

SECTION 4.0

Natural Gas Supply

Natural gas will be supplied to the Huntington Beach Energy Project (HBEP) via the existing 16-inch-diameter, high-pressure pipeline that currently serves the Huntington Beach Generating Station; no new offsite natural gas supply pipelines will be necessary for HBEP. The existing natural gas pipeline is owned and operated by Southern California Gas Company (SoCalGas). The pipeline operates at a nominal 145 pounds per square inch, and enters the existing Huntington Beach Generating Station on the northwest side of the facility near Newland Street.

The HBEP combustion turbine generators (CTG) will only combust natural gas. The natural gas requirement during operation at the site average ambient temperature¹ conditions is approximately 7,261 MMBtu/hr lower heating value basis, total for six CTGs.

SoCalGas also owns and operates the existing natural gas metering and valve station located on the northwest corner of the existing Huntington Beach Generating Station site (see Figure 4.0-1). The existing SoCalGas metering station will remain in service temporarily during HBEP construction for continued operation of existing Huntington Beach Generating Station Units 1 and 2.

As part of HBEP construction, SoCalGas will construct a new gas metering station to support the HBEP facility and will decommission/demolish the existing metering station (Figure 4.0-1). Construction of the new gas metering station is considered part of the overall HBEP and the potential environmental impacts associated with the construction of the new gas metering station are included as part of the analysis of construction impacts in this Application for Certification. Appendix 4A provides the “can serve” letter from SoCalGas regarding the delivery of natural gas to HBEP and construction of the new gas metering station.

Construction activities related to the new SoCalGas metering station will include grading a pad and installing aboveground and belowground gas piping; metering equipment; and gas conditioning, pressure regulation, and possibly pigging facilities. A distribution power line also will be installed to provide power for metering station operation lighting and communication equipment. A chain-link fence will be installed around the gas metering station for security.

Natural gas will flow from the new SoCalGas metering station to a new HBEP gas pressure-control station and gas scrubber/filtering equipment that will be constructed by the project owner as part of the HBEP. Prior to being supplied to the CTGs, the natural gas will be compressed, scrubbed, and filtered consistent with the turbine vendor recommendations at the HBEP gas pressure-control station. The natural gas used in HBEP’s heat recovery steam generators duct burners will not require gas compression through the HBEP gas pressure-control station, but will require filtering and scrubbing to be performed at the SoCalGas metering station. The natural gas for the HBEP building heating systems will flow through the SoGalGas metering station and HBEP gas pressure control station, and will not require compression or filtering.

Section 2.7 describes the project’s operating modes, fuel consumption, and energy production.

¹ Site average ambient temperature is 65.8°F (Dry Bulb) and 56.8°F (Wet Bulb) and relative humidity of 57%

| EQUIPMENT LIST | | |
|----------------|----------------------------------|-------------------|
| N.O. | DESCRIPTION | DIMENSIONS |
| 1 | COMBUSTION GAS TURBINE (CGT) | |
| 2 | CGT GENERATOR ENCLOSURE | 16'x39'x34' |
| 3 | CGT/HRSG TRANSITION DUCT | |
| 4 | CGT ENCLOSURE | 41' x 32' x 25' |
| 5 | FUEL GAS SKID | 20' x 12' |
| 6 | CGT CONTROL/LUBE OIL SKID | 50' x 14.5' |
| 7 | STG STEP UP TRANSFORMER | 35' x 23' |
| 8 | TURBINE COOLING AIR SKID ** | 10' x 8' |
| 9 | CGT STEP UP TRANSFORMER | 35' x 22' |
| 10 | CO2 F/F (LP TANK) | |
| 11 | STG ENCLOSURE | 59' x 55' x 40' |
| 12 | HEAT RECOVERY STEAM GENERATOR | |
| 13 | STACK | 18' DIA. |
| 14 | CGT AIR INTAKE SYSTEM | 40' x 38' |
| 15 | CONTROL PACKAGE | 40' x 20' |
| 16 | ELECTRICAL PACKAGE | 40' x 20' |
| 17 | SFC TRANSFORMER | |
| 18 | SEC. TRANSFORMER | |
| 19 | UNIT TRANSFORMER | |
| 20 | GENERATOR MAIN CIRCUIT BREAKER | 28' x 20' |
| 21 | FUEL GAS COMPRESSOR BLDG. | 144'x75'x25' |
| 22 | BOILER FEEDPUMP ENCLOSURE | 30' x 30' |
| 23 | CEMS | 15'x15' |
| 24 | BOP FIN FAN COOLER | 86'x48'x15' |
| 25 | STEAM TURBINE GENERATOR | 52' x 23' |
| 26 | STG CONTROL/LUBE OIL SKID | 38' x 17' |
| 27 | FUEL GAS CONDITIONING SKID | 71.5' x 34' |
| 28 | EXIST. SERVICE WTR. TANK (REUSE) | 40' DIA.x48' S.S. |
| 29 | EXIST.FIRE WATER PUMP ENCLOSURE | 22' x 30' |
| 30 | RELOCATED GAS METERING STATION | 108' x 82' |
| 31 | ACC | 209'x127'x104' |
| 32 | EXISTING RO/EDI BUILDING (REUSE) | 113'x51'x30' |
| 33 | NEW CONTROL/ADMIN BUILDING | 100'x72'x40' |
| 34 | NEW MAINT./WAREHOUSE BUILDING | 72'x60'x35' |
| 35 | AMONIA TANK AND CONTAINMENT | 18' x 38' |
| 36 | EXIST. DI WATER TANKS (2)(REUSE) | 28' DIA.x32'S.S. |
| 37 | EXIST.SHOPS & WAREHOUSE(REUSE) | 214'x115'x17' |
| 38 | EXIST. ADMIN BUILDING (REUSE) | 81'x57'x11' |
| 39 | TRANSMISSION STRUCTURE (TYP.) | |
| 40 | TRANSFORMER WALL | |
| 41 | | |
| 42 | EXIST. BRINE TANK (REUSE) | 24' DIA. x 22' |
| 43 | AMONIA UNLOADING | 56'x12' |

** = TCA HEIGHT FOR BLOCK 1 IS 24'
 ** = TCA HEIGHT FOR BLOCK 2 IS 12'
 --- FENCE
 --- MASONRY WALL
 [Hatched Area] CONSTRUCTION LAYDOWN & STAGING

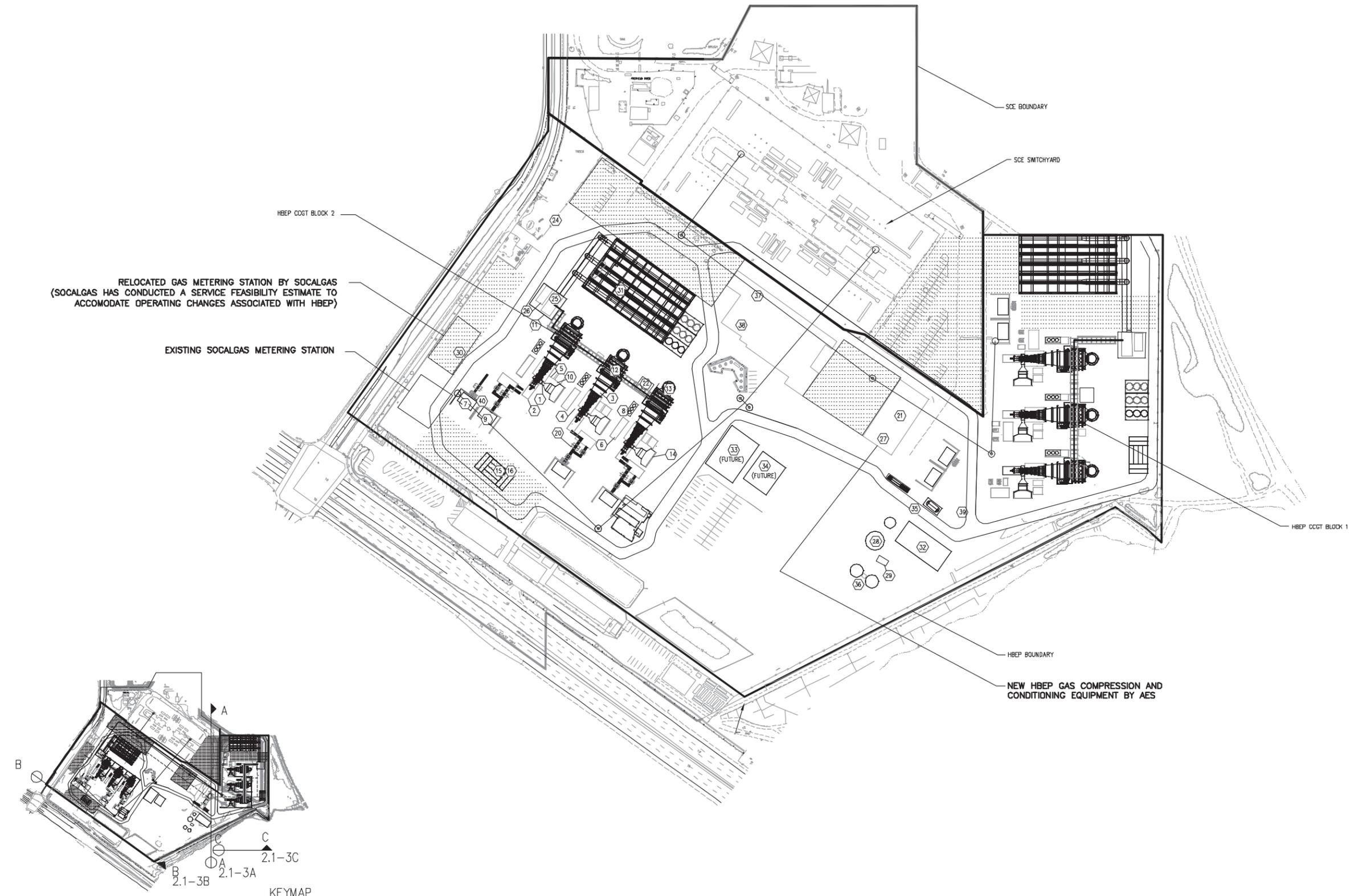


FIGURE 4-1
Proposed Natural Gas Modifications
 AES Huntington Beach Energy Project

Source: Power Engineers Collaborative, LLC, 05/04/2012.