# Optimization of the Western Canada Power Grid

## Incorporation of Renewable Energy

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# Forecasting functional data

## Some notation

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where $\varepsilon_{t,i}$ is iid N(0,1) and $\sigma_t(x_i)$ allows the amount of noise to vary with $x$.

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1. We assume $f_t(x)$ is a smooth function of $x$.
2. We need to estimate $f_t(x)$ from the data for $x_1 < x < x_p$.