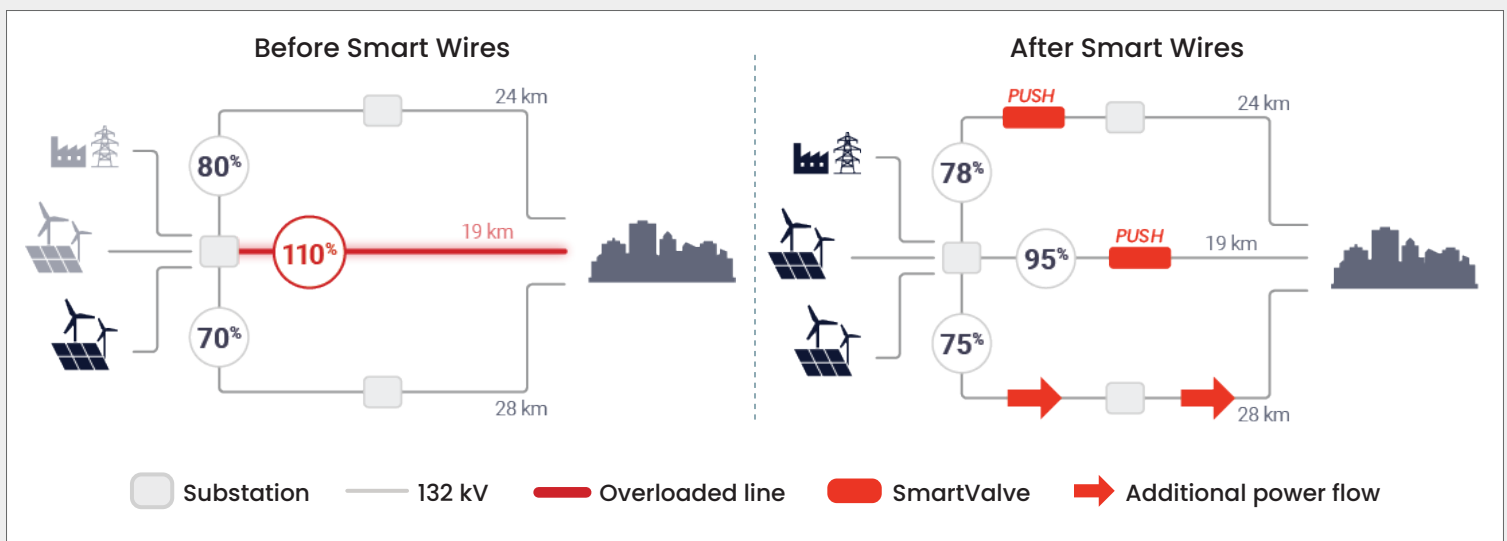


MINIMIZE COMMUNITY AND ENVIRONMENTAL DISRUPTION

Building new lines can often be challenging due to environmental regulations or community opposition. Therefore, many utilities upgrade existing lines to resolve constraints. However, many of these projects face similar opposition.

Smart Wires' solutions offer an alternative to costly, time-intensive and disruptive network reinforcements. By optimizing the existing infrastructure, utilities can quickly unlock additional capacity, while minimizing the impact to communities and the environment.



CHALLENGE

- A utility wants to connect additional renewable generation in high capacity factor areas.
- Unequal line lengths mean that the shortest line overloads while there is still spare capacity available on the network.
- Building new lines and substations would disrupt nearby communities, and railway and stream crossings made reconducting complex and costly.

SOLUTION

- SmartValves™ balance power on parallel paths and allow new generation to connect.
- Two deployments provide granular, real-time power flow control, responding to the intermittent wind and solar generation.
- The solution can be scaled up or down as required, to accommodate additional renewable connections.

IMPACT

- The project allows 95 MW of incremental renewable generation to connect using the existing network – enough to power more than 45,000 homes.
- Choosing Smart Wires saves customers \$10 million and avoids disturbing communities.
- A simple algorithm adjusts the power flow controllers in real-time, minimizing curtailment.