

DOCKETED

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Project Title:	Redondo Beach Energy Project
TN #:	200746
Document Title:	AES RBEP Presentation for CEC Informational Mtg Oct 1 2013
Description:	AES RBEP Presentation from Oct 1, 2013 CEC Meeting
Filer:	Karen Mitchell
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Submitter Role:	Applicant Representative
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AES Redondo Beach Energy Project

**California Energy Commission
Informational Hearing**

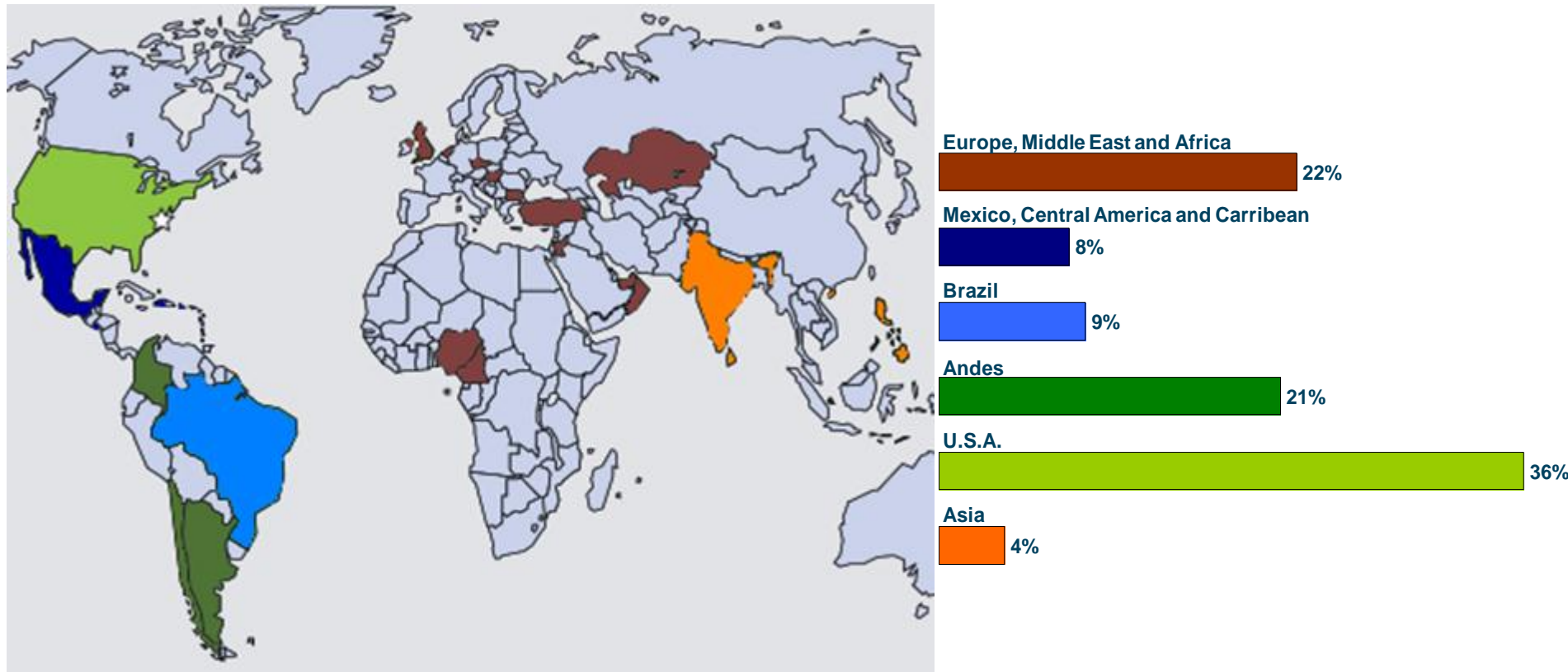
October 1, 2013



The AES Corporation

Safely providing affordable, sustainable energy to 23 countries on five continents

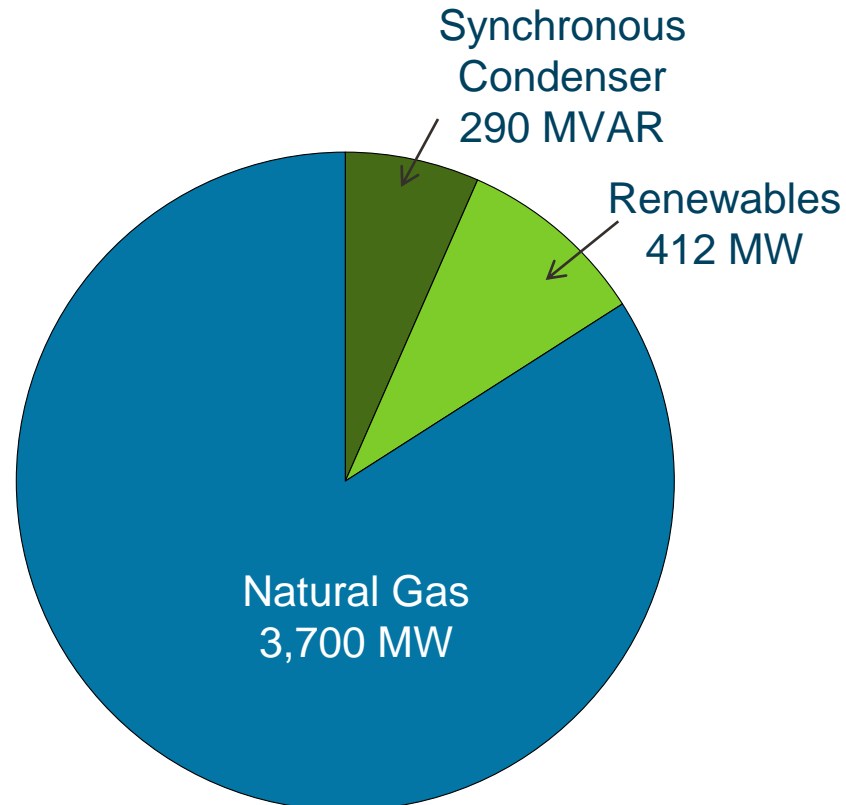
- U.S. based company with a diverse portfolio of generation technologies
- Global leader in renewables, energy storage and natural gas technologies – over 50% of portfolio
- Directly serve nearly 11 million customers worldwide
- Responsible developer of over 20,000 MW across >50 projects globally
- Over 30 year operating history in California



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Why Modernize the Redondo Beach Generating Station?

Environmental Goals

- Eliminates ocean water use
- Employs Best Available emissions Control Technology
- Exceeds carbon reduction targets

Infrastructure Upgrades

- Necessary for renewable energy
- Operate only when needed
- Up to 50% more efficient

Location

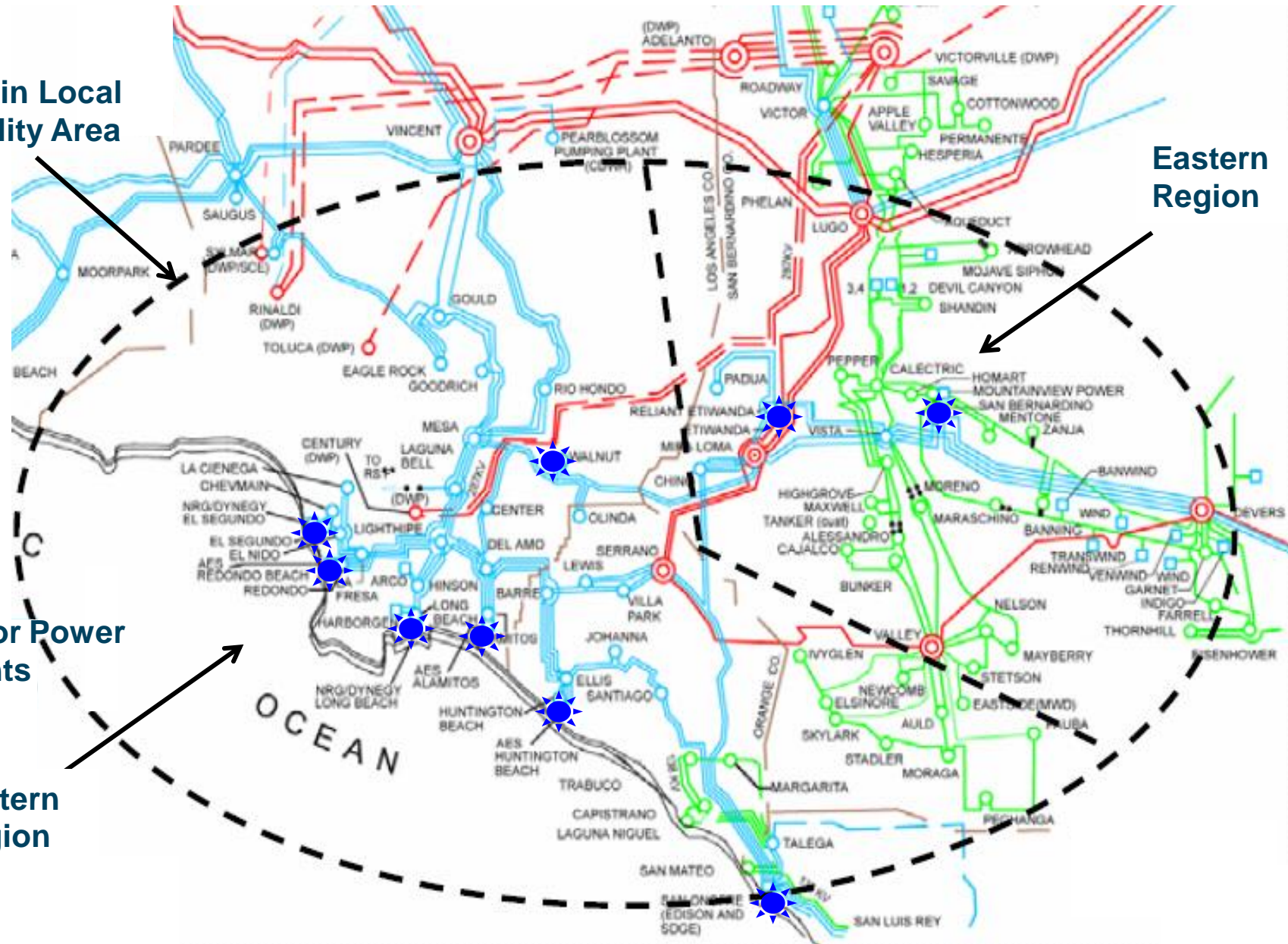
- Generation needs to be located close to population centers
- Twice as effective as inland plants
- Existing site and infrastructure

Community Benefits

- Reinvents the sky-line
- Revitalizes the harbor
- Repurposes land

LA Basin Local Reliability Area

Eastern Region



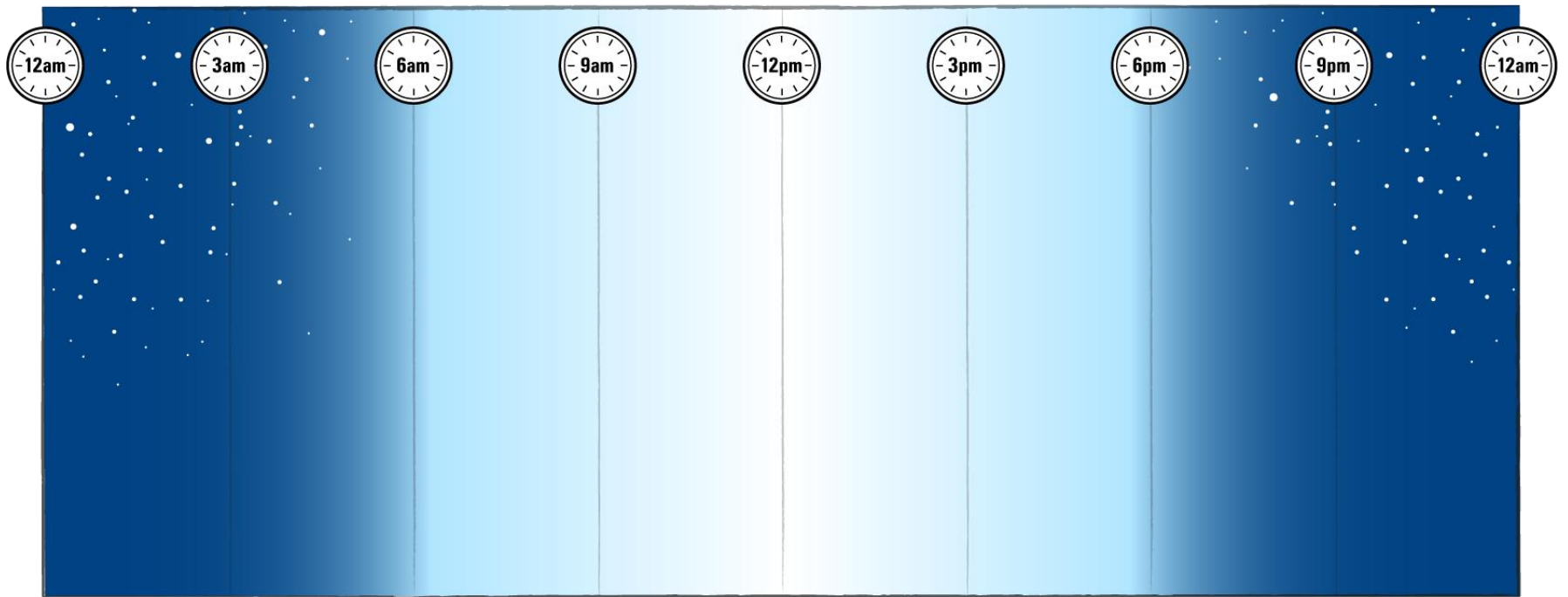
Major Power Plants

Western Region

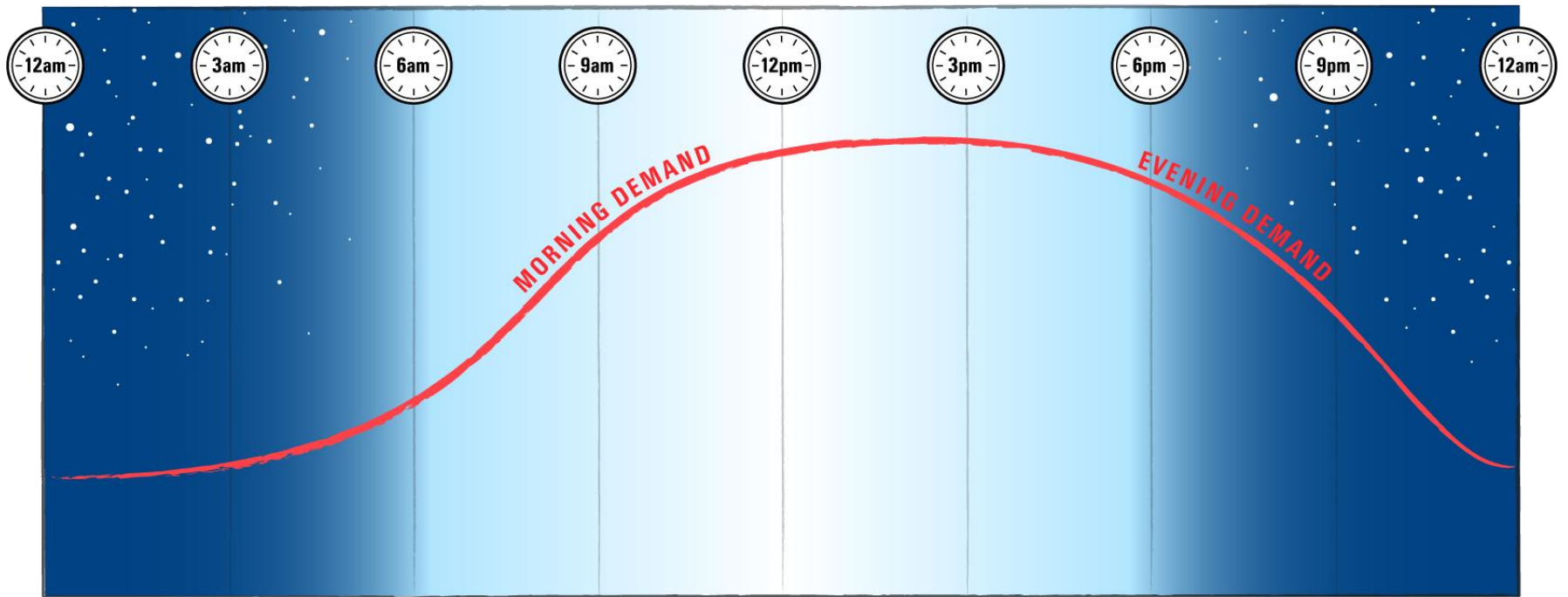
Source: California Independent System Operator.

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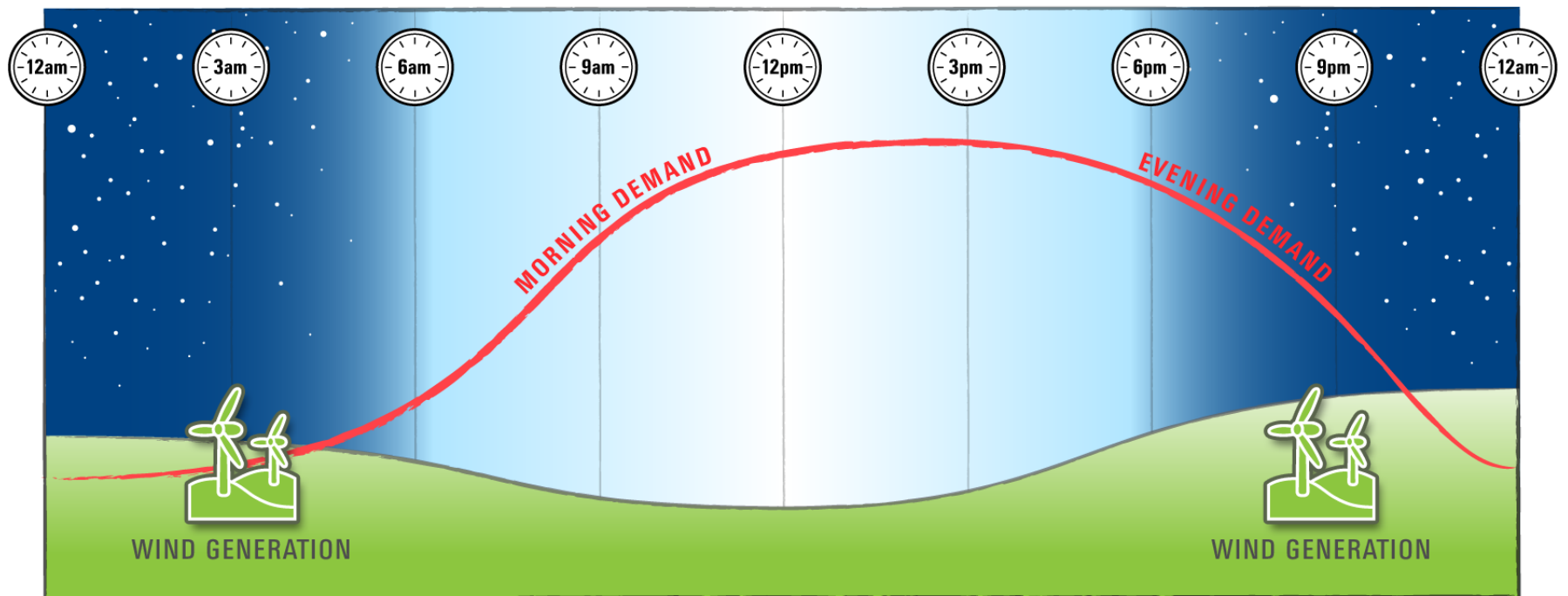
When the Energy Supply Falls Short, Natural Gas Bridges the Gap



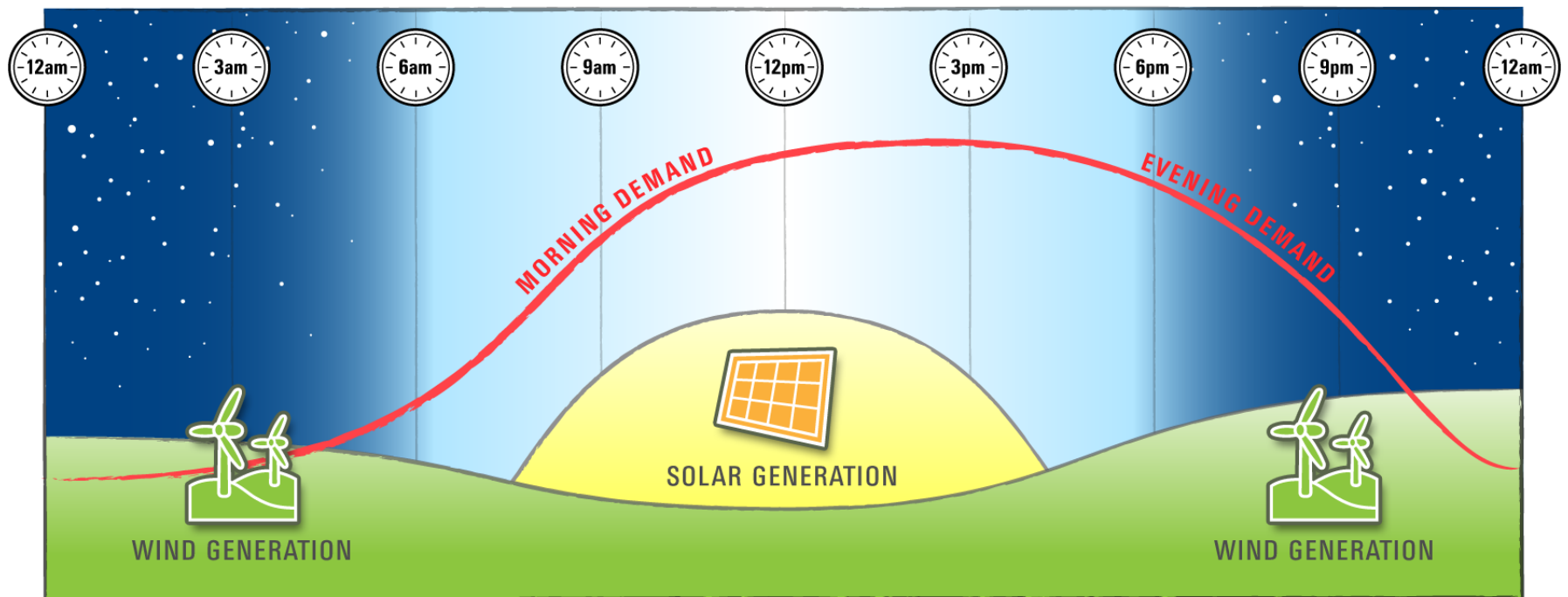
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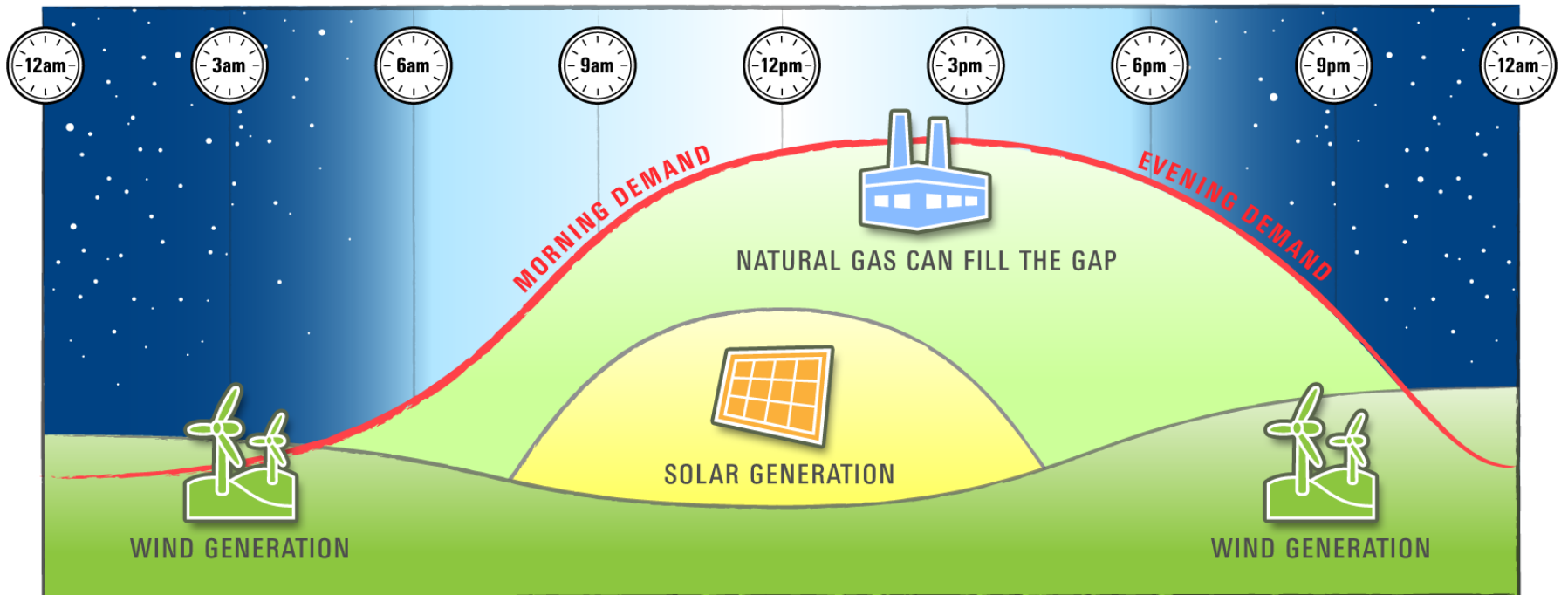
When the Energy Supply Falls Short, Natural Gas Bridges the Gap



When the Energy Supply Falls Short, Natural Gas Bridges the Gap



When the Energy Supply Falls Short, Natural Gas Bridges the Gap



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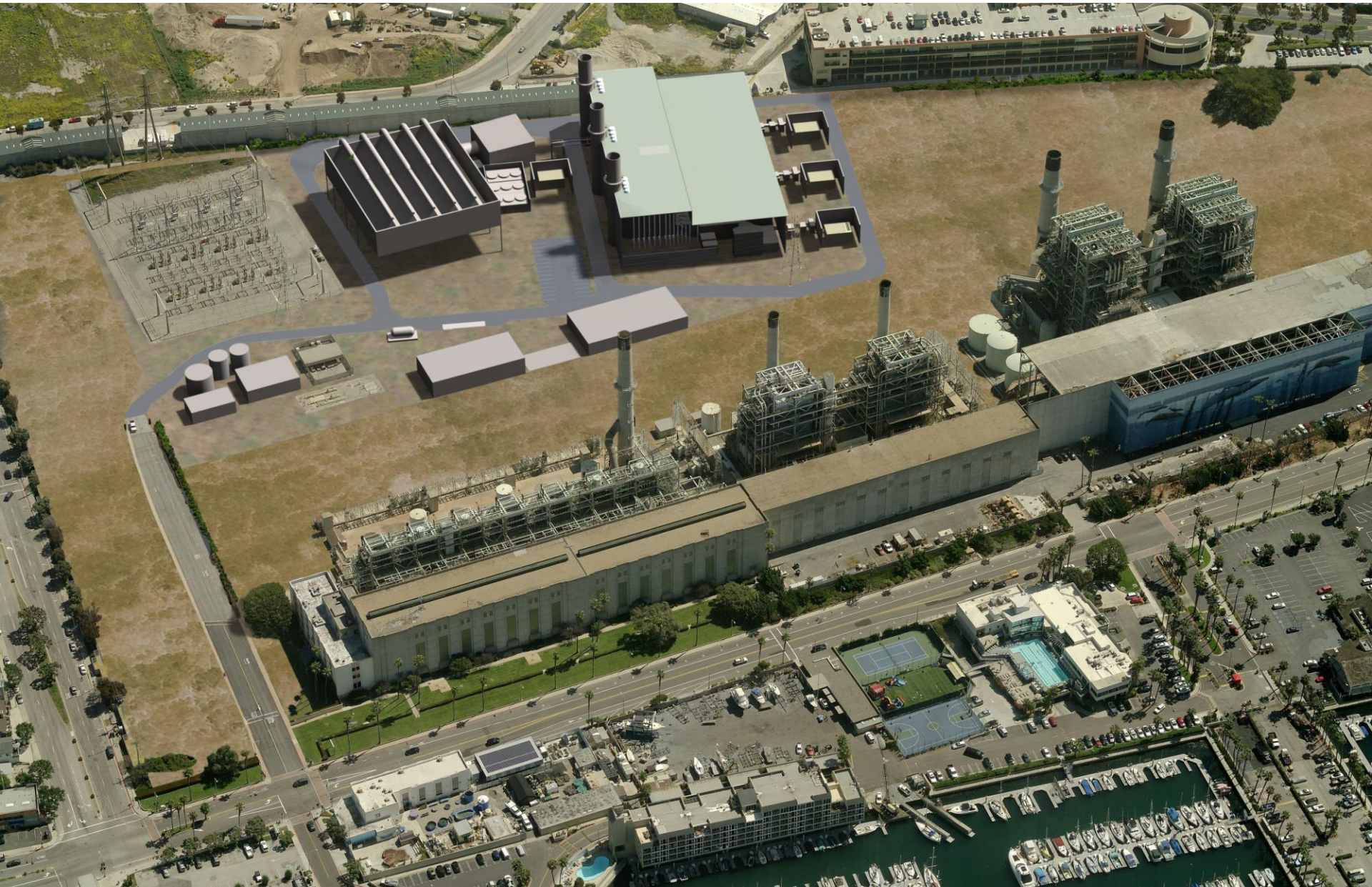
Redondo Beach Project Objectives

- Modernize a 60 year old plant
- Remove existing facility and free up nearly 75% of site for alternative use
- Create a sustainable business that supports California in achieving its clean energy and environmental goals
- Help minimize consumer electricity costs

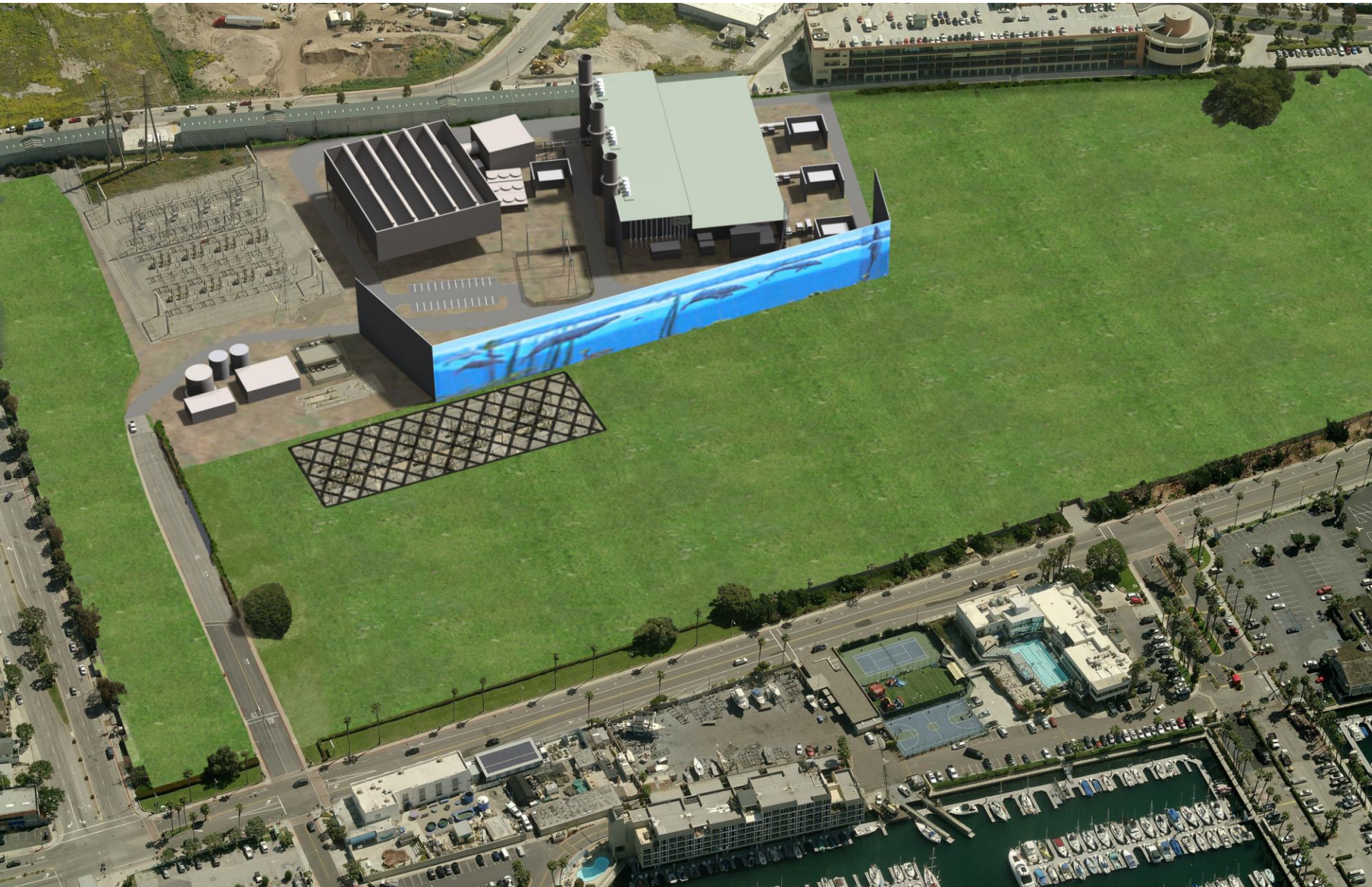
Existing Plant Site



Existing Plant Site

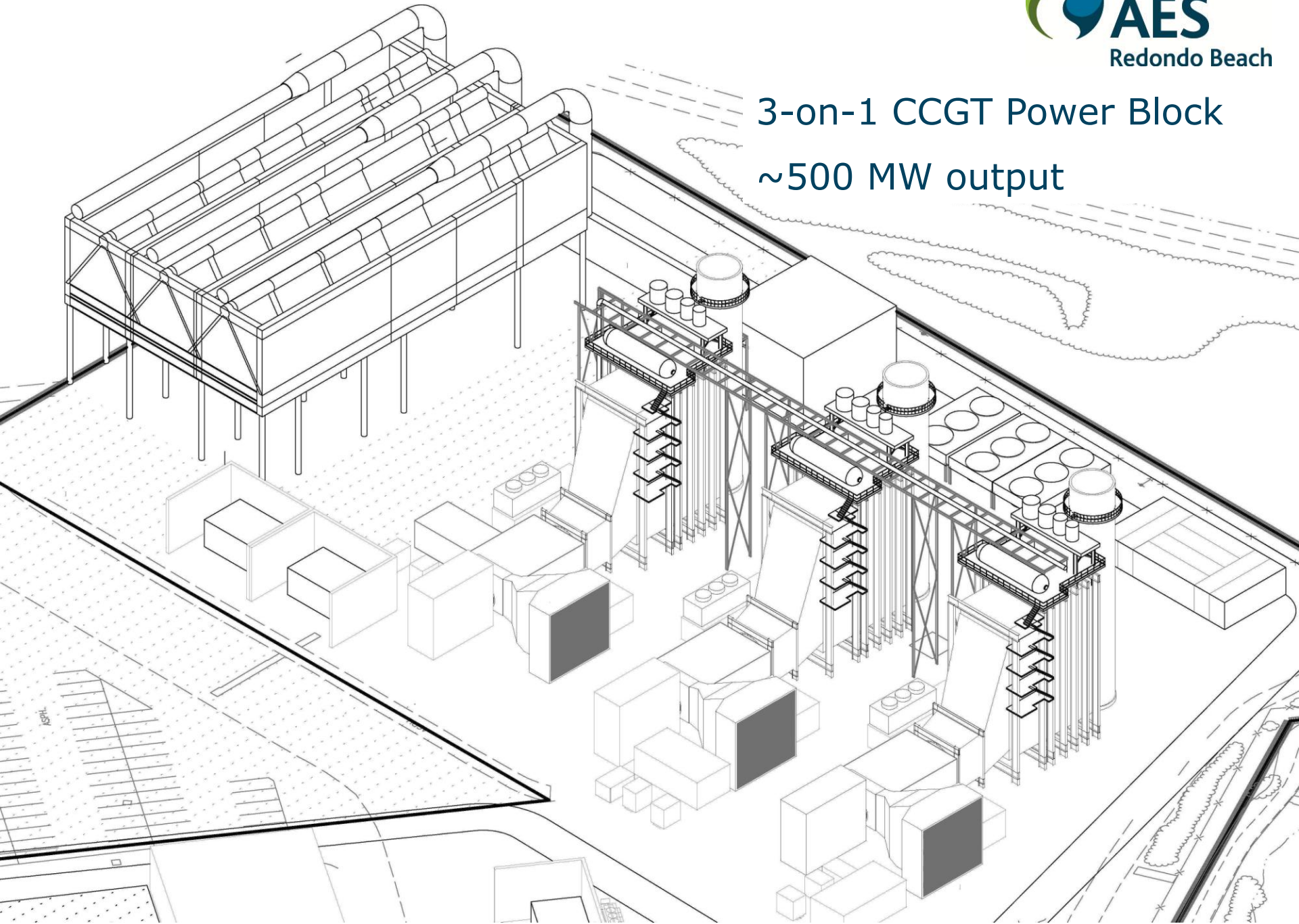


Proposed Modernization Project

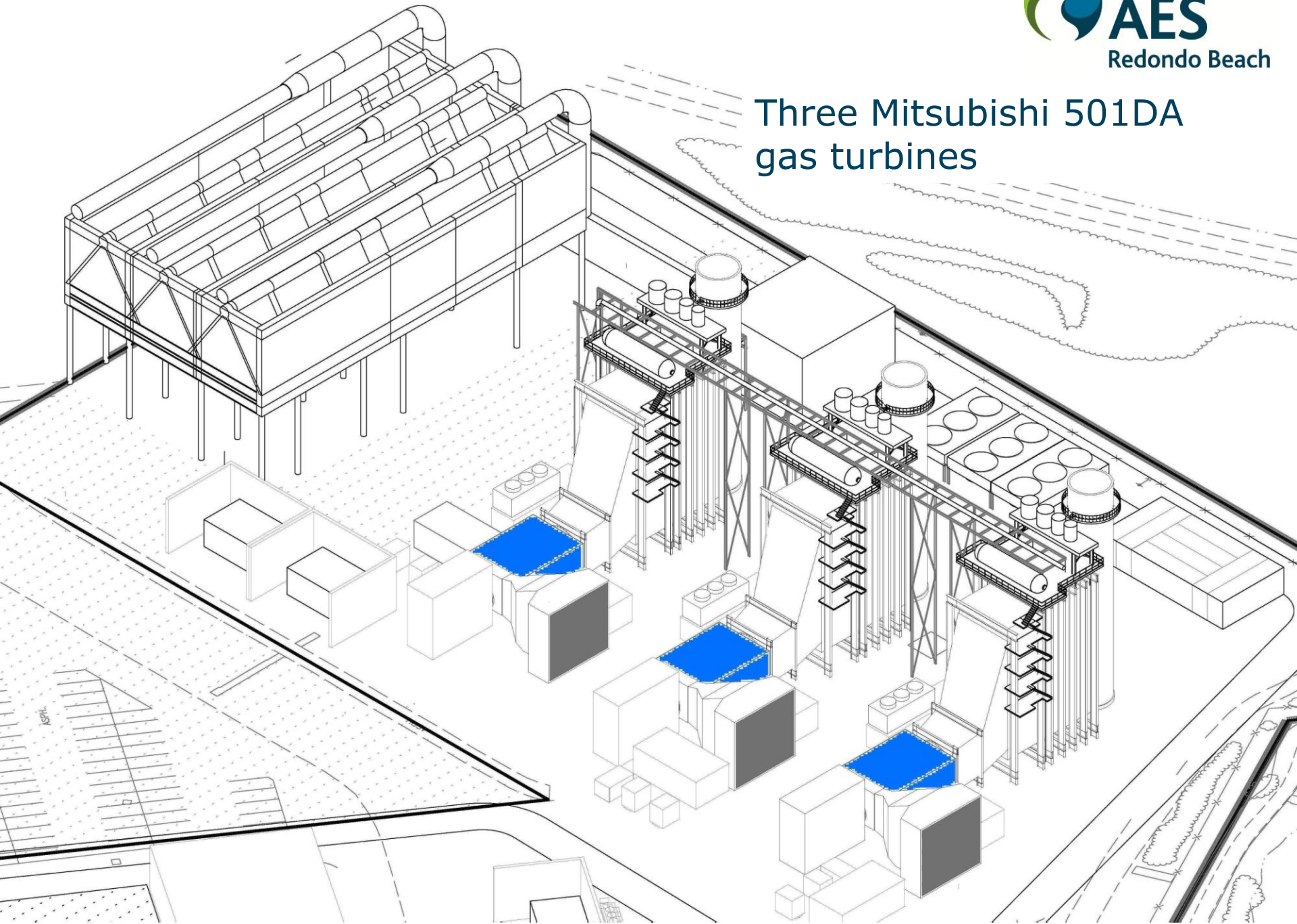


3-on-1 CCGT Power Block

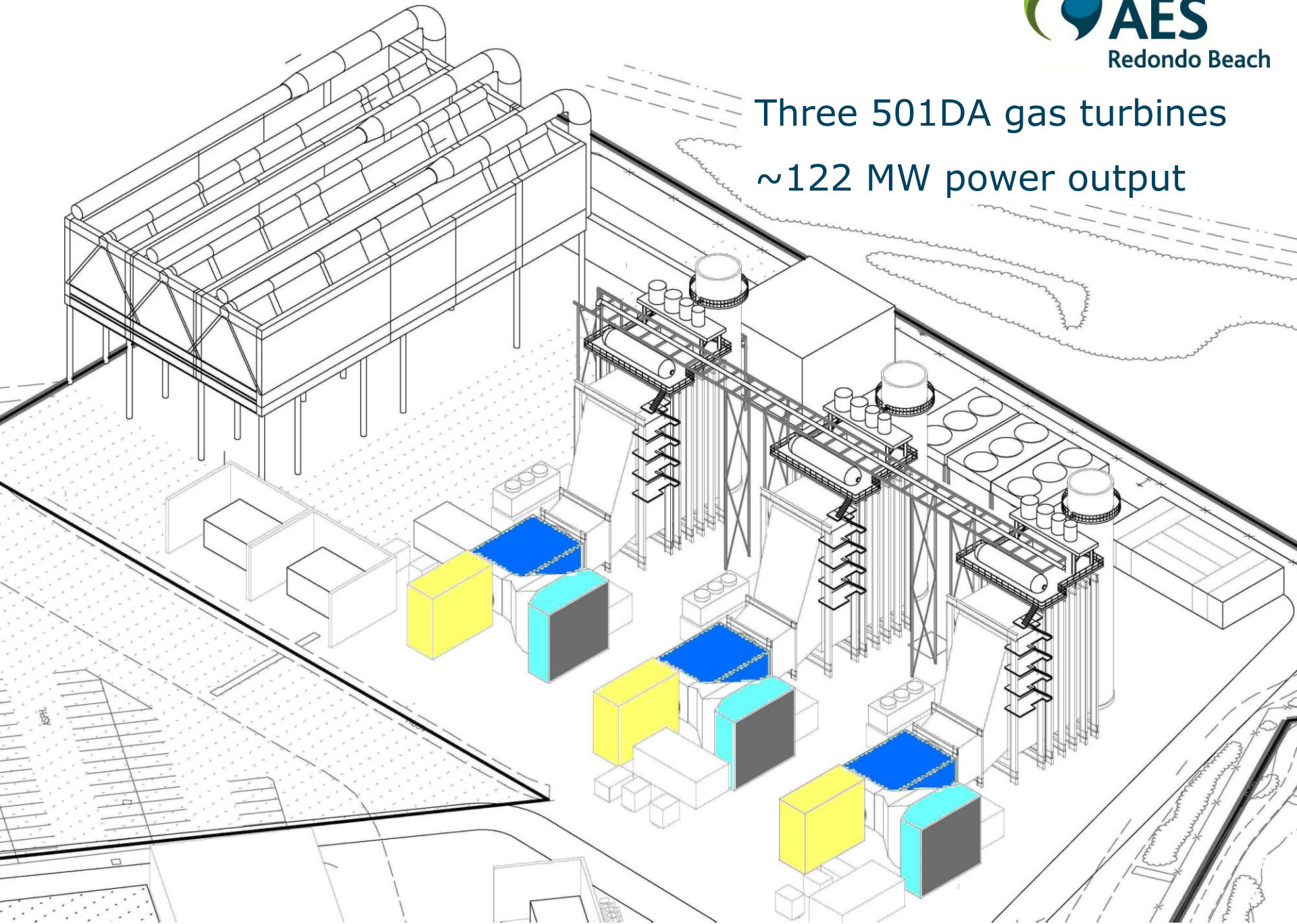
~500 MW output



Three Mitsubishi 501DA gas turbines

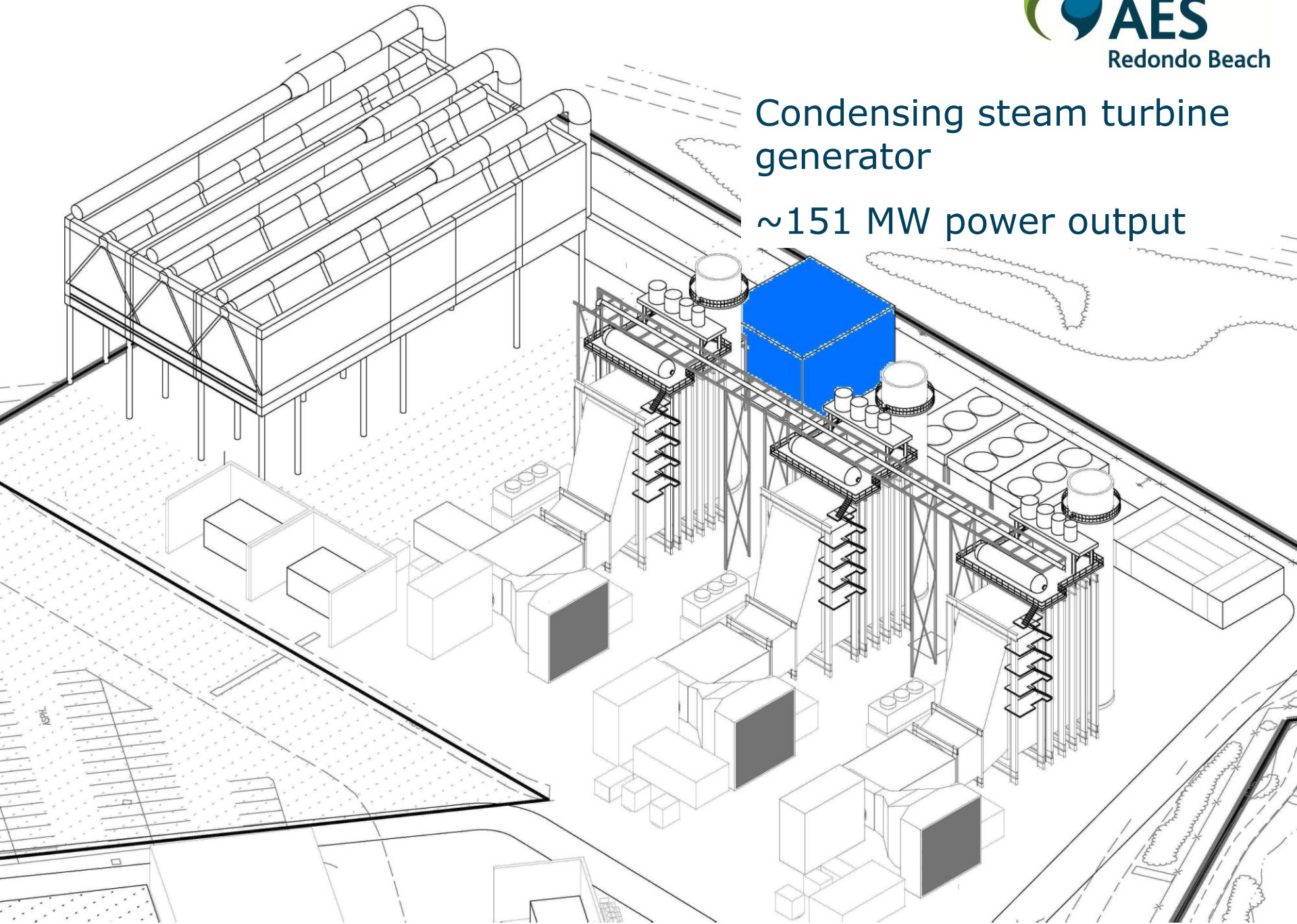


Three 501DA gas turbines
~122 MW power output



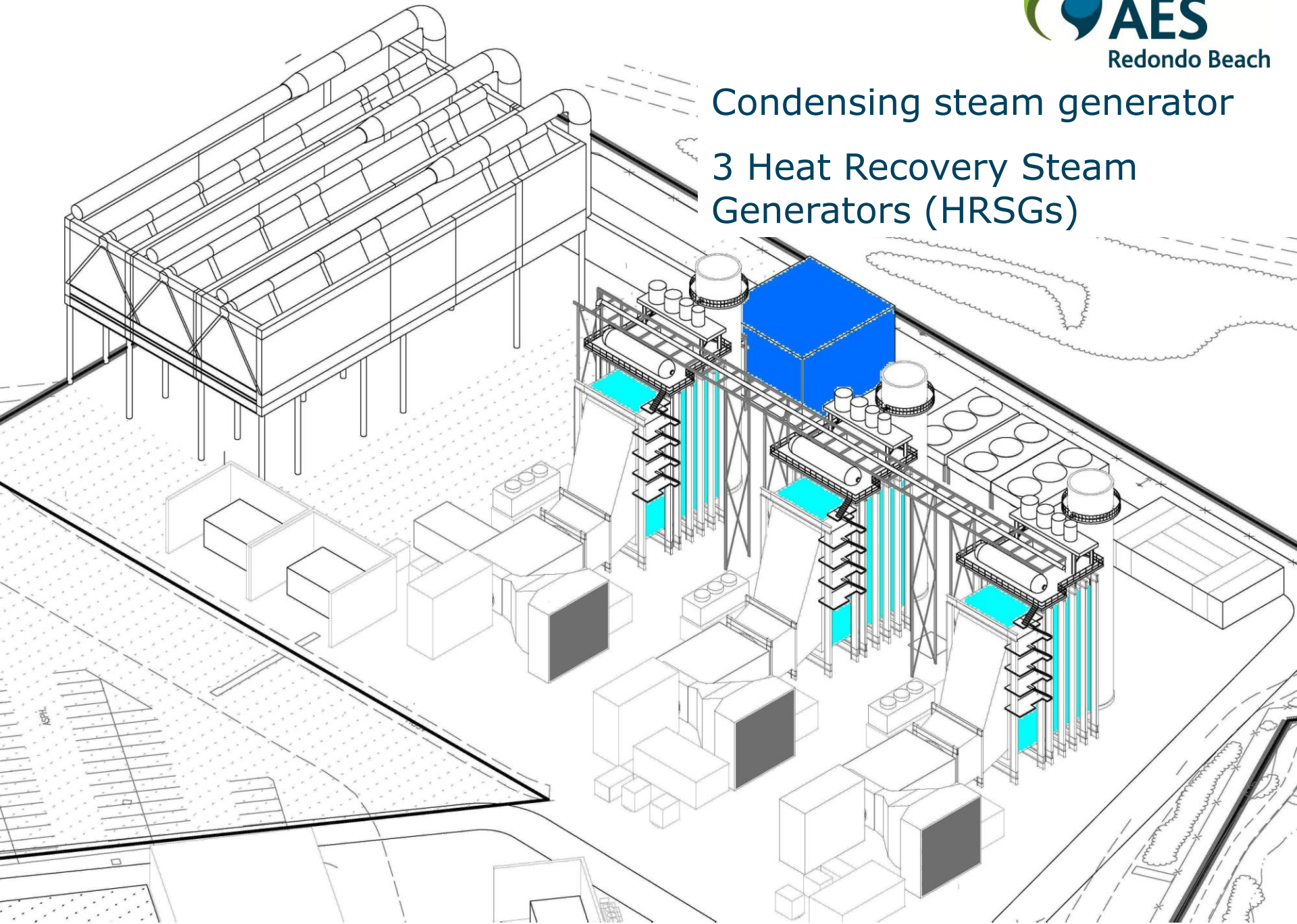
Condensing steam turbine
generator

~151 MW power output

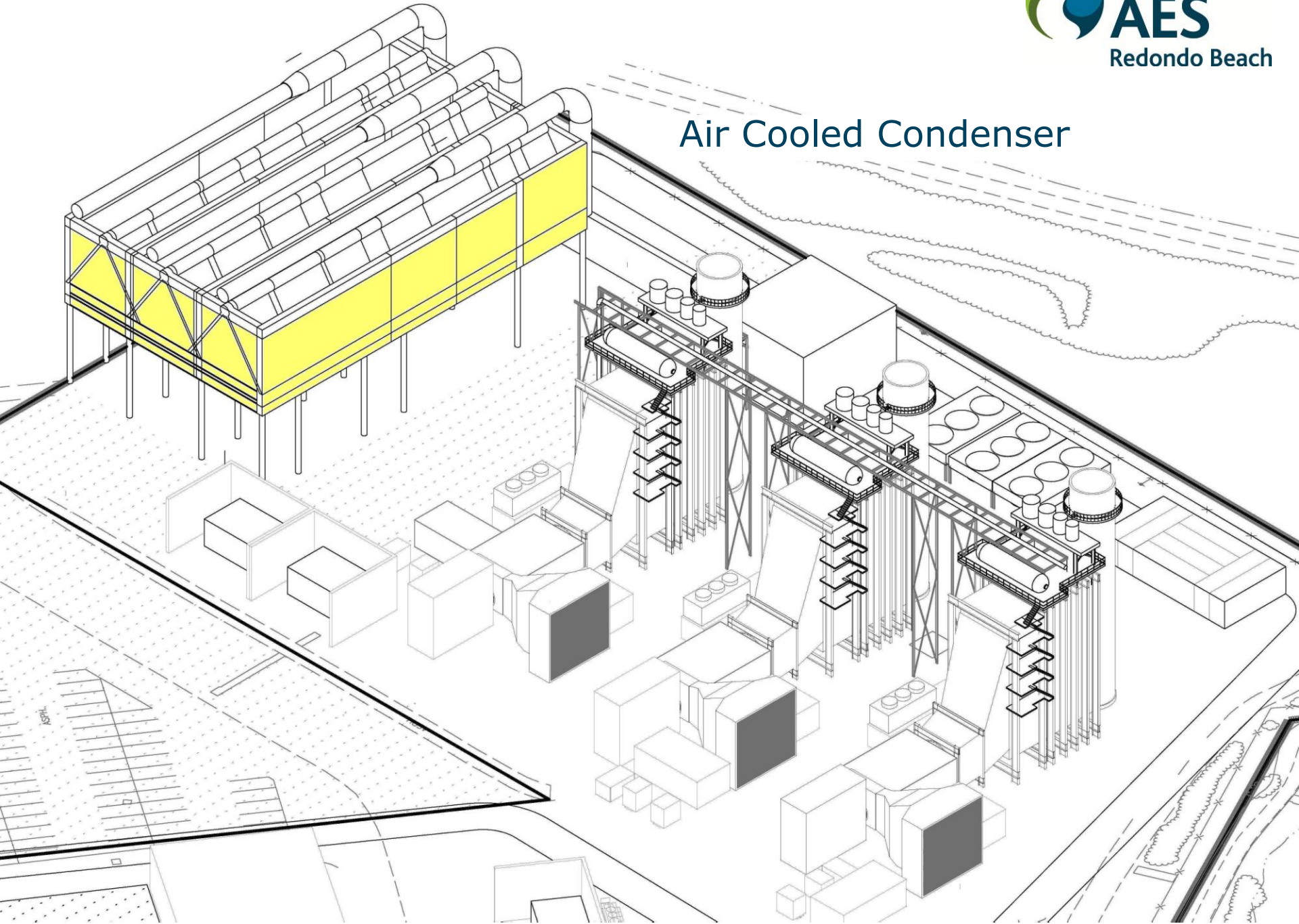


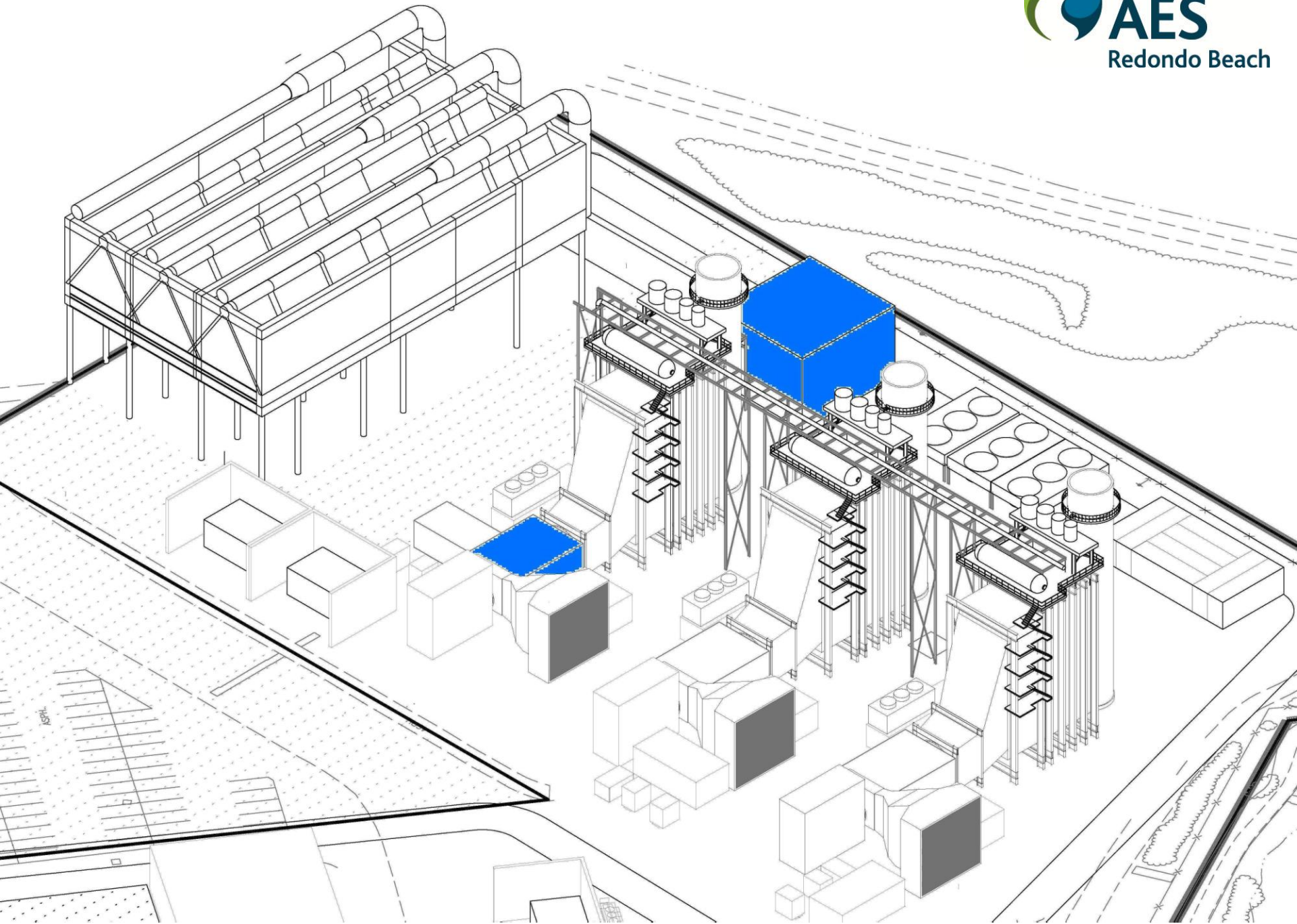
Condensing steam generator

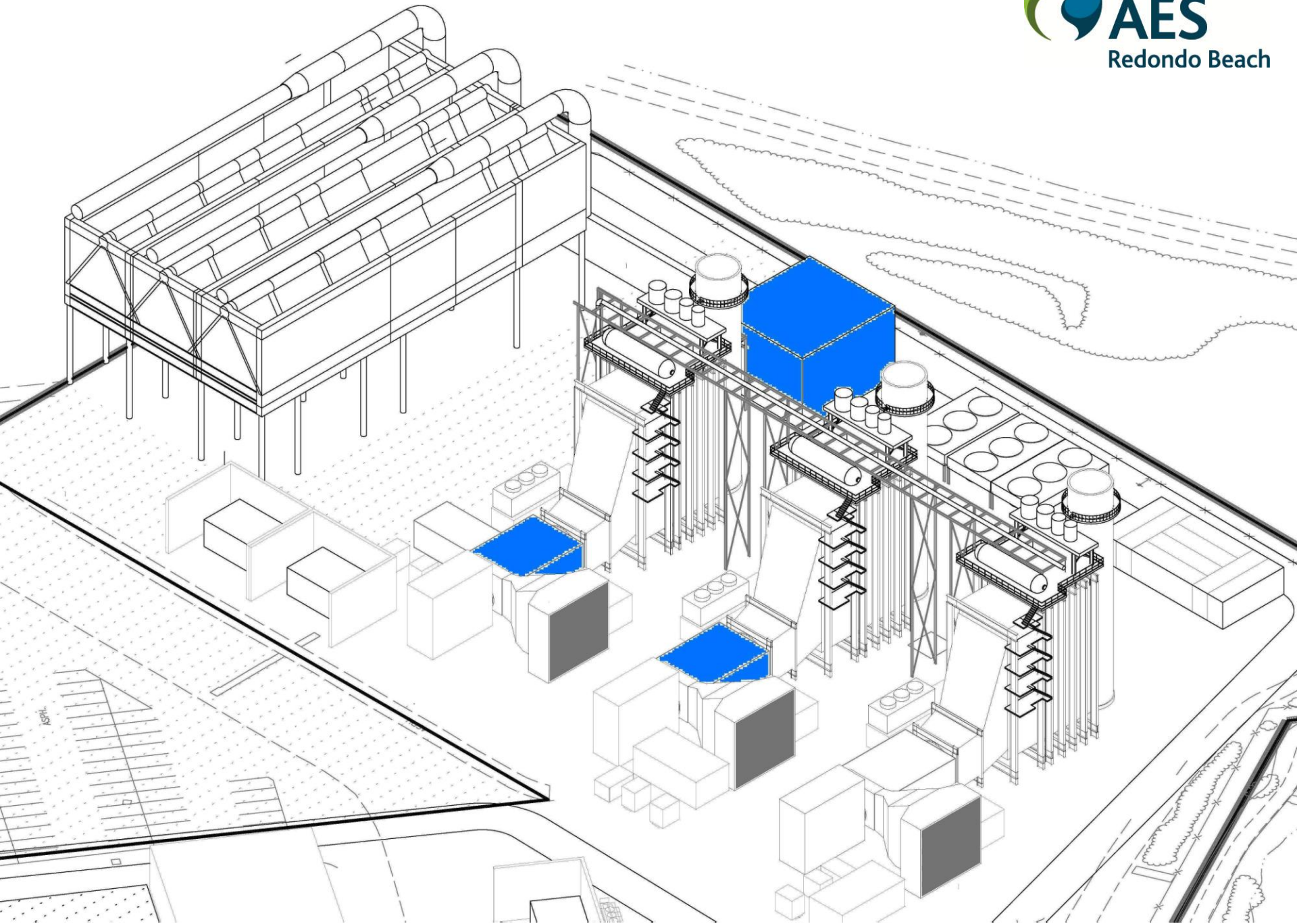
3 Heat Recovery Steam
Generators (HRSGs)

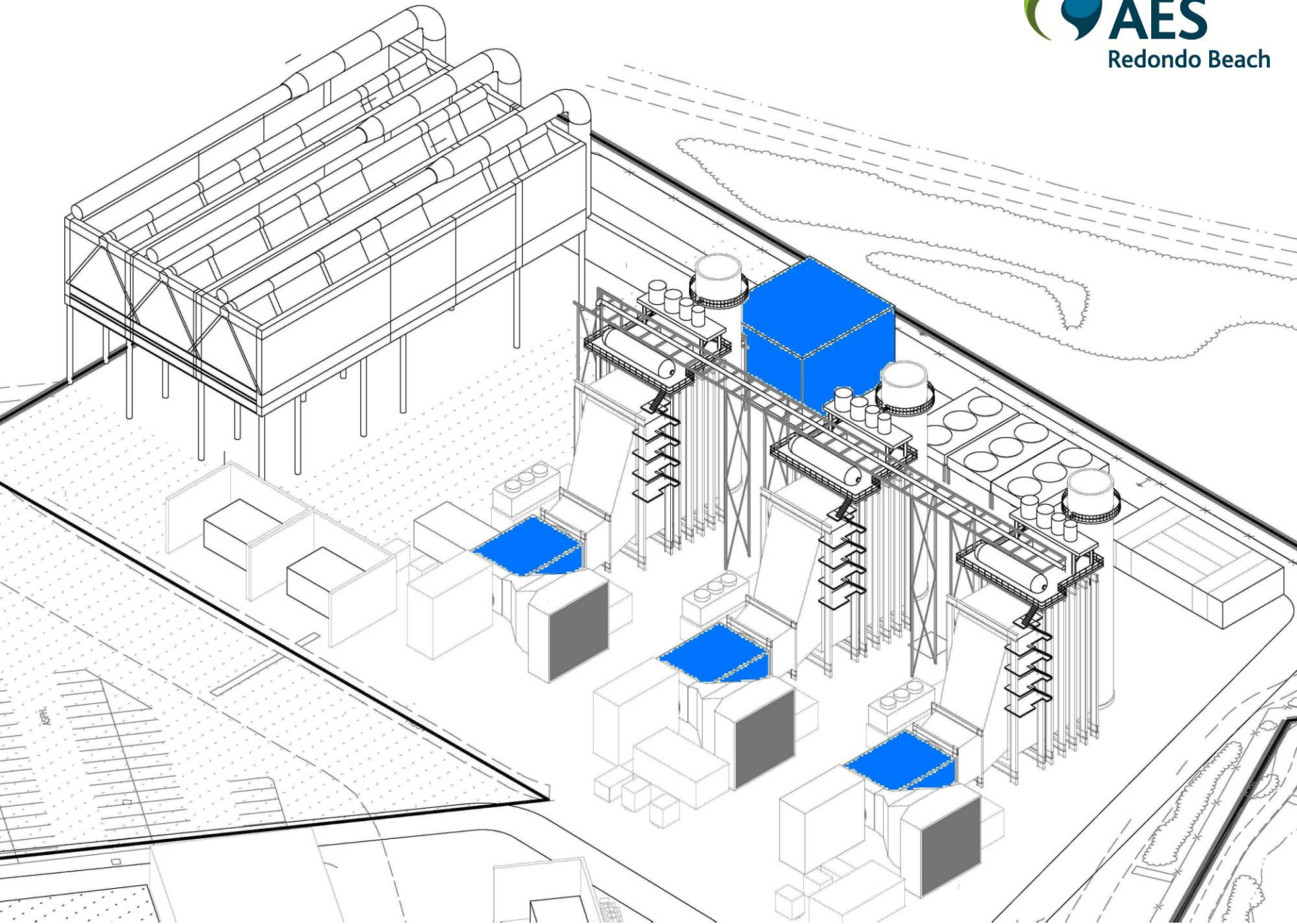


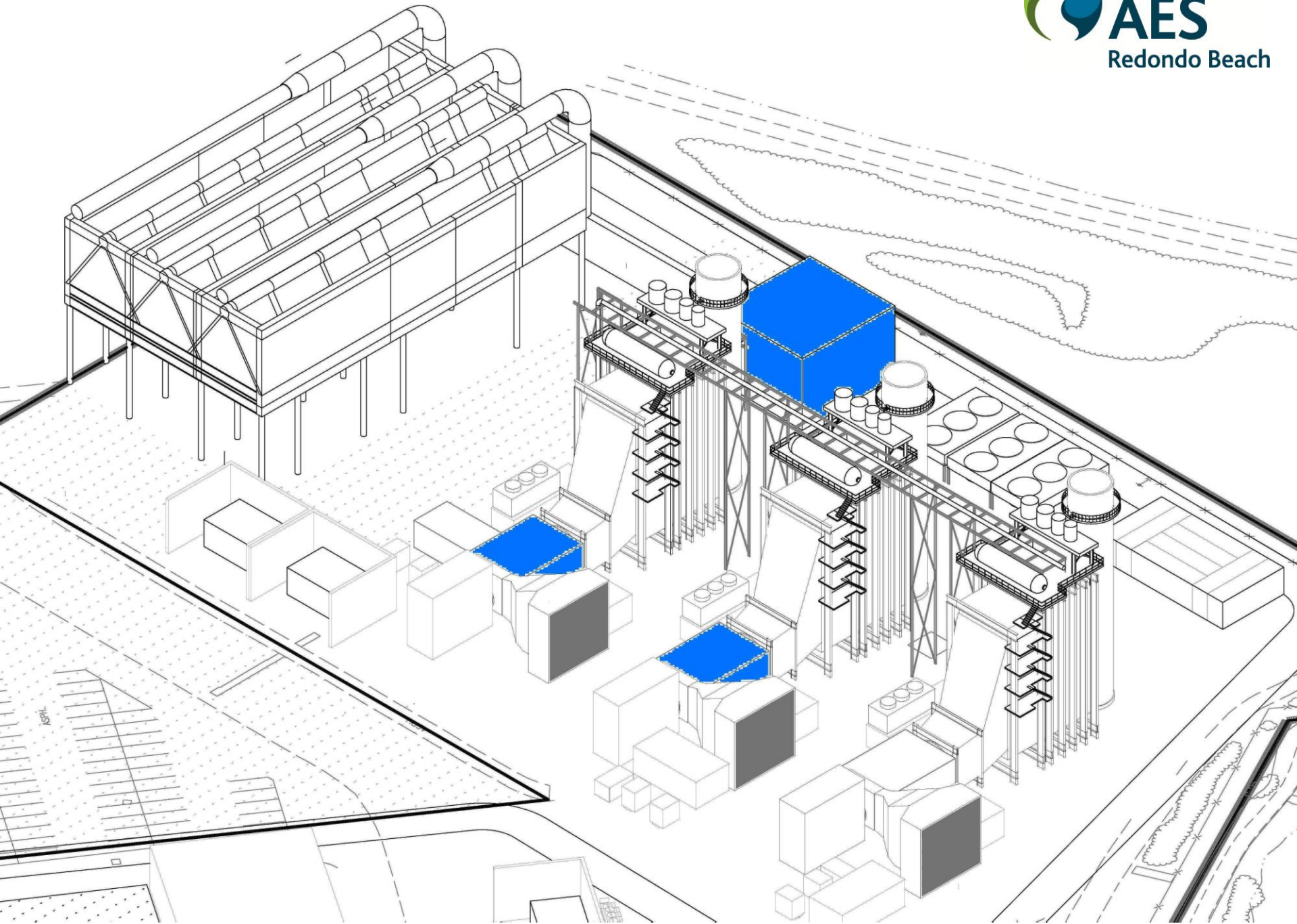
Air Cooled Condenser











Existing Plant Site

View from Moonstone Park, looking east



Proposed Modernization Project



Existing Plant Site

View from Herondo Street



Proposed Modernization Project



Existing Plant Site

View from PCH and Herondo, looking southwest



Proposed Modernization Project



Existing Plant Site

View from Broadway and Beryl



Proposed Modernization Project



Existing Plant Site

View from 700 Block Irena



Proposed Modernization Project



Existing Plant Site

View from Hermosa Beach



Proposed Modernization Project



Existing Plant Site

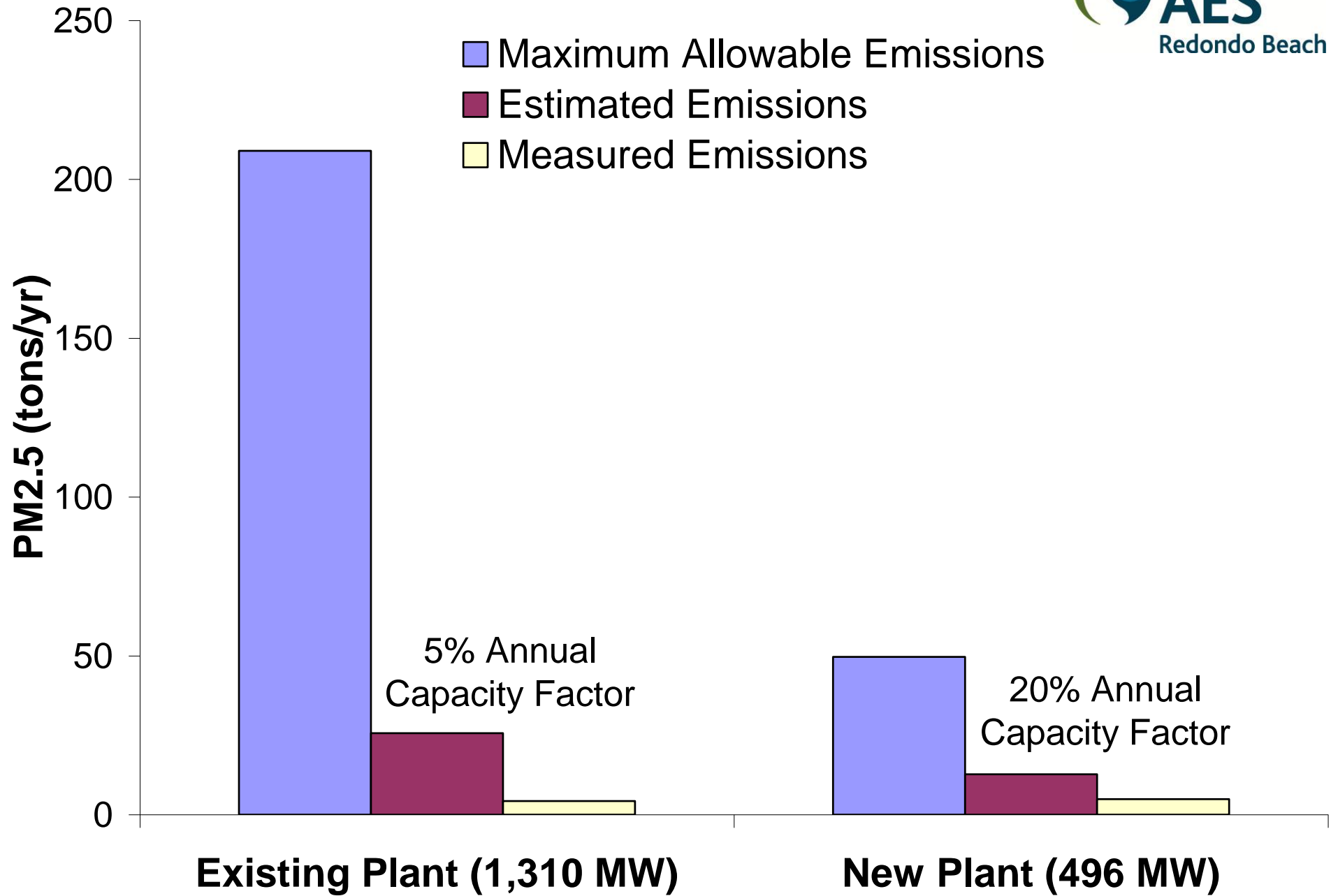
View from Hermosa Beach Pier

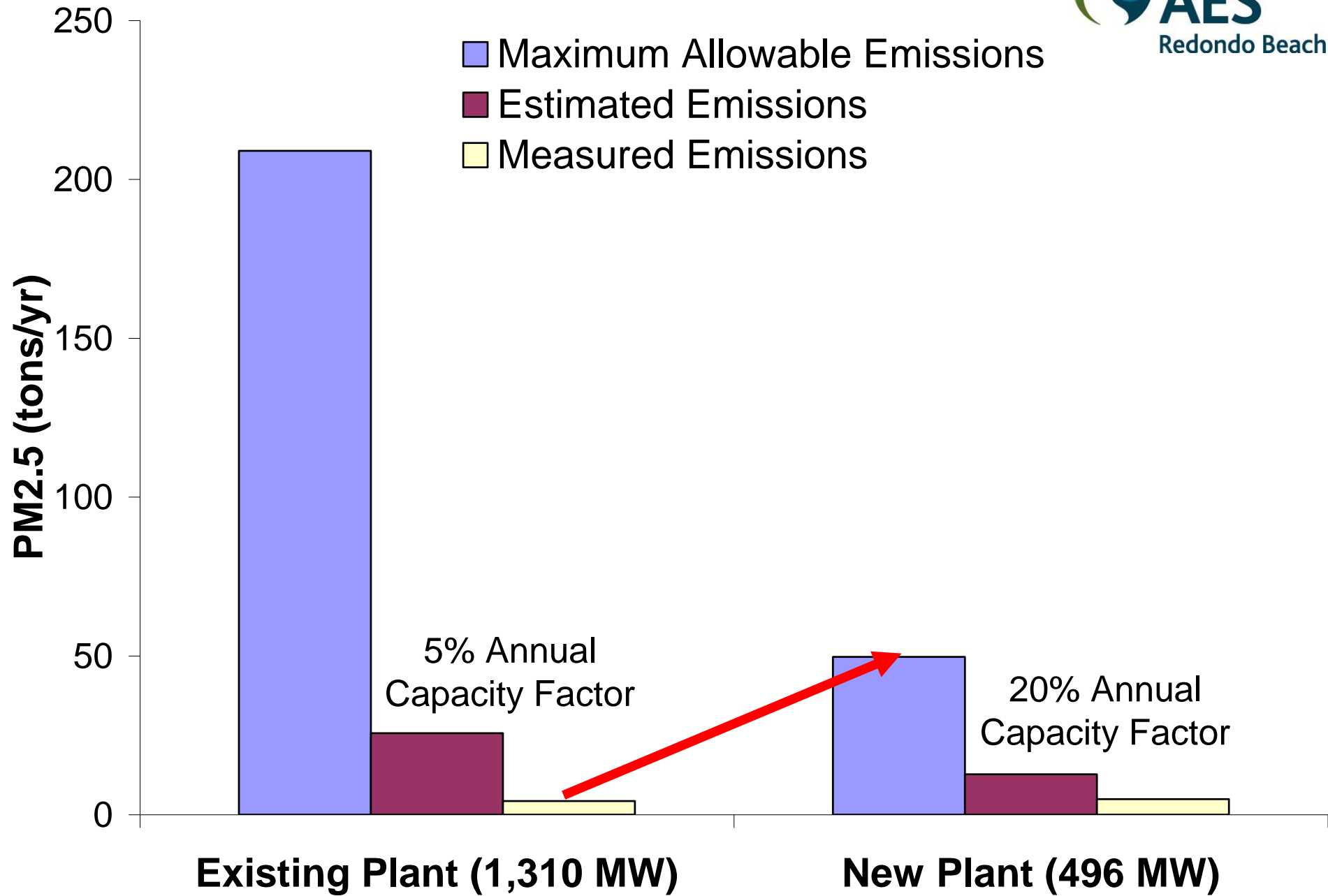


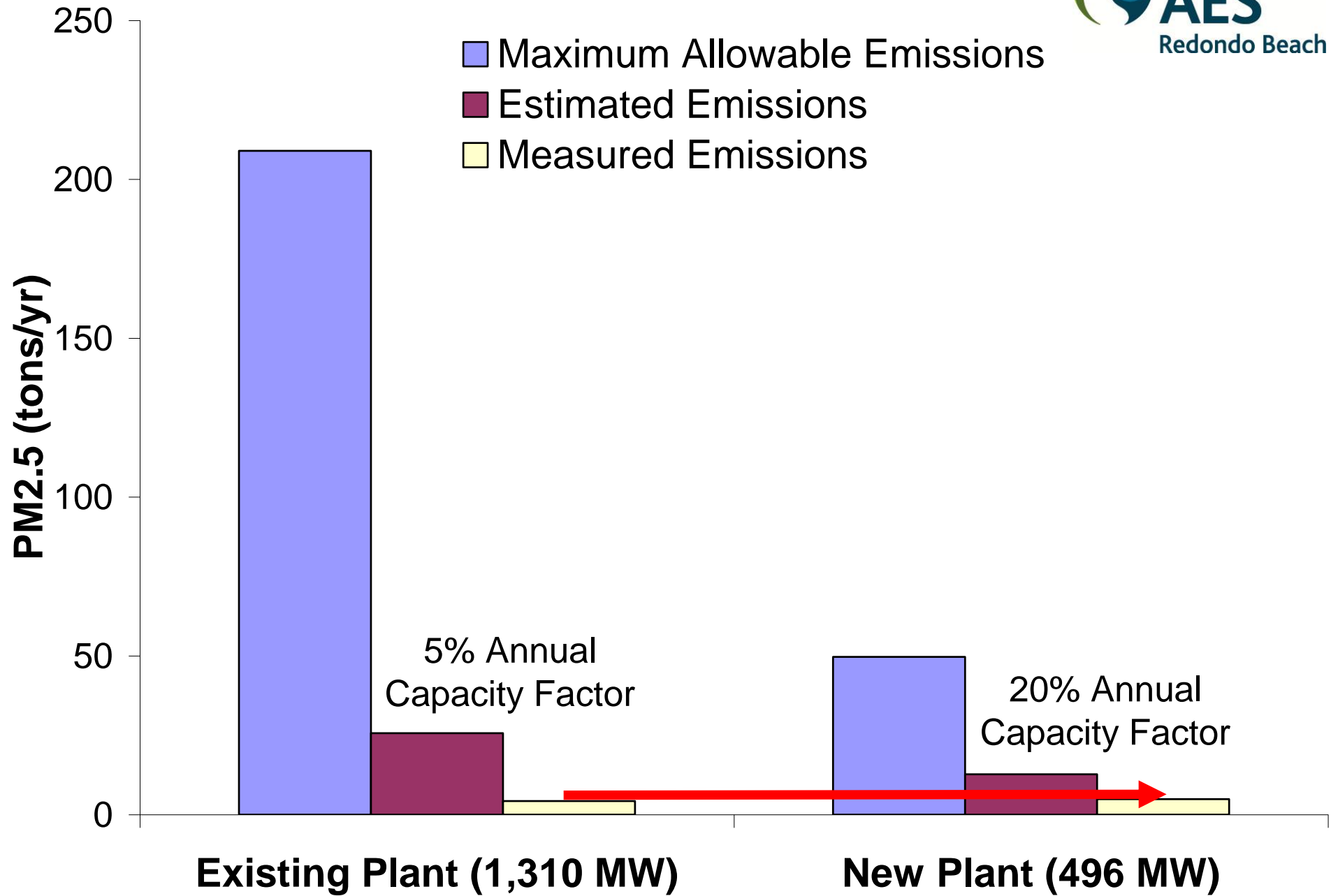
Proposed Modernization Project



- Smaller, more efficient plant = less emissions
- Lowest particulate matter guarantees ever presented
- Lowest greenhouse gas emissions for the project objectives
- Air quality analysis and health risk assessment must be fully vetted
 - South Coast AQMD
 - California Energy Commission
 - US EPA
 - Federal Land Managers
- Over \$40 million in air quality improvement funds available
- Expected to produce more energy in a year but use the same amount of fuel as the current plant







Project Economic Benefits

- Approximately \$500 million private investment
- Construction benefits:
 - \$113 million construction payroll
 - Peak construction force of 338; average 149
 - Additional 93 indirect jobs during construction
 - \$23 million for local supplies and materials
- Ongoing benefits:
 - Maintain 21 permanent high paying, highly skilled jobs
 - Approximately \$3 million annually in local expenditures
 - Continued and increased property taxes
- Lowest cost of energy for all rate payers

Thank You!