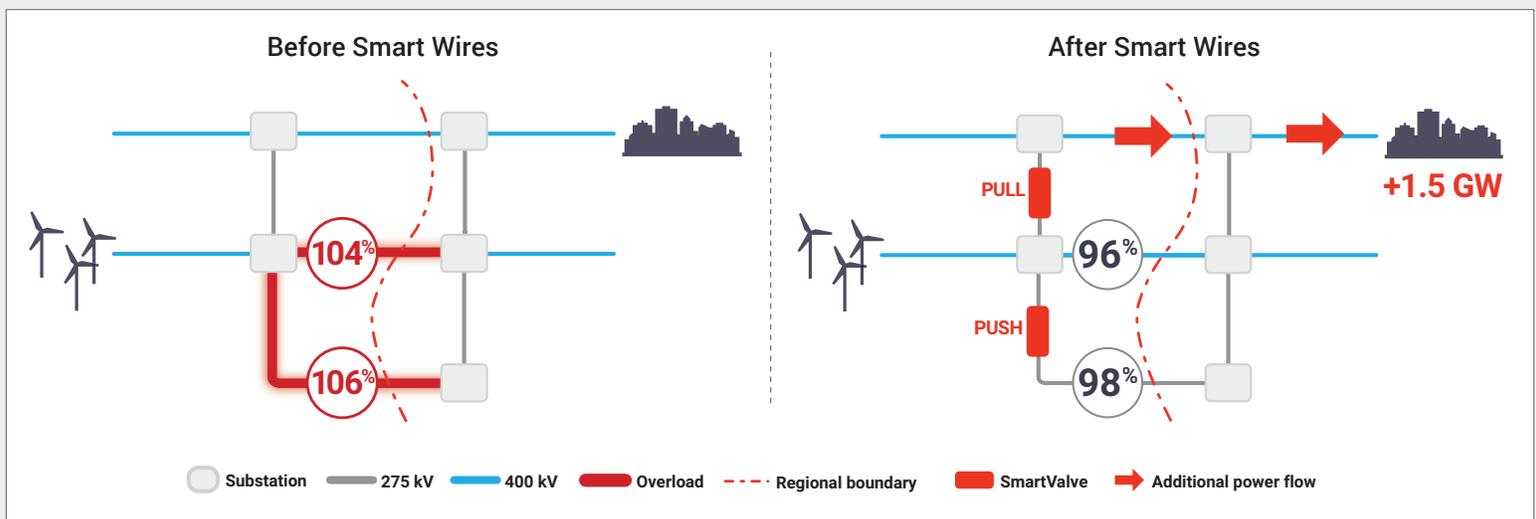


UNLOCK SYSTEM-WIDE POWER TRANSFERS

Major load centers are often located far away from generation sources. Large-scale power transmission over long distances is necessary to meet demand. Successive constraints must be resolved. To do so, utilities often employ operational fixes like generation re-dispatch, or planning fixes such as new lines, line upgrades or legacy power flow control.

Multiple small deployments of SmartValves™ allow utilities to quickly and effectively relieve constraints. By redirecting power from overloaded lines to underutilized parallel paths, SmartValve facilitates large-scale power transfers.



CHALLENGE

- A utility must considerably increase its interregional transfer capacity to reach its renewable targets.
- Various long-term generation and demand scenarios mean that the timing and size of system needs is highly uncertain.
- Traditional options, such as reconductoring and PSTs (phase shifting transformers), struggle to address these overloads in a timely, flexible and cost-effective manner.

SOLUTION

- Several deployments of SmartValves maximize regional transfer capacity and meet system needs, regardless of which scenario unfolds.
- Multiple small SmartValve deployments are more effective than a single deployment of SmartValves or traditional technology.
- SmartValves help the utility manage uncertainty since they can be deployed in less than 12 months with minimal site disruption or outages.

IMPACT

- SmartValves allow the utility to respond to a changing generation profile and unlock 1.5 GW of additional transfer capacity across three interregional boundaries.
- This solution provides more than \$470 M in cost savings compared to new circuits or PSTs, while delivering the same system benefits.
- The approach can be repeated on other boundaries to unlock 10+ GW of transfer capacity and sizeable economic benefits.