# Vector fitting for estimation of turbine governor parameters

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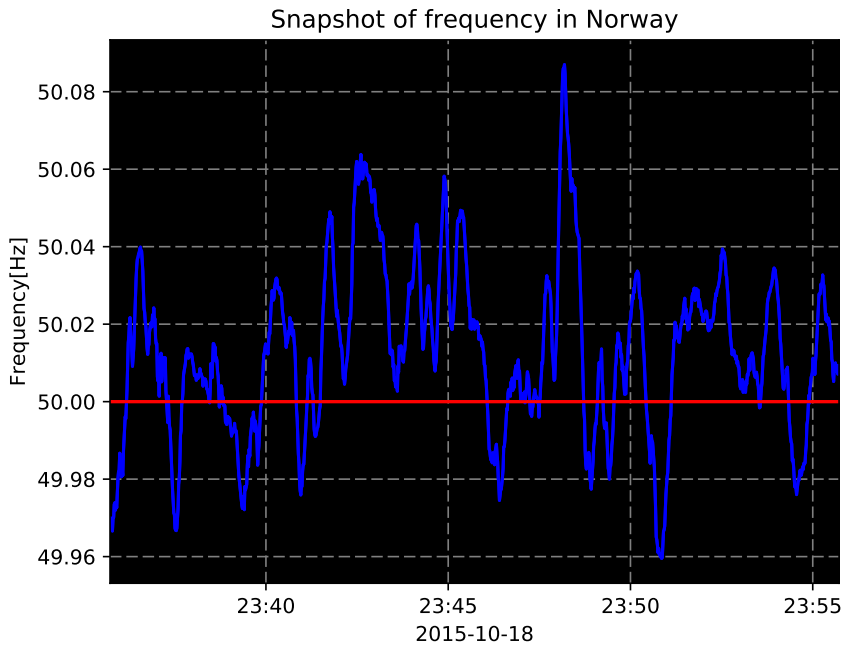
# Outline

1 Background

# Frequency quality

- There are concerns about the frequency quality in the Nordic countries



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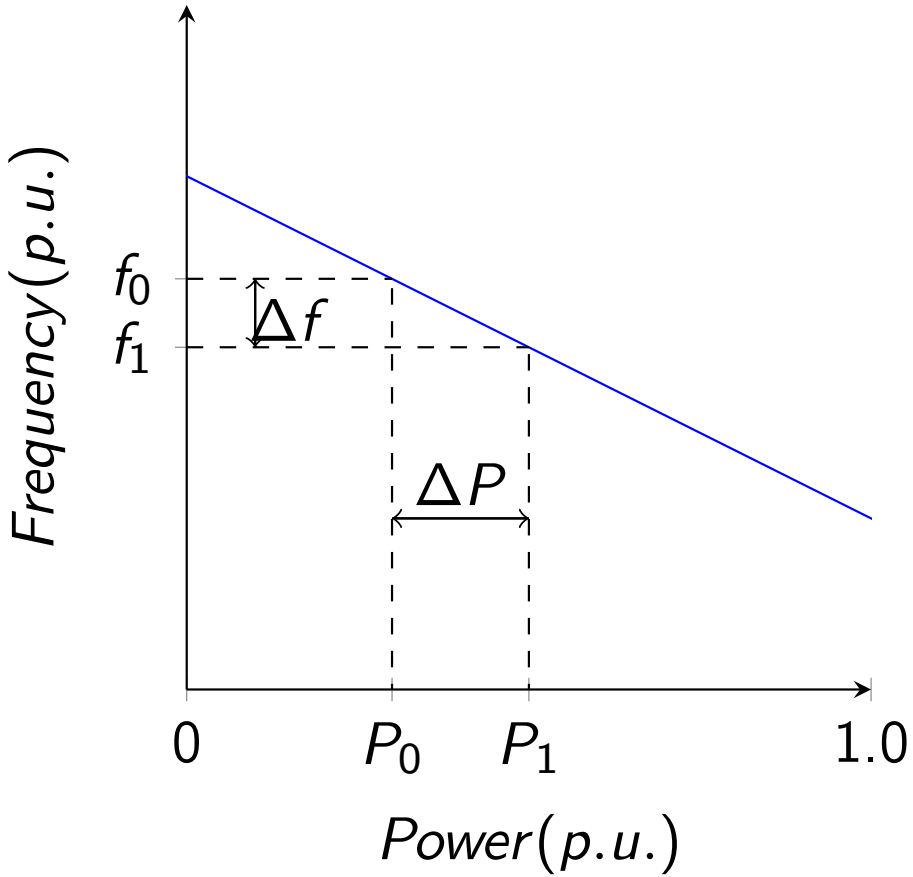

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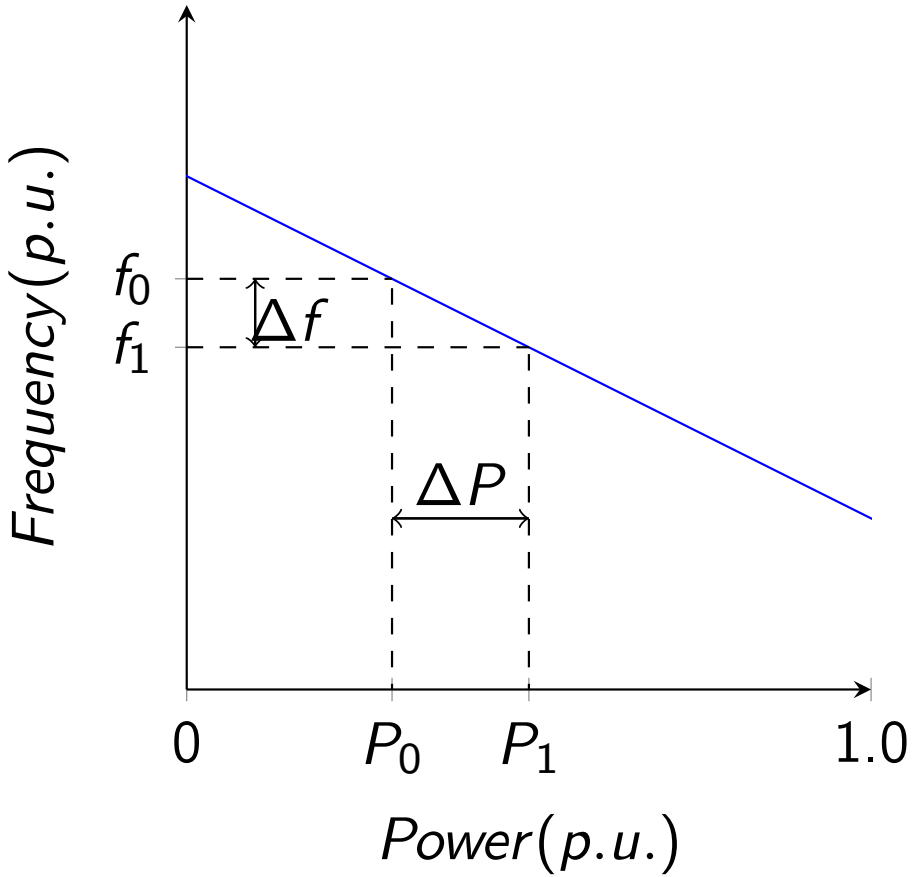

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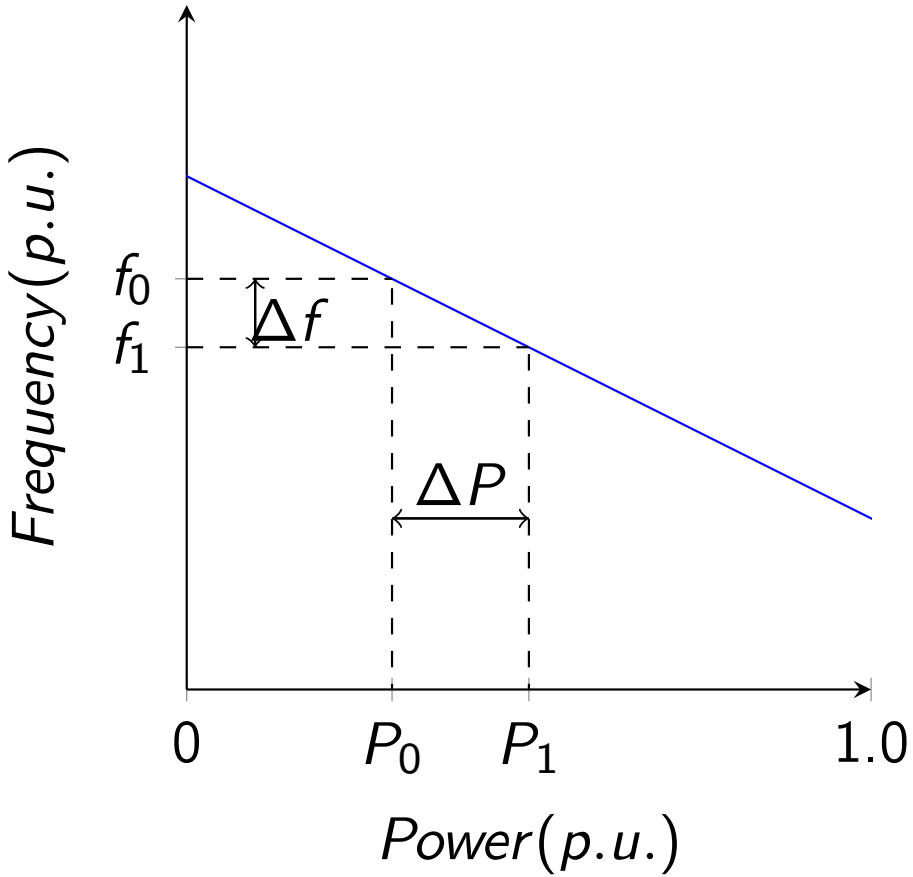

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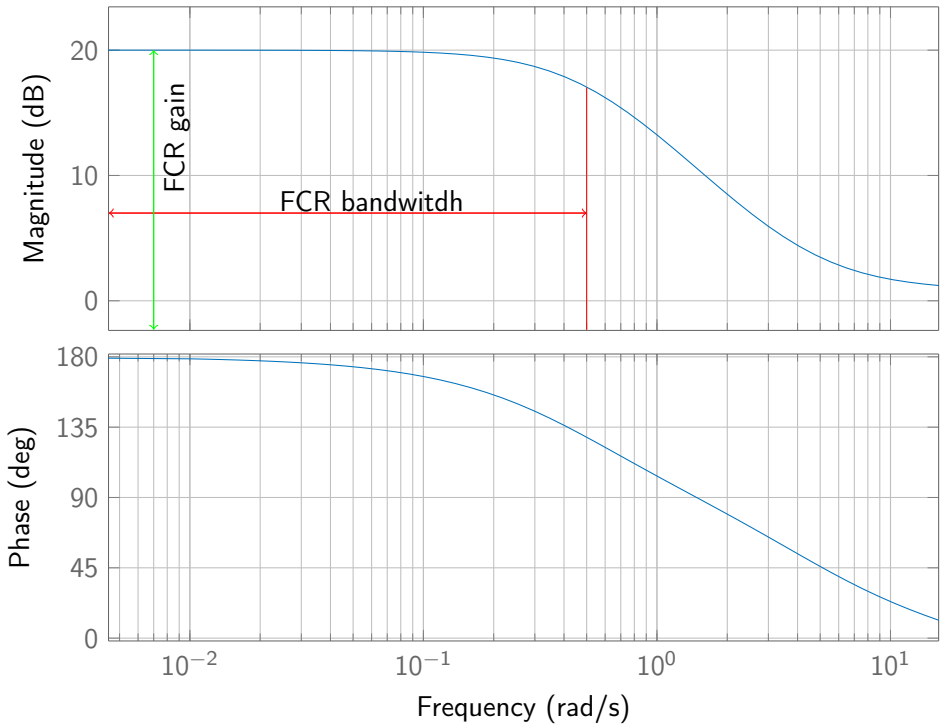
- It is of interest to monitor the generators' FCR performance with respect to both gain and bandwidth



# Hydro turbine governors

- Typically implemented as a PID controller