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Section 2 Project Objectives2-1

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As proposed by Watson Cogeneration Company (Applicant), the main objective of the Watson Cogeneration Steam and Electric Reliability Project (Project) is to improve the reliability of steam supply at the BP Carson Refinery by adding a fifth train that completes the original design of the Watson Cogeneration Facility. This fifth train will enable Watson to deliver an additional, secure, and long-term supply of steam to the BP Carson Refinery. The high reliability of Watson significantly reduces the possibility of refinery upsets due to loss of steam or power.

The Project will increase the existing capacity of the 385-megawatt (MW) Watson facility by approximately 85 MW. Excess power will be exported to the power grid at transmission level and benefits the reliability of the broader transmission grid in California by adding generation capacity and voltage support near existing loads.

An equally important objective of the Project is to conserve natural gas and reduce environmental impacts from emissions and contributions to global climate change. Cogeneration systems offer energy efficiency and greenhouse-gas (GHG) reduction benefits by producing two energy products—electricity and useful heat—from a single fuel source. The California Energy Commission has found that new combined heat and power (CHP) applications could play a large part in avoiding future greenhouse gas emissions due to the combined efficiency of the heat and power portions of the project. The California Climate Action Team identified cogeneration as capable of meeting 2.7 percent of the state’s GHG reduction targets for the year 2020, or reductions of 5 million metric tons of carbon dioxide equivalent. The California Air Resources Board has determined that the widespread development of efficient combined heat and power systems would help displace the need to develop new, or expand existing power plants and has set a target of an additional 4,000 MW of installed CHP capacity by 2020, enough to displace approximately 30,000 gigawatt-hours of generation from other resources. Although cogeneration facilities use fuel for combustion, they utilize much more of the fuel’s energy potential than do conventional power facilities and are therefore more energy efficient. Gas-fired power stations continue to be an important part of a lower-carbon energy solution, because natural gas is the cleanest fossil fuel available and is an important part of the California supply picture for the medium term.

