

# Emissions Reduction Alberta Energy storage Portfolio

**13 Projects | \$89 Million ERA Funding | \$620 Million Total Budget**

- **4 projects:** co-located storage with wind or solar generation
- **3 projects:** BESS co-located with load/microgrids
- **2 projects:** transmission deferral BESS
- **2 projects:** grid connected storage for services
- **1 project:** conversion of simple cycle gas plant to hybrid asset
- **1 project:** large scale energy storage (PHES)

**Funded technologies include:** lithium ion, lithium-iron phosphate, iron flow, vanadium flow, pumped-hydro

Funded by



# Emissions Reduction Alberta Energy storage Portfolio

## Sample projects

Turning Point Generation – Canyon Creek pumped hydro



Enmax– hybrid gas electric turbine to provide low-emissions spinning reserve



Funded by

# Emissions Reduction Alberta Energy storage Portfolio

## Sample projects

- Transmission system upgrades. For example: TransAlta – transmission deferral battery system
- Smart grid and distribution. For example: Fortis Alberta – smart microgrid with energy storage to support town of Waterton reliability

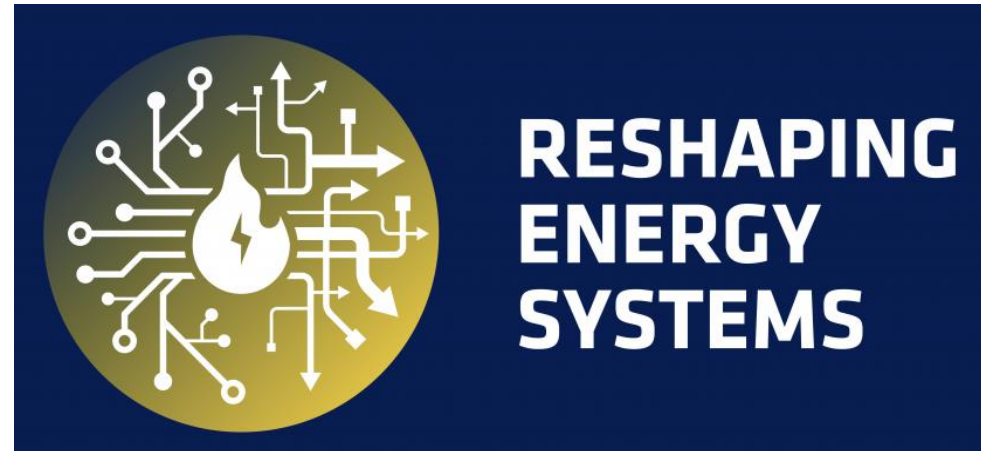


Funded by



## Reshaping Energy Systems

- 13 projects awarded funding for energy systems enhancements
- 2 pure play storage projects with TERIC Power, plus a study on transmission BESS with Altalink
- Major trend towards pairing storage with digital solutions for DER management and grid reliability (e.g.: Virtual Power Plants)



Funded by



# Emissions Reduction Alberta Energy storage Portfolio

## Lessons Learned

- Patient capital is important- storage is hard!
- Flexibility and diversity of technology choice- outcomes are what matter
- High value for pilots/demos to inform the market

## The Future

- Growing need for firm dispatchable power → long duration energy storage is one solution
- How to provide low emissions, low(er) cost grid services?
- Interested in adding additional storage technologies to the portfolio
- Integrating storage with other technologies

Funded by