What Energy Storage Provides

End-Use

- Power Quality/Reliability
- Peak Load Reduction
- Distributed Generation & Smart Grid Support

Renewable Penetration

- Reduced Variability
- Ramp rate control
- Load time shifting
- Reserves
- Dispatchability

Transmission and Distribution

- Line and Transformer Deferral
- Stability
- Voltage/Frequency Regulation

Generation

- Spinning Reserve
- Capacity Deferral
- Voltage/Frequency Regulation
- Load Leveling

EXHIBIT 7
DATE 03/11/13
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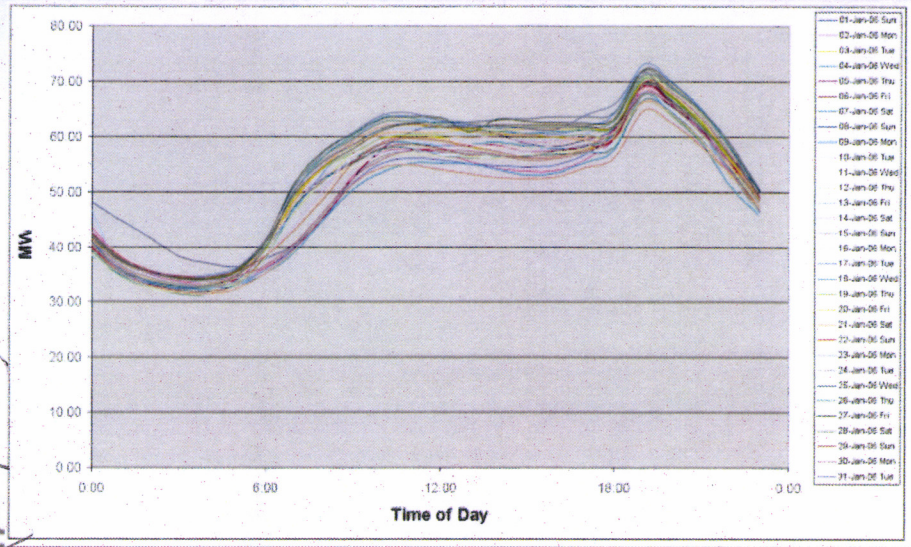
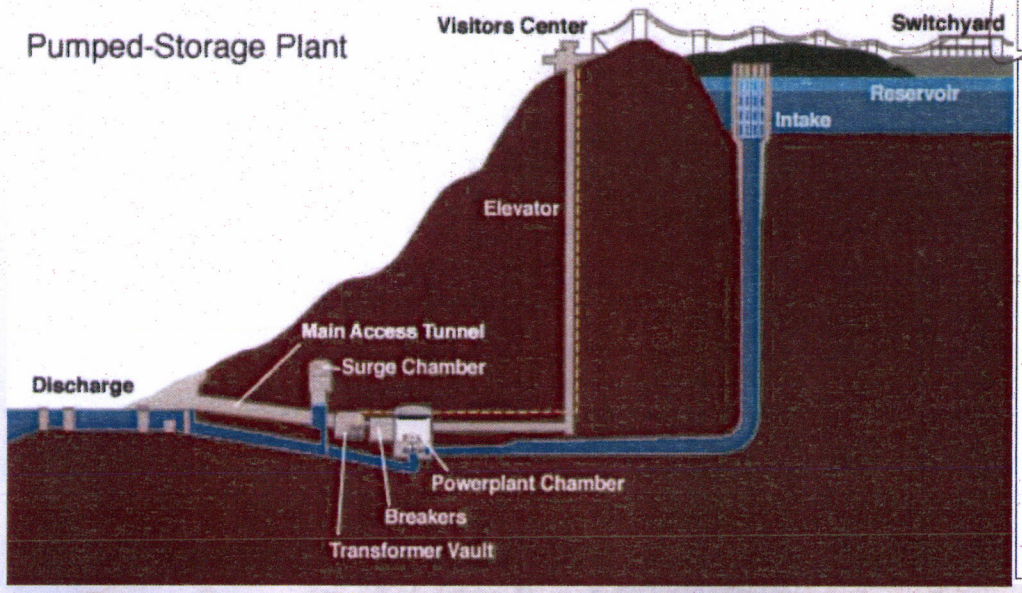
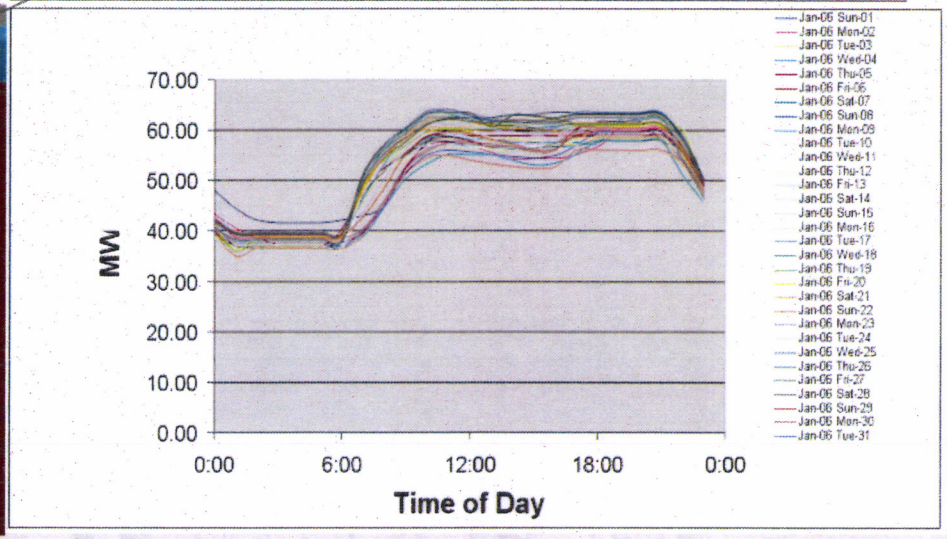
Classical Application of Energy Storage

- Load Leveling or Peak Shaving
- Pumped hydro energy storage
- Widely used in Japan, Europe
- Less used in USA

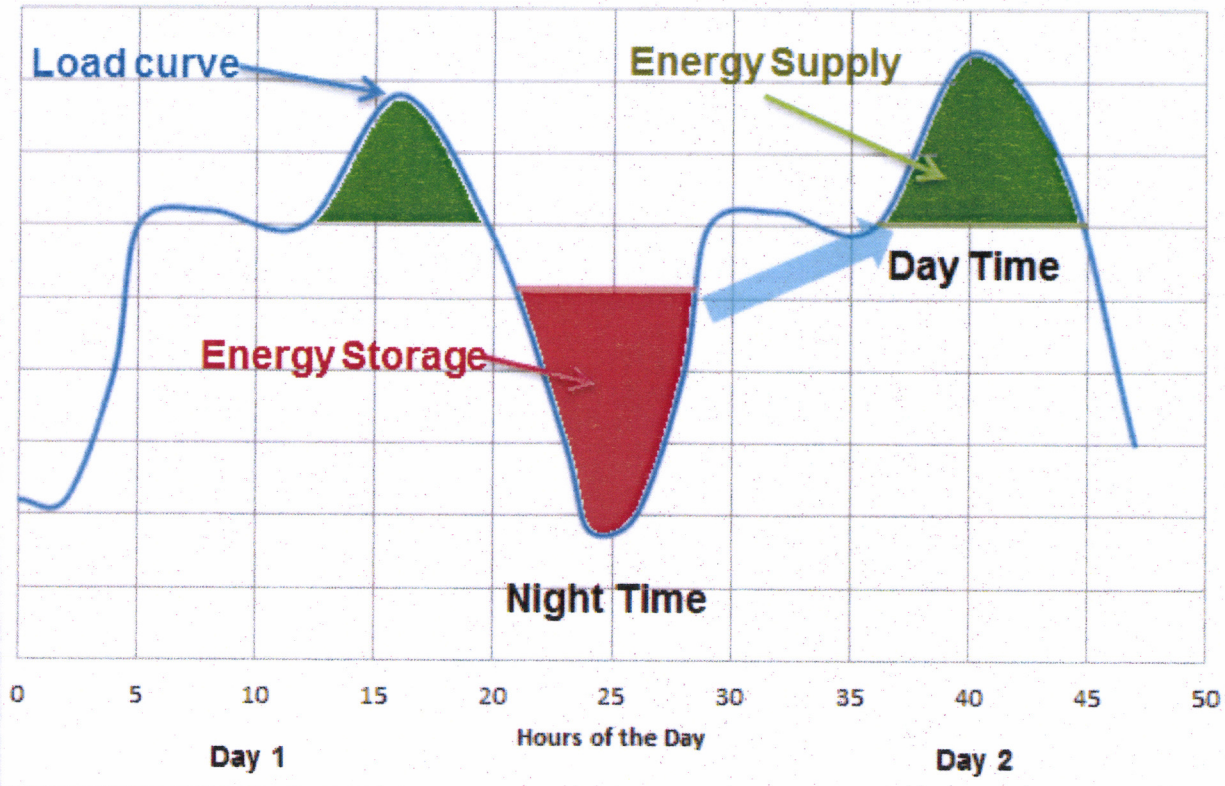
flattens the peak







Unique Feature of Energy Storage Technologies



Move energy through time to take advantage of price differentials-helps load leveling

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