Primary Frequency Response Sr. Task Force (PFRSTF)
Inertial Response

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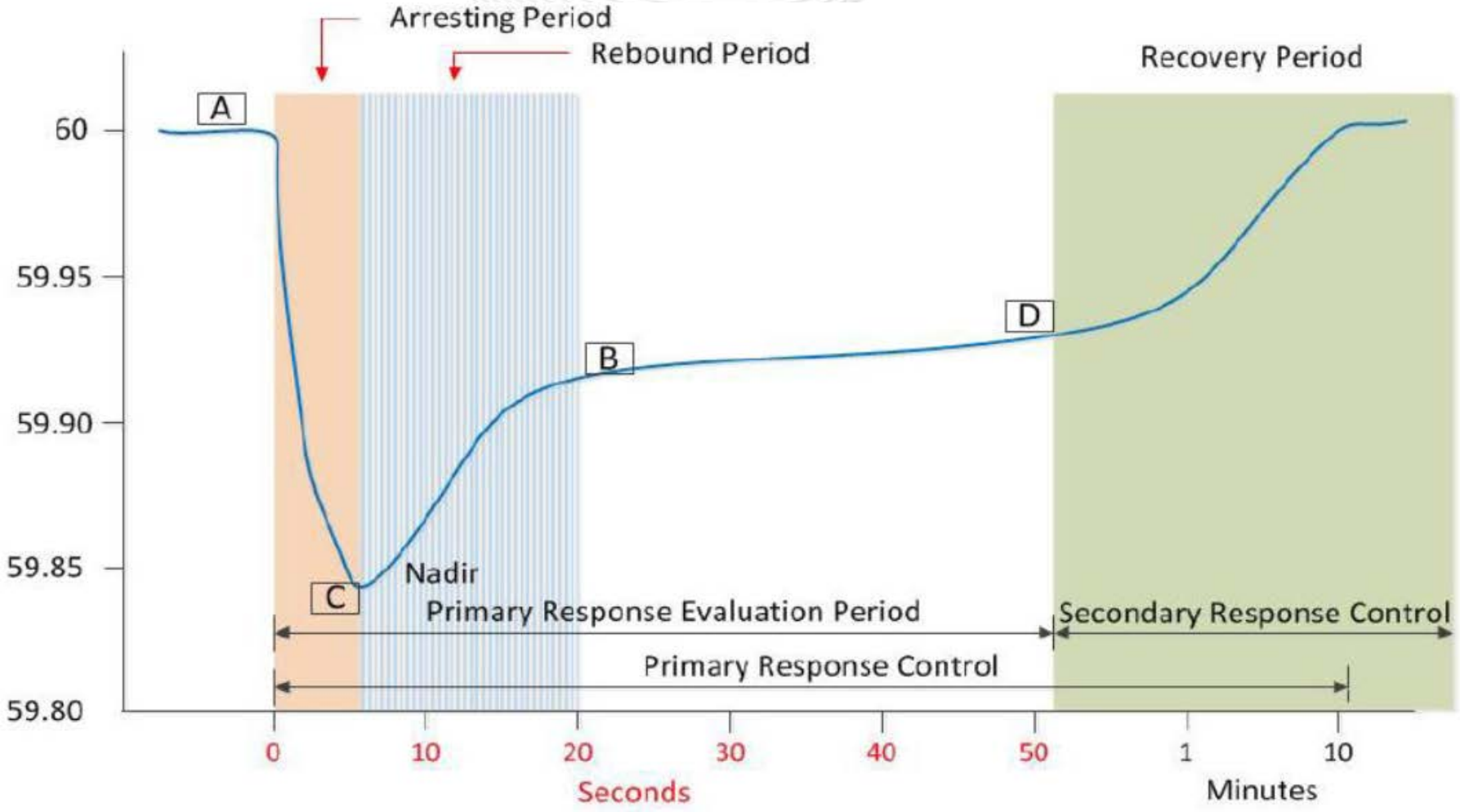
Inertia Response

- Kinetic energy stored in the rotating mass of all of the synchronized turbine-generators and motors on the interconnection

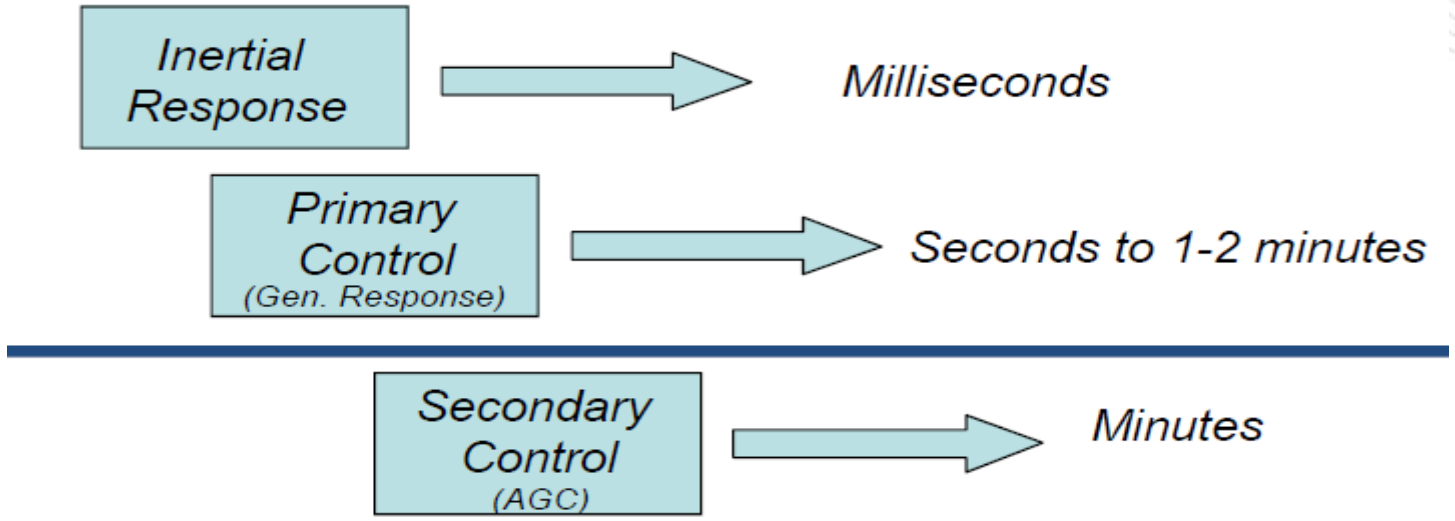
- Produced by the slowing of the spinning inertial mass of rotating equipment on the interconnection that both releases the stored kinetic energy and arrests the decline of the interconnection frequency

- Happens immediately following a disturbance

Classic Frequency Excursion Recovery



Types of Control



Control	Service	Timeframe
Inertial Control	Inertia	0-10 Seconds
Primary Control	Primary Frequency Response	10-60 Seconds
Secondary Control	Regulation / Reserves	1-10 Minutes
Tertiary Control	System Re-dispatch (SCED)	10-30 Minutes

Primary Frequency Response Requirement – Inertial Component

- PJM is NOT proposing to separate Inertial response from PFR
  - Not seeing a reliability problem with inertia
    - System Planning evaluates in stability studies
    - Eastern Interconnection has adequate inertial response
  - Difficult to separate inertia from overall PFR
  - Difficult to measure
    - No MW “response”
  - Much of inertia comes from load
  - No costs associated with inertia