



# EUROGIA2020

Düsseldorf PO Day : Energy Storage

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❖ 20+ years of successful Earth Thermal Storage System installations can be used on the emerging Smart Grid

- How best to use this technology to support and enhance Smart Grid development?
- Product efficiency analysis and testing can be done in a Smart Grid off-peak scenario.
- Determine the most effective method to connect to wind, solar and other distributed power generation technologies.
- Determine the best switching and controls needed for local power generation.
- Determine the best software modelling systems

# How to connect our Thermal Energy Storage System with Wind, Solar or other power generation and connect to a Smart Grid network



- Electricity costs are lower benefitting all end users
- Capital, operating and maintenance costs all substantially less than current technologies
- Power utilities can better control their demand loads
- Power generated from Wind or Solar can be converted to heat and stored thus solving part of the problem of having too much electricity at the wrong time.
- Owners can use Thermal Energy modelling as another option in their decisions.

## ❖ Partners involved

- SGIN (Smart Grid Innovation Network) – Siemens Canada, NB Power, University of New Brunswick
- Applied Energy Research Lab – Nova Scotia Canada
- Exp Engineering – offices throughout North America
- Otter Tail Power – an investor owned electric utility in North & South Dakota and Minnesota

## ❖ Missing partners / expertise

- Power utilities
- Wind and Solar companies
- Software engineers
- Data analysis

## ❖ Kevin Kilbride

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