CONCEPTUAL APPROVAL TO PROCEED WITH A JOINT PROJECT WITH PUBLIC WORKS TO DEVELOP A BIOGAS MICROTURBINE FACILITY AT THE RIVERSIDE REGIONAL WATER QUALITY CONTROL PLANT

Riverside Public Utilities
Resource Operations and Strategic Analytics

Board of Public Utilities
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1

LEGISLATIVE HISTORY

1. **SB X1-2 "California Renewable Energy Resources Act" (2011)**
   - 33% Renewable Portfolio Standard (RPS) Target by 2020
2. **SB 350 "Clean Energy and Pollution Reduction Act" (2015)**
   - Amends RPS target to 50% by 2030
3. **SB 32 "Global Warming Solutions Act" (2016)**
   - Greenhouse gas emissions reduced to 40% below the 1990 level by 2030
4. **SB 100 "100 Percent Clean Energy Act" (2018)**
   - Amends RPS target to 60% by 2030

2

RPU RENEWABLE PROCUREMENT

1. Since 2012, Board and Council have approved 274 MW of renewable procurement
2. Today, RPU serves its customers with the following renewable resources:
   - Geothermal – 86 MW
   - Wind- 46 MW
   - Solar- 98MW
3. In 2020, the City expects to serve its retail load using 44% renewable energy
4. In 2022, an additional 44 MW of solar generation will be added to the RPU generation portfolio

BACKGROUND

1. Public Works Department (PWD) Owns and Operates the Riverside Water Quality Control Plant (RWQCP)
   a. Currently flaring excess gas production
      i. Will be receiving increasing amounts of digestible waste
      ii. Mandated to reduce or eliminate gas flaring
   b. Capable of producing clean biogas, which RPU can utilize for renewable energy generation

PROJECT OVERVIEW

RPU will:

1. Develop a 2.2 MW Renewable biogas Microturbine project with a term of 20 years
   a. Possibility to increase size to 3.6 MW as RWQCP increases digestible waste intake
   b. Project will utilize existing infrastructure to reduce cost
2. Pay PWD for the digester gas as a renewable fuel for the Microturbines
3. Benefit from the energy generation and associated renewable attributes

ECONOMIC ANALYSIS

1. Analysis based on a comparison of the 20-year expected value of the project (energy, RECs, RA) versus expected costs to design, build and operate the generation asset.
2. PWD and RPU are expected to obtain nearly equivalent economic benefits
   1. PWD – est. $5.5 M over 20 years for sale of digester gas
   2. RPU – est. $5.6 M over 20 years in excess revenue and/or avoided costs
3. Staff will present project contracts and fiscal impact for approval before the end of 2020.

RECOMMENDATION

That the Board of Public Utilities recommend that the City Council approve the conceptual plan for a joint project between Riverside Public Utilities and Riverside Public Works Department to develop a biogas microturbine facility of 2.2 megawatts, with the future potential to expand the facility up to 3.6 megawatts, located at the Riverside Regional Water Quality Control Plant.