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<th><strong>Docket Number</strong></th>
<th>13-AFC-01</th>
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<tr>
<td><strong>Project Title</strong></td>
<td>Alamitos Energy Center</td>
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<td><strong>TN #</strong></td>
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<tr>
<td><strong>Document Title</strong></td>
<td>Attachment 2 - AES Battery Storage Project</td>
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<tr>
<td><strong>Description</strong></td>
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<td><strong>Filer</strong></td>
<td>ELIZABETH LAMBE</td>
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<td><strong>Organization</strong></td>
<td>Los Cerritos Wetlands Land Trust</td>
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<td><strong>Submitter Role</strong></td>
<td>Intervenor</td>
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<td><strong>Submission Date</strong></td>
<td>8/12/2016 11:53:41 AM</td>
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AES Alamitos
Battery Energy Storage System
Application for a Conditional Use Permit

Long Beach, CA
July 18, 2016
The AES Corporation

Improving lives by delivering safe, reliable and sustainable energy in every market we serve.
AES in California

- 3 natural gas power plants
  - Long Beach (Alamitos)
  - Huntington Beach
  - Redondo Beach

- Approximately 15% of Southern California Edison’s peak demand

- Innovative leader in new energy solutions

- Over 280 MW of renewable energy sources
  - Wind
  - Battery Storage *
  - Solar power developer

*Coming to Long Beach by 2021
Alamitos Energy Center

- AES proposes to modernize and reduce the generating capacity of the Alamitos generating station in three separate projects:
  - Modernize and reduce the natural gas generation from 1,960 MW to 1,050 MW
  - Replace natural gas generation with up to 300 MW of Battery Energy Storage System (BESS)
  - Demolish and remove the old steam generators and stacks
Why Do We Need Energy Storage?

California’s goals for a cleaner, more environmentally sensitive energy future are fundamentally changing the electrical system.

- Renewable Energy: 33% by 2020 – 50% by 2030
- Greenhouse Gases: 80% reduction by 2050
- Coal: Limits on out-of-state coal contracts
- Water: Limits on once-through-cooling (OTC) for power plants, reductions in fresh water
- Nuclear???
- Electricity: Transportation and goods movement
- System Evolution: Demand side management, smart meters, consumer choice
Net load - March 31

Ramp need ~13,000 MW in three hours

Overgeneration risk

Yearly curves from 2012 to 2020.
Why Build Energy Storage in Long Beach?

- Maintain grid reliability
  - Need generation where the demand is located
  - Alamitos location more effective and efficient
  - Loss of generation in south-western Los Angeles reliability area
Key Attributes of the AES Alamitos BESS

- World’s largest battery energy storage system (100 MW up to 300 MW)
  - Pre-qualified battery suppliers
  - AES patented Advancion® control technology
  - Mandatory supplier return and recycling
  - Closed loop chiller plant for climate control
- No emissions
- Negligible fresh water use
- Eliminates discharge to San Gabriel river
- Reduces noise
- Within existing plant fence line, consistent with zoning use
BESS equipment looks similar to computer equipment in a data center.

- Cells
- Modules
- Trays & Racks
AES’ Newest BESS in Indianapolis
Clean | Reliable | Lower Profile
Clean | Reliable | Lower Profile
Clean | Reliable | Lower Profile
Required Planning Entitlements

- AES filed an application with the City of Long Beach for
  - Site Plan Review
  - Conditional Use Permit
  - Standards Variance
  - Local Coastal Development Permit
  - Mitigated Negative Declaration (MND)

- Next Steps
  - August/September: 30 day public review of MND
  - October: Planning Commission Approval
  - 2018: Design and Construction
  - 2020: Operational

- Once constructed and operational, AES will apply to the City of Long Beach for demolition permits
How Can the Local Community Participate?

- Provide comment on the draft EIR
- Support via letter or e-comments
- Attend public meetings and hearings
- Get on the AES email list serve
How to Reach Us

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