Why are we concerned about these Go to both transients or capacitor switching transients?

- Overvoltages
  1. Insulation failure/device failure
  2. Overvoltage effects on neighbors
     - Failure
     - Misoperation (Power Quality)
\[ L_i = \frac{N^2}{2} \]

\[ n = \frac{\phi}{\phi_0} \]

\[ 3 \frac{\phi}{\phi_0} = \sin \theta \]

less flux

louder

less voltage

higher frequency

at higher amplitude
Recovery transients from op switch

- can apply in general
  not just gate to gate

1. Adding a resistor
   
2. Rating?
   
   1. Size to limit overvoltage
   2. Size to limit current
   3. Size to make overdamped
   4. Standard size for which cut that volt
2. Add an inductor (reactor)

- Trim possible resonance
- Reduce outrush in a fault
3. Synchronous closing breakers
   - close with minimal ΔV across breaker