California Energy Commssion
DOCKETED
12-AFC-02
TN # 67110
SEP 13 2012

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September 13, 2012

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VIA EMAIL & US MAIL

Ms. Felicia Miller, Siting Project Manager
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

Re: Huntington Beach Energy Project (12-AFC-02)
Applicant's Site Visit & Informational Hearing Materials

Dear Ms. Miller:

As you are aware, on September 10, 2012, the California Energy Commission held a Site Visit and Informational Hearing for the Huntington Beach Energy Project ("HBEP"). Applicant AES Southland Development, LLC presented a summary of HBEP at the Informational Hearing via a PowerPoint presentation and also provided a handout to attendees during the Site Visit. Applicant encloses herein for docketing both the PowerPoint presentation and the handouts.

Pursuant to Commissioner McAllister's August 17, 2012 Order issued for the HBEP proceeding, the documents enclosed herein exceed the five (5) megabyte file size limitation.[1] As such, a paper copy of both the presentation and maps will be served on the parties via first class mail, along with a compact disk containing each.

Should you have any questions regarding these documents, please contact Robert Mason or Melissa Foster directly.

Respectfully submitted,

Melissa A. Foster
Enclosures
cc: Proof of Service List

[1] Commissioner McAllister's August 17, 2012 Order also cites to the Commission's 2011 Standing Order for all proceedings requiring filing, service and docketing of materials with the Commission. (*See* Standing Order 11-GEN ADMIN-01 (Nov. 30, 2011).)

Alaska California Idaho
Minnesota Oregon Utah Washington

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Meadowlark Country Club
Goldenwest
Warner Ave
Graham St
Springdale St
Edwards St
Slater Ave
Newland
Oak View
Fulton Park
Fountain Valley Park
Fountain Valley
405
Talbert Ave
Huntington Central Park
Courreges Park
Ellis Ave
Garfield Ave
Garfield
Lagenbeck Park
Seapoint Street
golf course
Pacific Coast Highway
Hwy 1
Main St
Yorktown Ave
Yorktown
Bartlett Park
Adams
Adams Avenue
Adams Ave
Beach Blvd
Newland St
Magnolia St
Bushard St
Brookhurst St
Ward St
S Ward St
Indianapolis Ave
Huntington Beach
Fairview Park
Atlanta Ave
Edison Community Park
Edison High School
Hamilton Ave
Victoria St
Talbert Regional Par
Huntington Beach State Park

Route Map

Potential Parking Areas During Construction

Existing Huntington Beach Generating Station
Area available for development of power generation is outlined in blue.

Proposed Huntington Beach Energy Project

Huntington Beach Energy Project

Presented to:

California Energy Commission

September 10, 2012

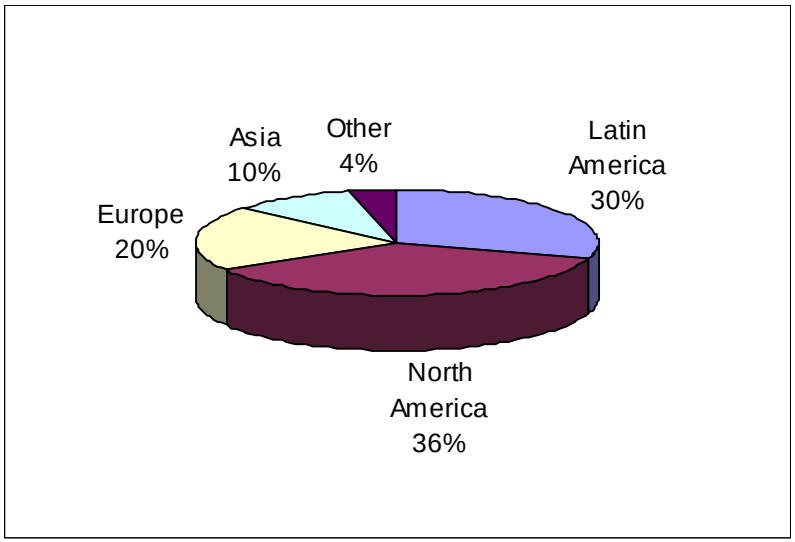
AES

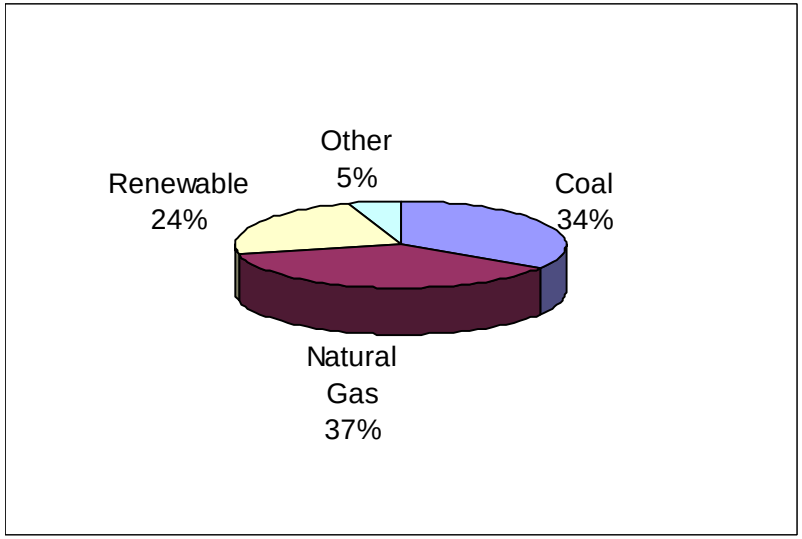
the power of being global

AES Corporation

Safely providing affordable, sustainable energy to 28 countries on 5 continents with a global workforce of more than 29,000 people

- AES Corporation portfolio includes:
  - Utilities – 14 businesses serving nearly 11 million customers
  - Thermal generation - 34,100 MW in operation, 1,700 MW under construction
  - Renewable generation – 10,000 MW in operation, 560 MW under construct





- AES California portfolio includes:
  - Thermal - 3,700 MW owned plus an additional 450 MW operational control
  - Wind - 250 MW owned plus an additional 250 MW O & M control
  - Solar – 360 MW underdevelopment through AES Solar (50% owned by AES)

AES Southland

- In 1998, AES purchased three natural gas generating stations (Alamitos, Redondo Beach and Huntington Beach) from Southern California Edison (SCE)
  - SCE mandatory divestiture due to California AB 1890
  - Totals nearly 20% of SCE's on-peak needs
- Upon acquisition, AES entered into a long-term tolling agreement
  - All SL units under this toll except HB U3&4
  - 2002 re-commissioned HB U3&4
- Exemplary operational performance since inception, exceeding 92% annual availability and 95% summer on-peak availability

Why Build a New, Modern Plant?

- Critically located, aging infrastructure necessary to maintain grid reliability
  - Need generation where the load is, significant population on the coast
  - HB location is 4 times more effective than inland plants to serve coastal load
- Retrofitting existing equipment for 316b compliance is inconsistent with the future needs of California
  - Retrofitting with Cooling Tower (wet or dry) is costly
  - Existing equipment is ill-suited for future needs
    - Long start up times, slow ramping
    - Minimum on-line times – causes over-generation in windy periods
    - More emissions
- Opportunity to be environmentally sensitive
  - Improve thermal efficiency
  - Eliminate once-through cooling
  - Reuse existing industrial site, gas, water and electrical interconnections

Our Objectives for the Modernization

- Create a sustainable business which supports California in achieving its clean energy and environmental goals
- The new power plant will:
  - Satisfy Local Area Requirements
  - Supply Southern California with necessary energy
  - Provide controllable generation to support renewable resources, like wind and solar
- Ultimately, help to minimize consumer costs.

Key Project Attributes

- Infrastructure – Build where transmission, gas, water and sewer all exist and appropriate industrial zoning is in place
- Location
  - Must maintain some generation through the entire modernization process to support grid reliability
  - Need for replacement generation is in Western LCR, and more specifically near the Barre substation
- Intermediate loading operating profile requiring sustainable energy over multiple hours or days
- Emission Offsets - Air quality regulations require shutdown and retirement of old plants
- Regulatory limits
  - BACT compliance
  - Minimizing emissions – appropriate technology for operating profile
  - Ocean and fresh water use
  - Preservation of resources – land and habitat

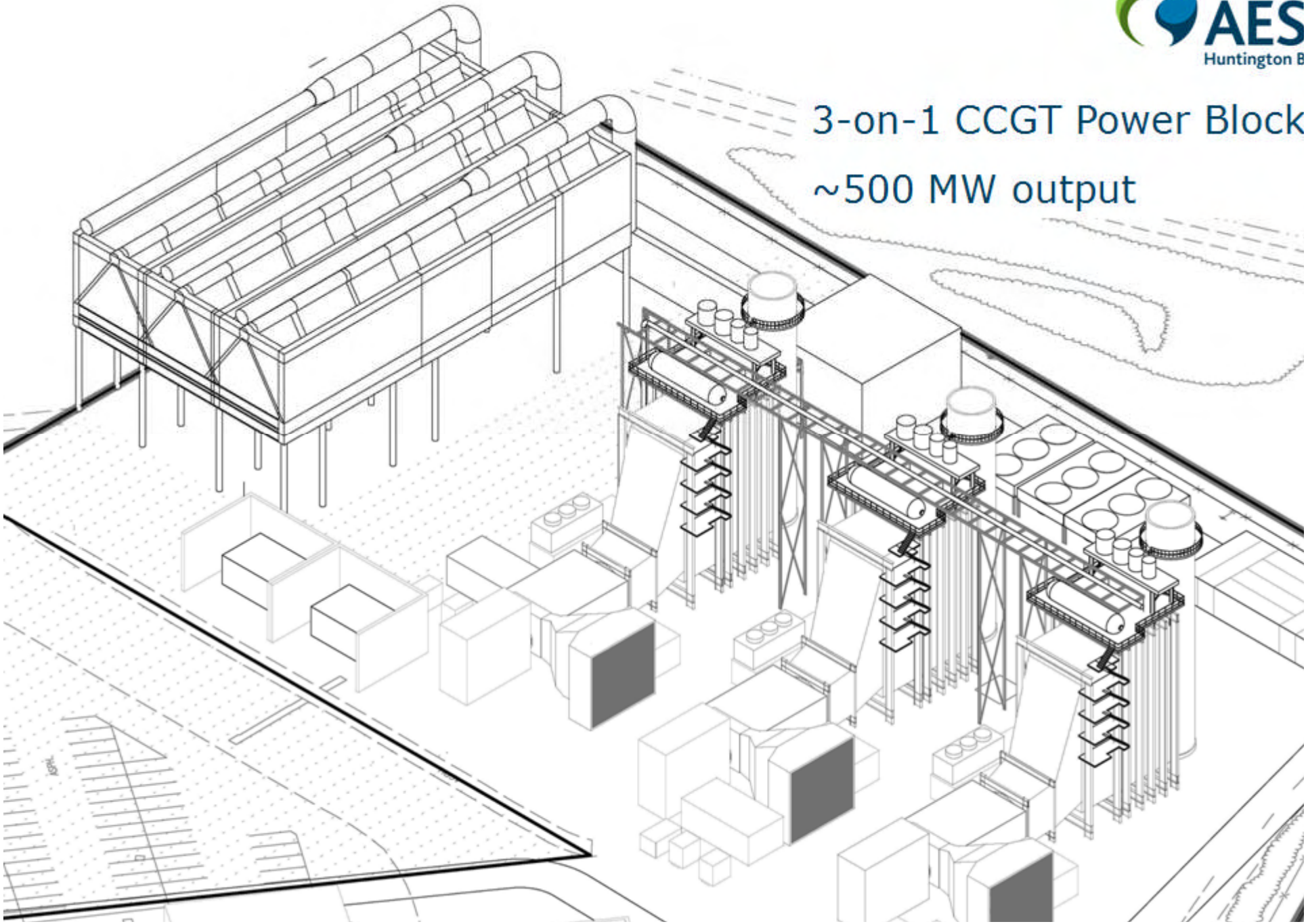
Huntington Beach Energy Project

- Natural gas-fired combined-cycle, air-cooled, generating plant that will provide 939 MW of capacity to the electrical grid
- Replacement and modernization of the existing Huntington Beach Generating Station
- Two 3-on-1 combined-cycle gas turbine (CCGT) power blocks
- Eliminates the use of ocean water
- Designed to provide maximum efficiency and lowest emissions for the project objectives
- Significant reduction of fresh water use
- Ensures continued generation from critical location throughout the development process

AES
Huntington B

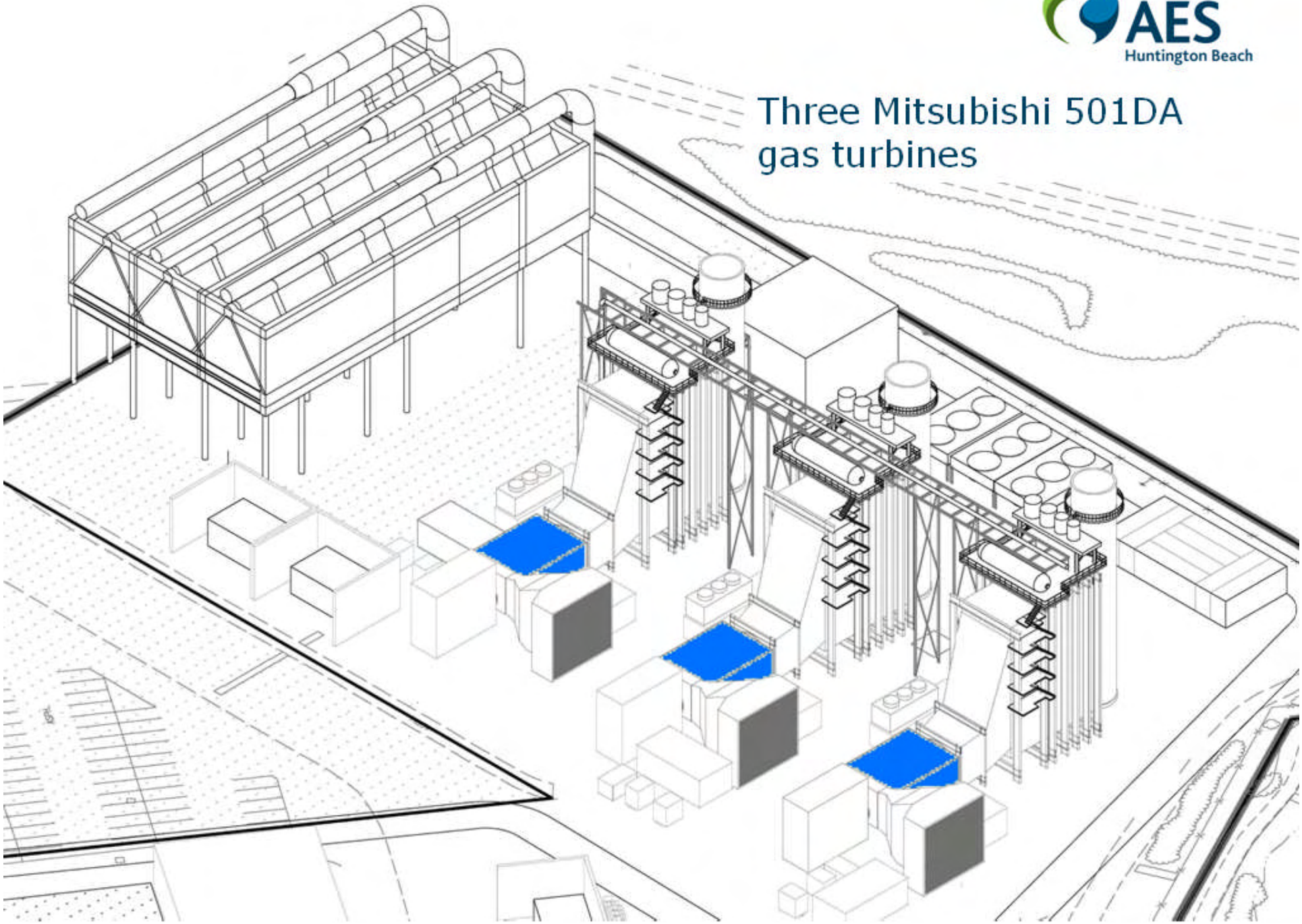
3-on-1 CCGT Power Block

~500 MW output



AES
Huntington Beach

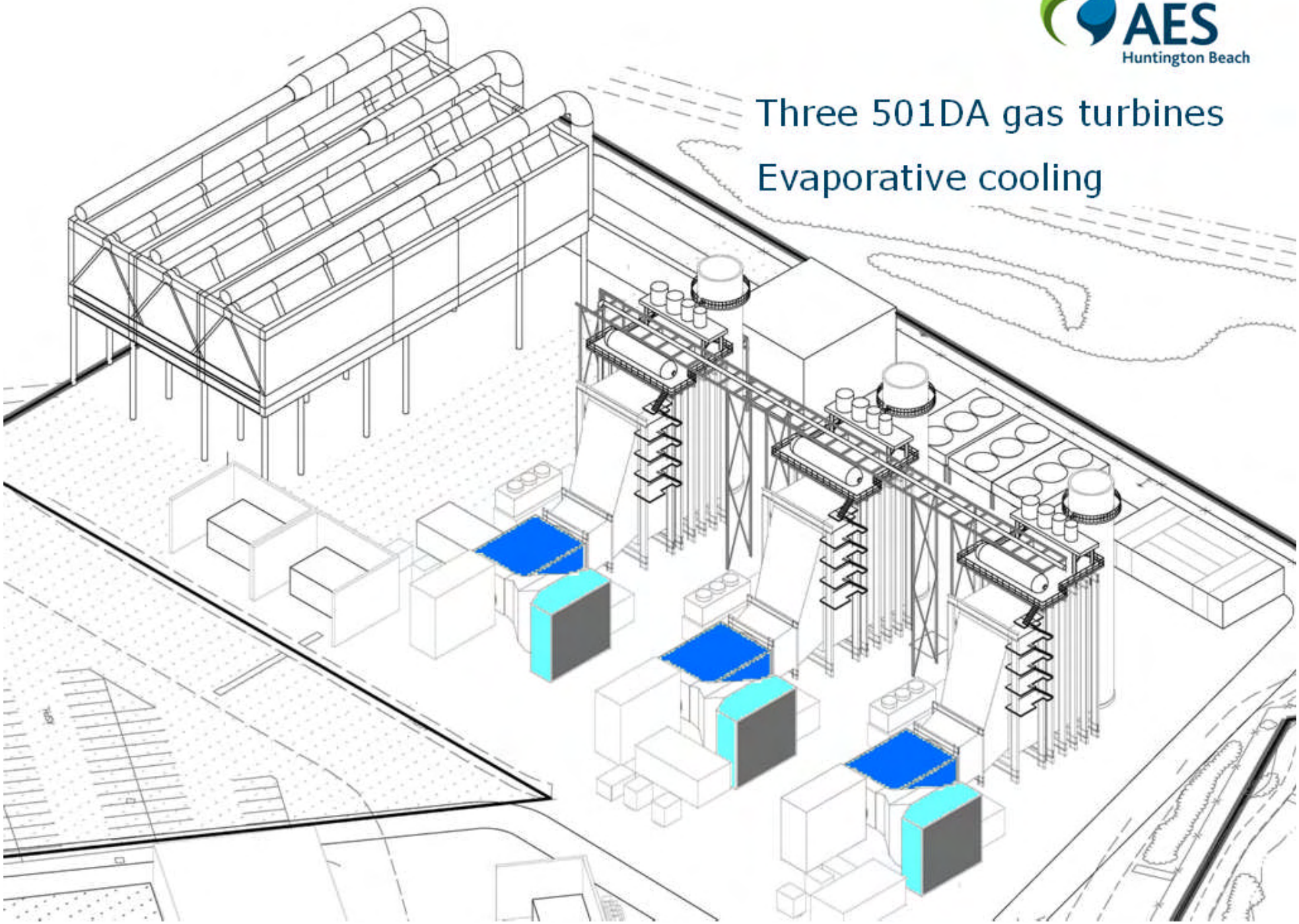
Three Mitsubishi 501DA gas turbines



AES
Huntington Beach

Three 501DA gas turbines

Evaporative cooling

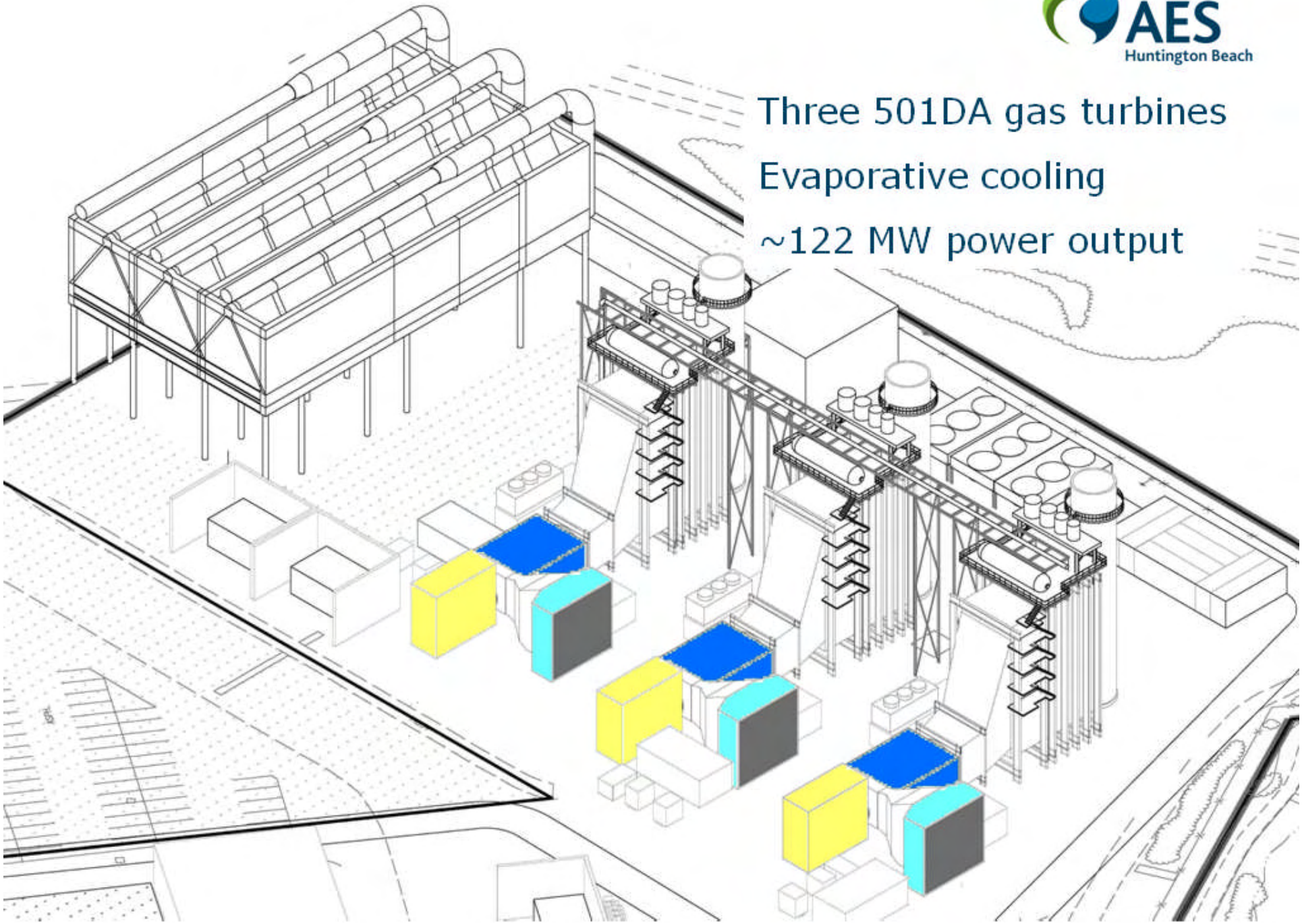


AES Huntington Beach

Three 501DA gas turbines

Evaporative cooling

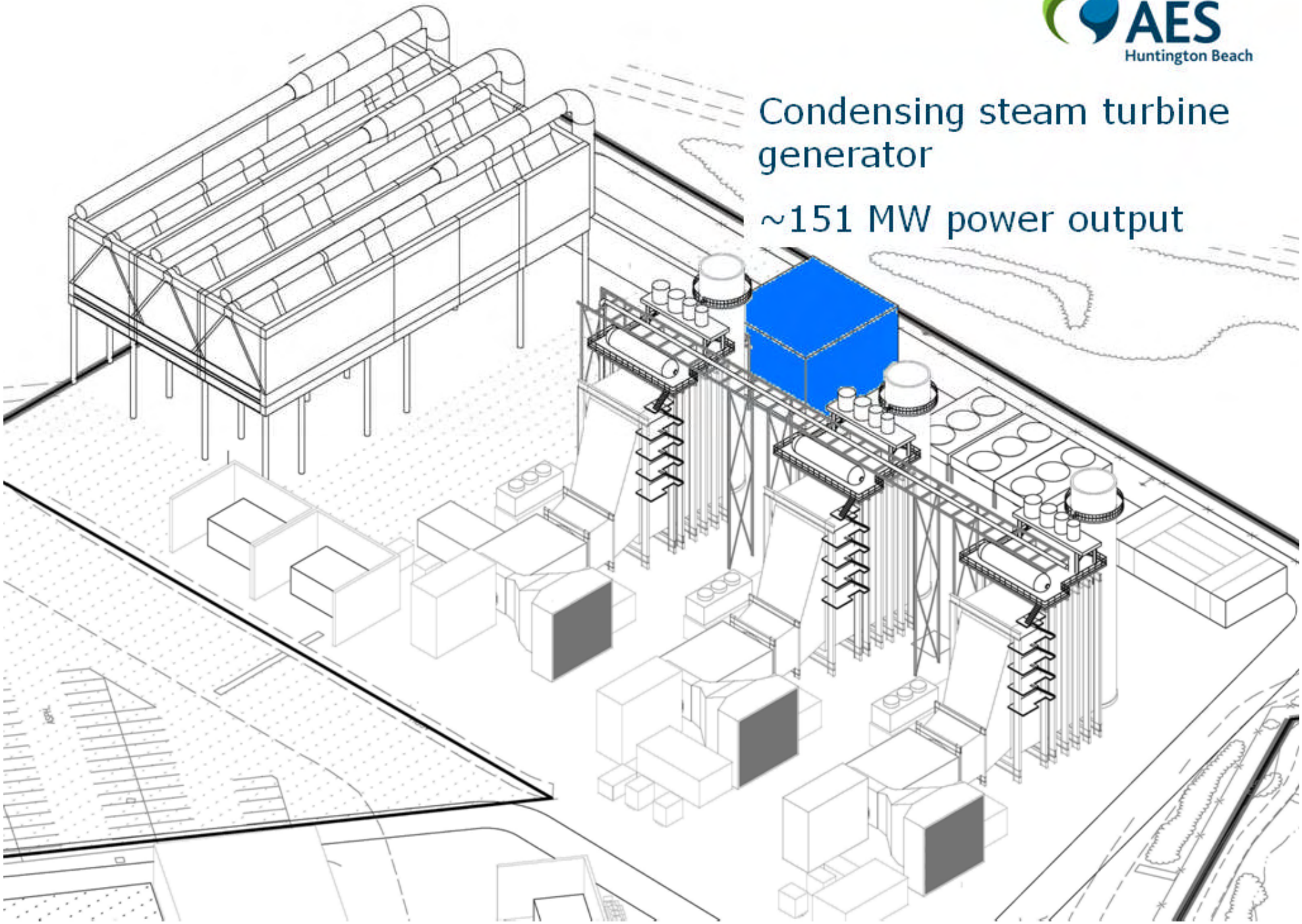
~122 MW power output



AES Huntington Beach

Condensing steam turbine generator

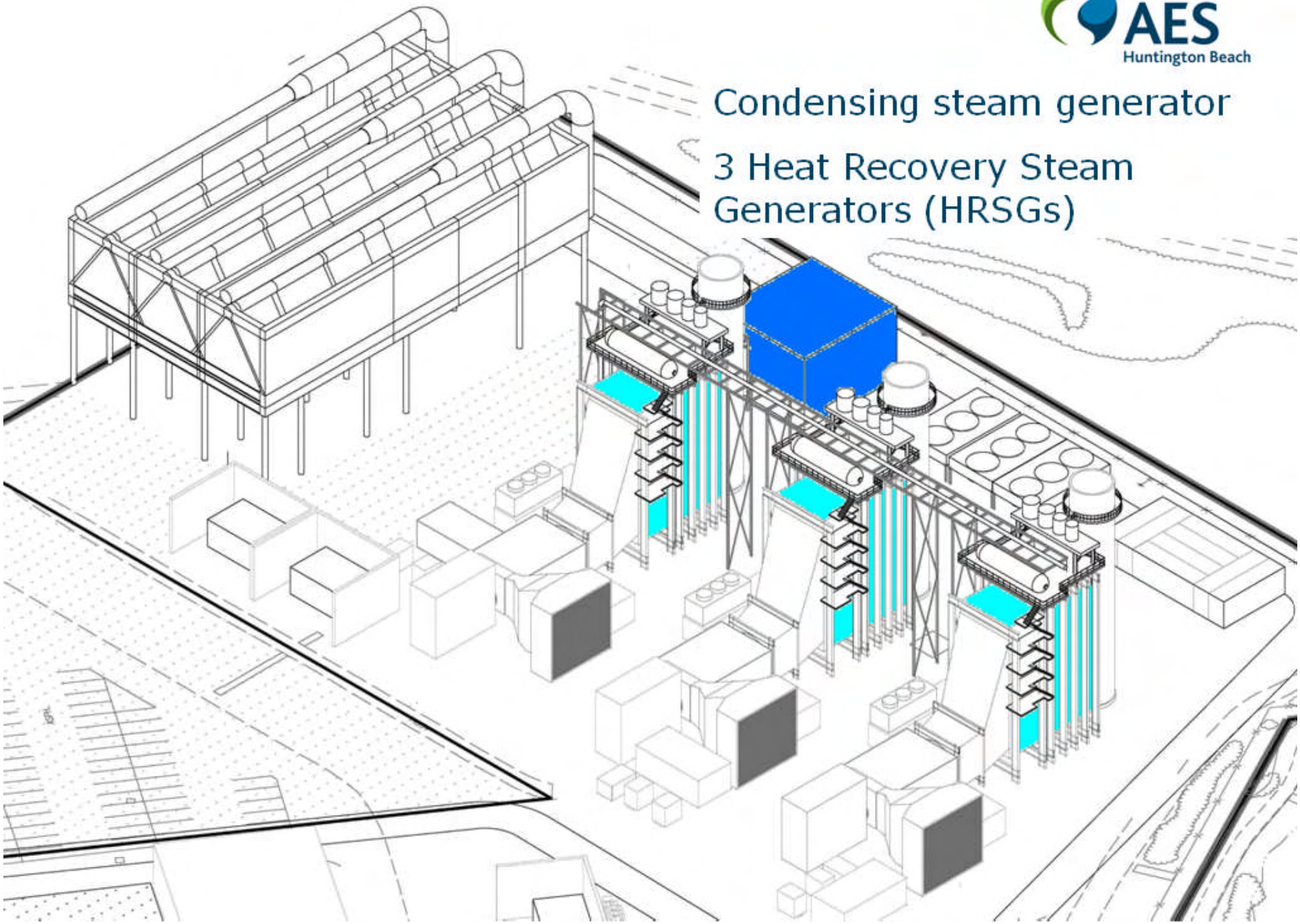
~151 MW power output



AES
Huntington Beach

Condensing steam generator

3 Heat Recovery Steam Generators (HRSGs)



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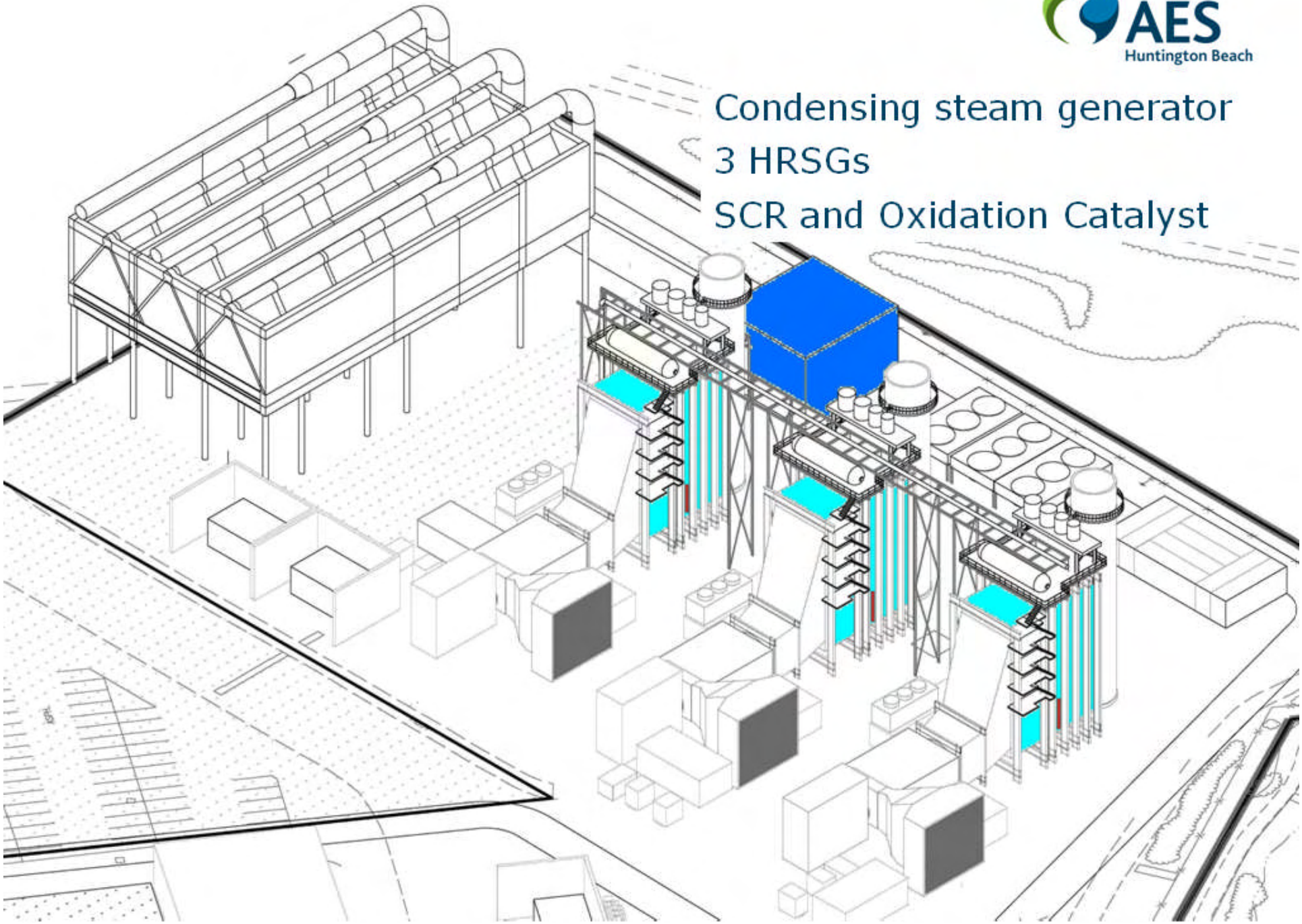
Huntington Beach

Condensing steam generator
3 HRSGs
SCR and Oxidation Catalyst



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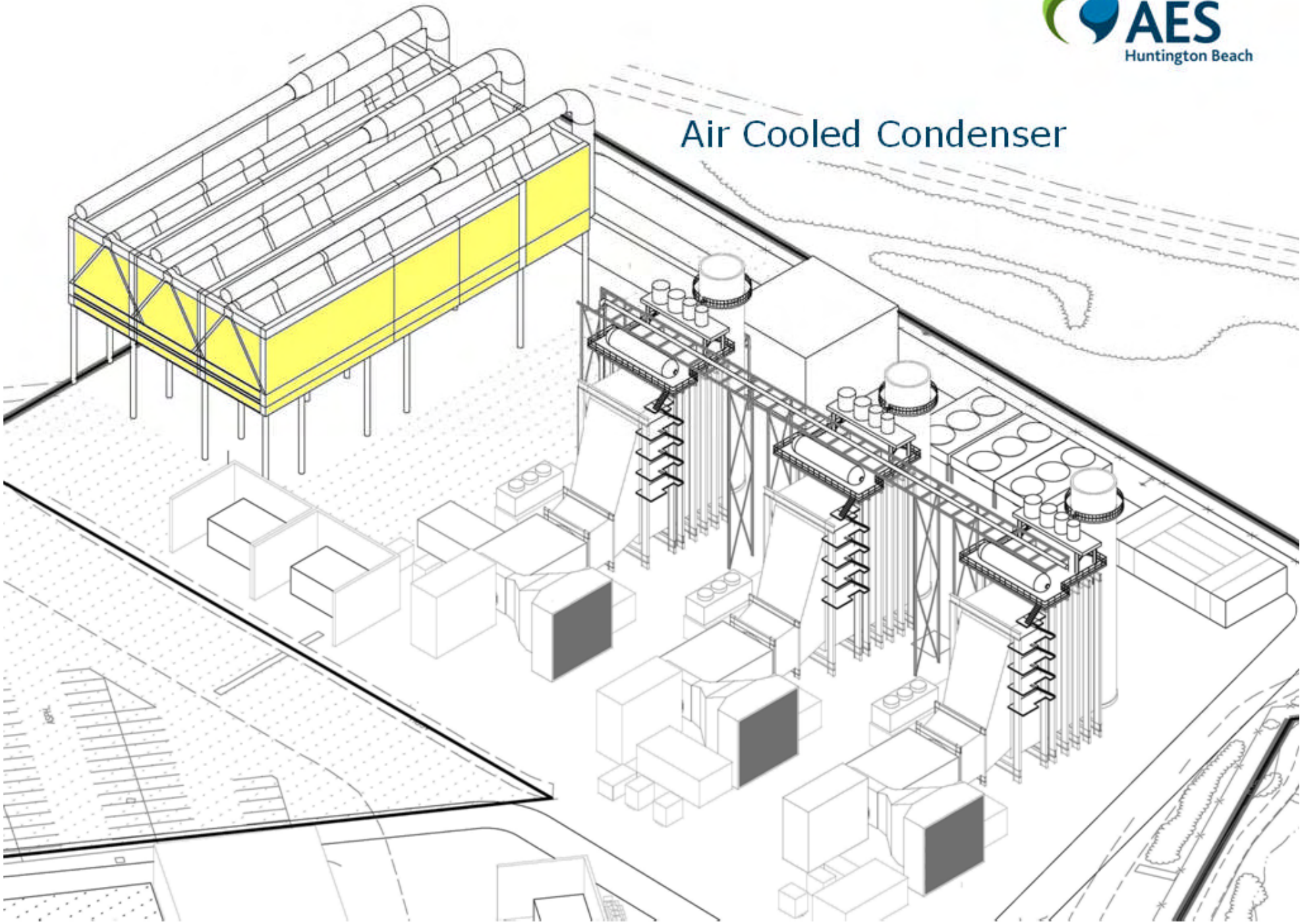
Air Cooled Condenser



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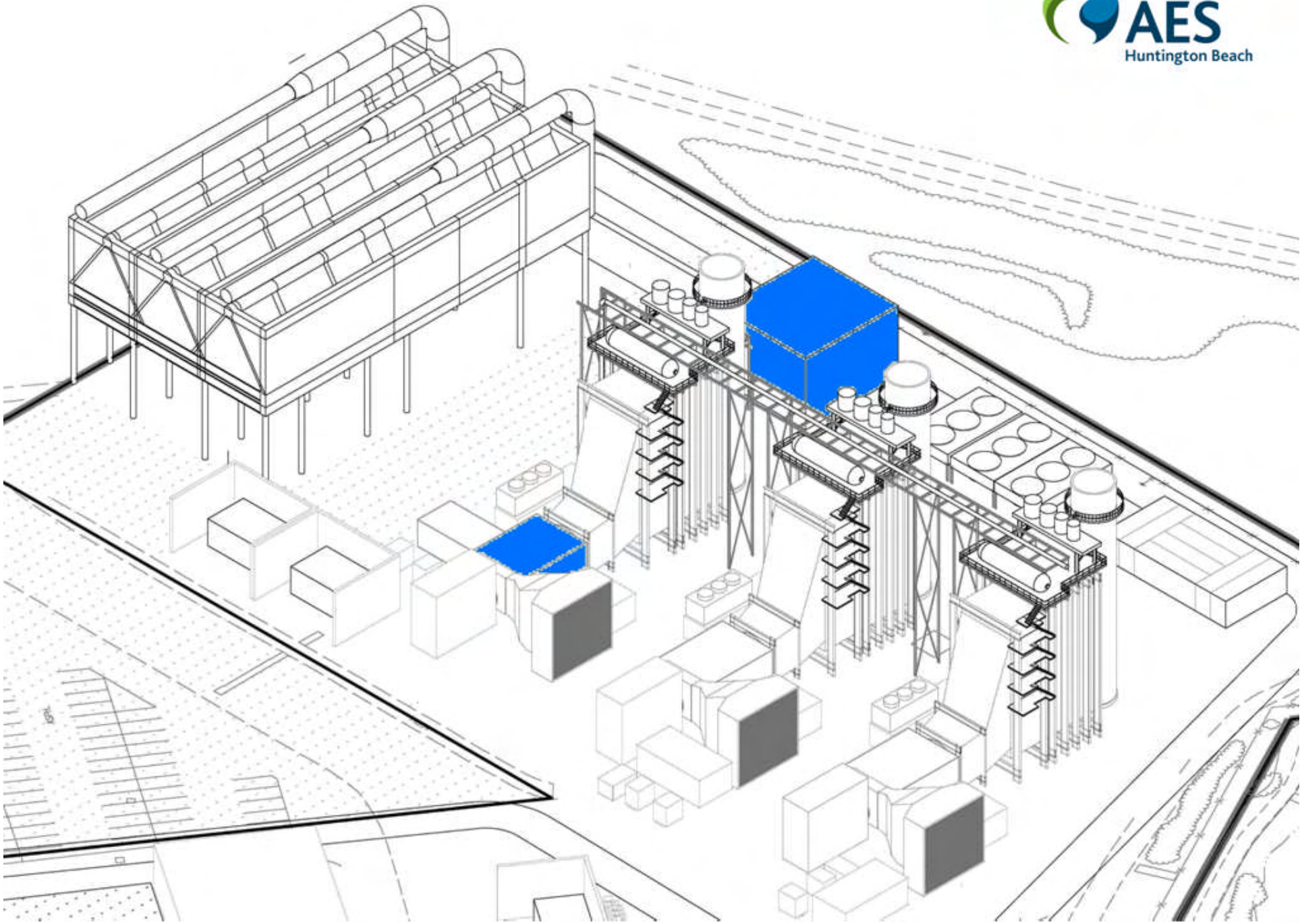

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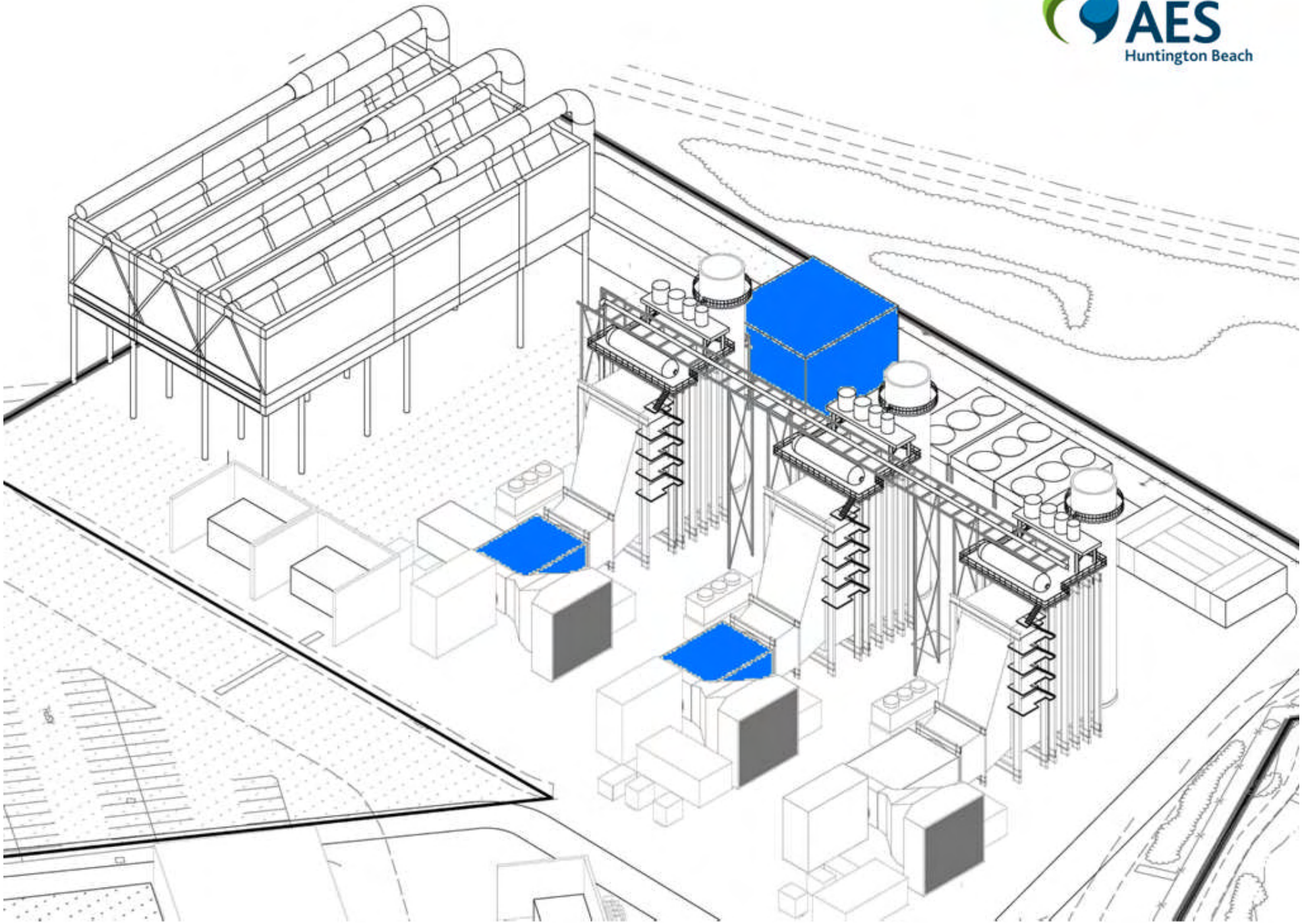

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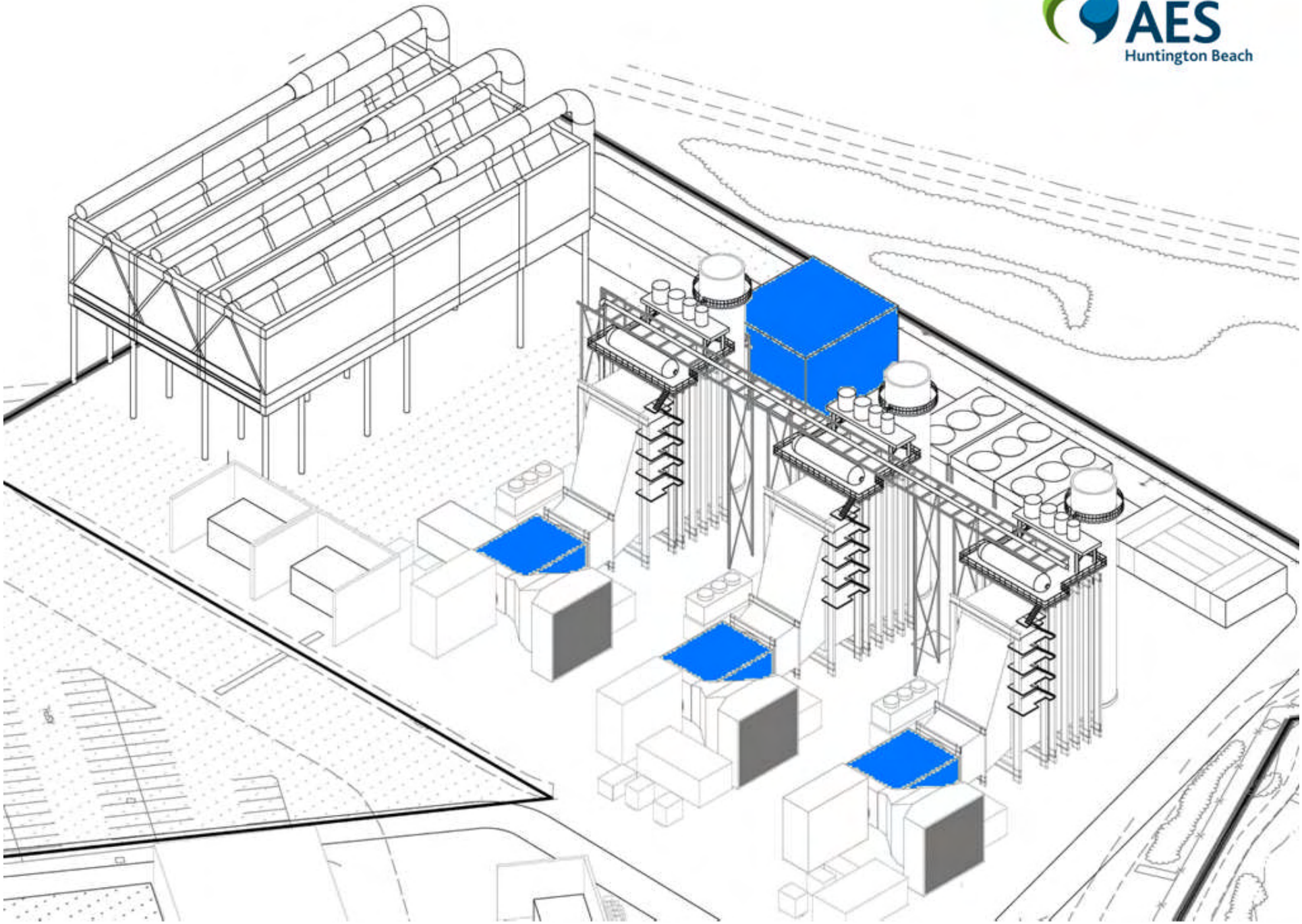

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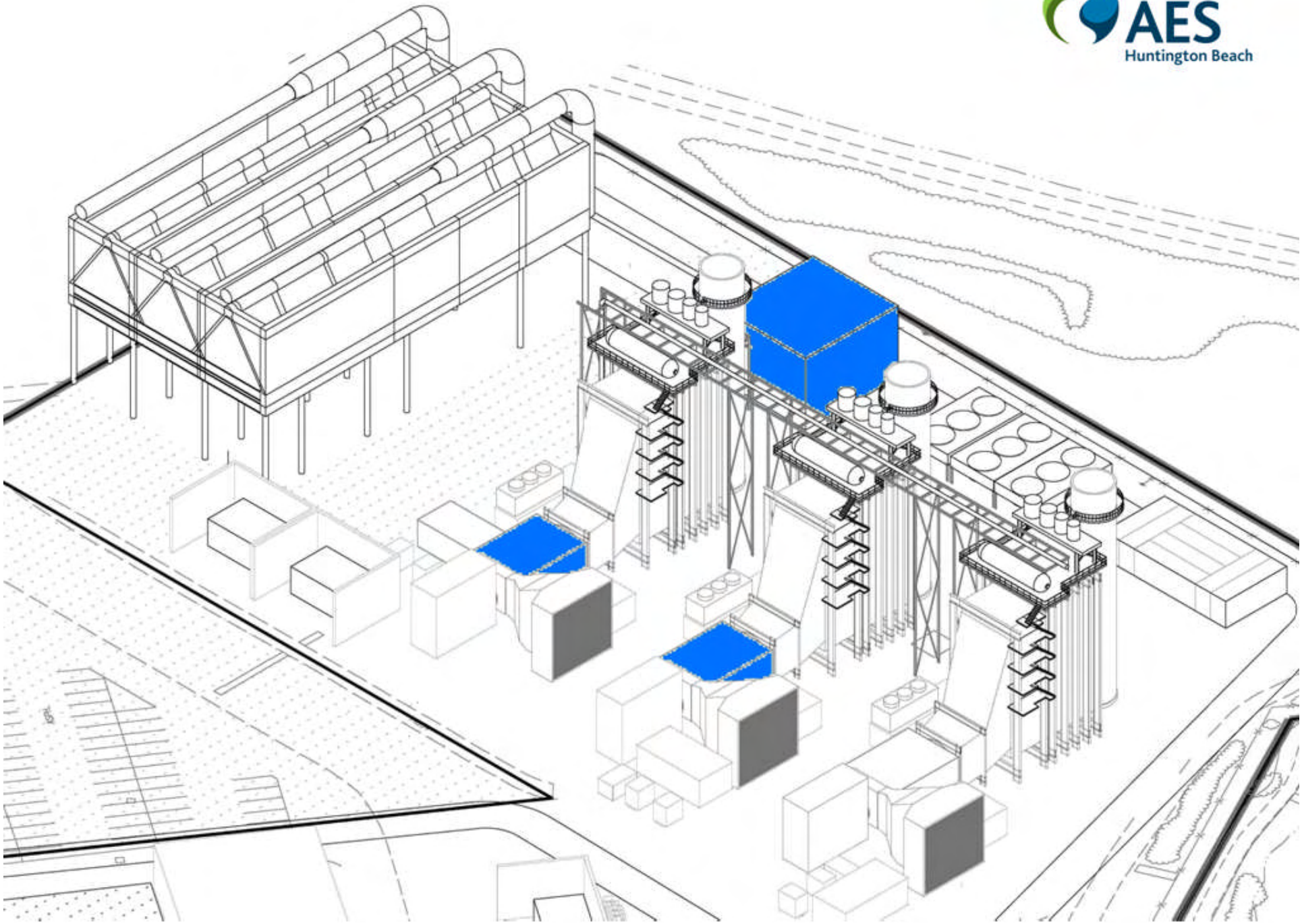

Huntington Beach Energy Project

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Existing Plant Site

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Proposed Modernization Project

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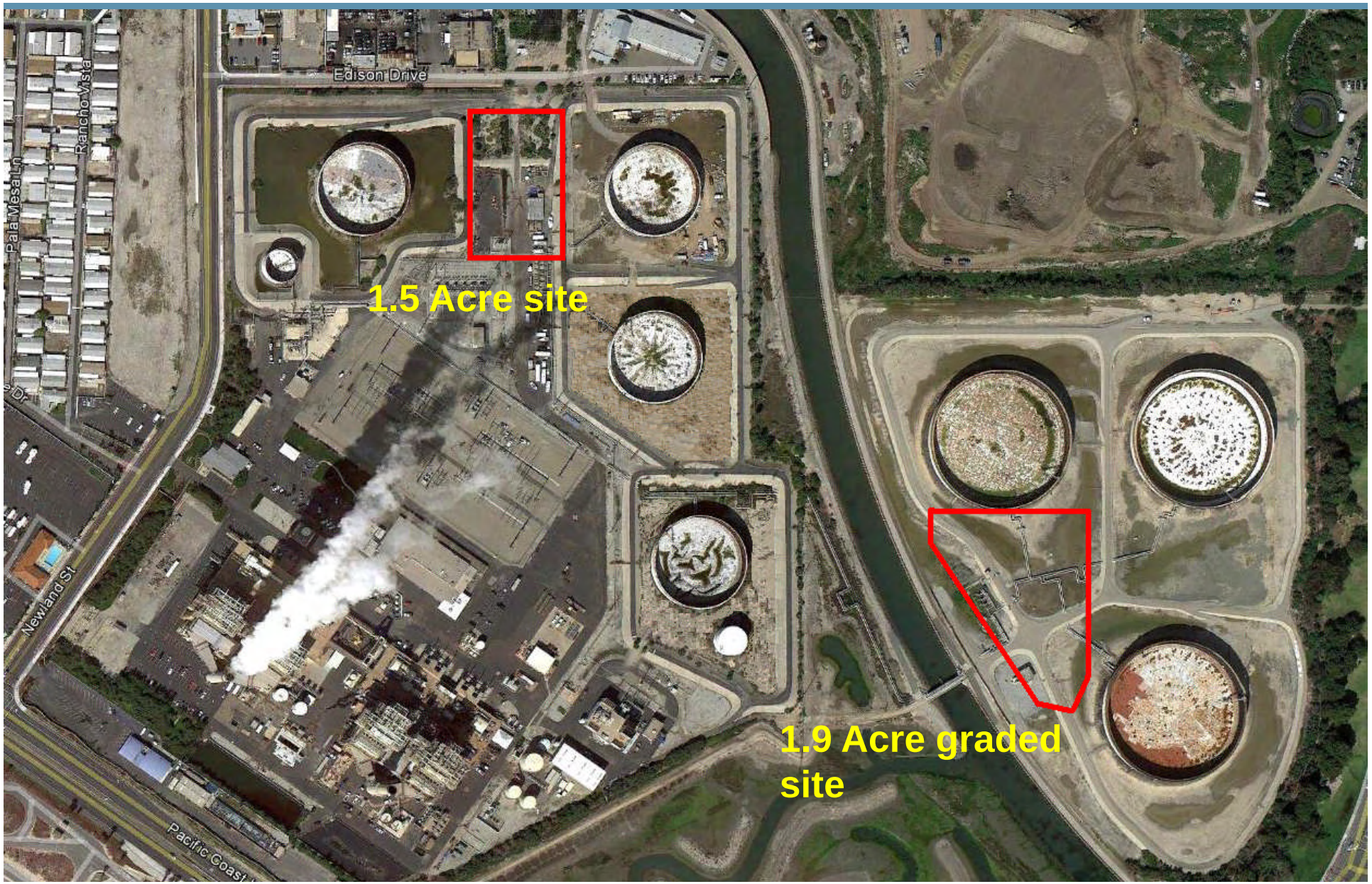
Potential Offsite Construction Parking

Potential Offsite Construction Parking



Project Benefits

- Air Quality
  - Natural gas fired, pollution controlled source
  - New level for BACT in the South Coast AQMD
  - Lowest GHG emissions for the project objectives
- Alternatives
  - No other site identified to serve specific grid needs
  - Necessary for increased renewable, storage and distributed energy
- Waste Management
  - All demolition and construction wastes to licensed facilities
- Water
  - No ocean water
  - Maximum possible fresh water use of new plant would be a fraction of what the existing plant actually uses
- Noise
  - New plant will be quieter than existing plant

We know that to be successful the Huntington Beach Energy Project must be a project where all stakeholders can benefit.

Thank You!

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV

APPLICATION FOR CERTIFICATION FOR THE HUNTINGTON BEACH ENERGY PROJECT

Docket No. 12-AFC-02
(Revised 8/24/12)

APPLICANT
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Jennifer Jennings
Public Adviser's Office
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*indicates change

DECLARATION OF SERVICE

I, Judith M. Warmuth, declare that on September 13, 2012, I served and filed a copy of the attached Applicant's letter to Ms. Felicia Miller, dated September 13, 2012 submitting Applicant's materials provided during the Site Visit and Informational Hearing on September 10, 2012. This document is accompanied by the most recent Proof of Service list, located on the web page for this project at: http://www.energy.ca.gov/sitingcases/huntington_beach energy/index.html.

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(Check all that Apply)

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☒ Served by delivering on this date, either personally, or for mailing with the U.S. Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses marked ***"hard copy required"** or where no e-mail address is provided.

AND

For filing with the Docket Unit at the Energy Commission:

☒ by sending one electronic copy to the e-mail address below (preferred method); **OR**

☐ by depositing an original and 12 paper copies in the mail with the U.S. Postal Service with first class postage thereon fully prepaid, as follows:

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Attn: Docket No. 12-AFC-02
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.ca.gov

OR, if filing a Petition for Reconsideration of Decision or Order pursuant to Title 20, § 1720:

Served by delivering on this date one electronic copy by e-mail, and an original paper copy to the Chief Counsel at the following address, either personally, or for mailing with the U.S. Postal Service with first class postage thereon fully prepaid:

California Energy Commission
Michael J. Levy, Chief Counsel
1516 Ninth Street MS-14
Sacramento, CA 95814
michael.levy@energy.ca.gov

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.

JUDITH M. WARMUTH

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