Community Development Commission

September 13, 2016

TO: Each Supervisor

FROM: Sean Rogan, Executive Director

SUBJECT: REPORT ON HONOR RANCH – PITCHESS DETENTION CENTER

Background

On July 12, 2016, your Board directed the Community Development Commission (Commission) to conduct an evaluation of alternatives for addressing the necessary infrastructure upgrades and the elimination of blight on County-owned lands known as Honor Ranch and the Pitchess Detention Center (Honor Ranch – PDC).

The Honor Ranch – PDC development proposal is a multi-benefit strategy that would address eminent County water and power infrastructure needs; it would also capitalize on the potential for long-term revenue sources through the development of County-owned lands. Underscoring this strategy is the goal of achieving long-term sustainability for PDC as a net–zero facility.

Site Description

Honor Ranch – PDC encompasses over 2,800 acres of County-owned land that is situated east of the 5 freeway, south of Tapia Canyon road, and north of Biscaliluz Drive. PDC is managed by the Los Angeles County Sheriff Department (**LASD**) and has the capacity to house approximately 9,000 inmates. PDC employs both correctional and civilian employees. PDC's primary function as a correctional facility is supplemented with additional purposes that include administrative offices, inmate vocational training, farming operations, and a training site for County deputies, firefighters, and other first responders.

Critical Issues

The Commission, in conjunction with **LASD,** has conducted detailed discussions of the Honor Ranch – PDC site area. The discussions incorporated existing reports previously commissioned by **LASD** on current land use, water systems, power generation and infrastructure. These reports provided alternative uses, goals and long range planning solutions. Specific areas of focus were analysis of the cogeneration plant (CoGen), CoGen replacement alternatives, a water system assessment (WSA) and the potential for production of solar power. Through this information, the Commission has identified two (2) key areas of concern; water and power. Both infrastructure systems require near-term capital demands to reduce the County's exposure to rising costs and, in the case of water, possible critical shortages. It should be noted that the observations below assume no expansion of the current services provided at PDC.

Water:
The PDC water system is operated by **LASD**. The PDC water distribution system includes active groundwater production wells, standby groundwater production wells, storage reservoirs, a disinfection facility, booster pumps, pressure zones, transmission mains, and an emergency connection with Castaic Lake Water Agency (CLWA). The water system facilities were initially constructed between 1947 and 1952. Many of the system components are original construction and have reached the end of their service life.

Average annual water demand is approximately 2,160 acre feet per year, which equates to roughly 2.0 million gallons per day. This demand is primarily being met through the use of groundwater with an emergency connection to CLWA for the purchase of treated surface water in the event that groundwater supply is inadequate.

In June 2014, a Water System Master Plan Update was completed for PDC. The results showed that PDC's pipelines and certain reservoirs have exceeded their useful life estimates. Of the five (5) reservoirs, three (3) have exceeded their useful life estimates, one (1) has an estimated remaining life of 9 years and the remaining one (1) has 28 years. Well casings, well pumps, and booster pumps are in good operating condition with at least 17 years of remaining life.

Most of the supply side pipelines are original construction and over 60 years old; the cost to maintain this component of the water system will only increase. Based on discussions with **LASD** staff, the current cost of maintaining PDC's supply side pipelines is in excess of $2.0 million annually. Assuming this cost grows annually at 2.0% (estimated long-term rate of inflation) over the next 30 years, this amount totals $81.1 million. In present value terms, this equates to $41.3 million assuming a 4.50% discount rate. If the County were able to replace PDC's supply side pipelines today at a cost less than $41.3 million, it would generate long-term savings. As part of the pipeline improvements, the County also should consider making immediate minor improvements to further enhance the efficiency of PDC's water infrastructure. For example, some refurbishments to the well pumps could save an additional $16,000 per year in energy cost and the introduction of companion surge technologies could limit undetected leaks and provide substantially more near-term savings.

In addition to assessing the feasibility of water infrastructure improvements the County has an opportunity to assess the feasibility of artificial groundwater recharging by utilizing greywater. Such improvements could be made in conjunction with pipeline improvements. Currently, water is pumped from the aquifer, undergoes light treatment, and then is used onsite for various purposes. Wastewater is then pumped to the CLWA for treatment. By recharging the aquifer, the County may be able to alleviate some of the stress on PDC's main water supply while enhancing the long-term sustainability of PDC as a net–zero facility. The County should consider the feasibility and cost of on-site wastewater treatment, expanded use of greywater, and recharging the aquifer.

Power:
The main source of power at PDC is a 30 megawatt (MW), combined cycle gas turbine generator. The generator cogenerates both steam and electricity (CoGen). A portion of the electricity generated is used at PDC to serve the jail (5.5 MWp), while the bulk of the output is sold to Southern California Edison (SCE) through a Firm Power Purchase Agreement (PPA).

Upon expiration of the PPA in November of 2018, SCE is not required to renew the contract. The PPA is priced well in excess of market rates and as such, SCE will most likely terminate the purchases. Thereafter, continued operation of the CoGen plant will be costly due to low energy sale prices and application of cap-and-trade regulations. In 2015, an assessment of energy replacement options was undertaken. The 20-year net present value (NPV) of continuing operations is estimated to be $151.6 million. The report also identified alternative solutions; those alternatives are:

- Installation of fuel cells
- Installation of a smaller CoGen facility
- Migrating entirely to purchasing power through SCE.

This 2015 report followed a 2009 report that investigated the use of solar panels.

Based on the 2015 Report, the least costly option is to install a small CoGen unit. The 20-year NPV for this option is $87.4 million. This option is very close in cost to the fuel cell option which has a 20-year NPV of $87.8 million. As discussed previously, continuing operations as is, the "do nothing alternative", is estimated to be $151.6 million (net of surplus energy sales). Shutting down the unit completely and migrating to a full dependency on SCE would be $90.7 million. These last two options are the least attractive alternatives due to higher costs and uncertainty for control of future operations and maintenance (O&M) costs.

With the termination of the SCE PPA contract in 2018, it is critical for the County to select the appropriate resolution for replacement of the CoGen. The cost of installing solar has decreased by over 65% since the publication of the 2009 report and during the first quarter of 2016 industry costs for installation are down 12% year over year. Accordingly, this report strongly recommends the County should further investigate the feasibility of installing solar at PDC. At a minimum, the use of solar should be assessed in conjunction with installing a new small CoGen plant. This approach would complement existing mechanical infrastructure at PDC which is partly dependent on the production of steam.

Additional consideration also has been given to the use of solar with battery storage, as well as installing a digester for the production of biogas. This biogas would offset some of the future natural gas purchases at the site. Both options have been considered due to their ability to add incremental savings and provide supplemental, on-site power generation for peak periods.

The option of solar installation at the site could also complement other County objectives such as recent Board interest in the formation of a Community Choice Aggregation (CCA). By July 2017, the County is anticipating that a peak load of 900MW will be required to meet the energy demand of customers in unincorporated County areas. Depending on the results of an updated solar feasibility study, the installation of solar at PDC would provide a broader strategic role for these future County demands.

Land:
The project site area includes significant opportunities to better utilize County lands. Approximately 20% of the site area could potentially be repurposed to deliver two distinct benefits: (1) long-term revenue to the County and (2) O&M savings to **LASD**.

Production of renewable energy would include consideration of ground based solar. To advance this concept, **LASD** staff has entertained discussion of a 25MW solar farm. That scope would require approximately 125 acres. The panels could be installed within the security perimeter of PDC in the appropriate hillsides and flat lands behind the facilities. No discussions entertained rooftop panel installation on any facilities or any installation in the flat lands immediately east of the wash. This level of solar power production could generate significant O&M savings to **LASD**, serve as a source of renewable energy for other County facilities, and advance PDC toward a net-zero facility.

Immediately adjacent to the northbound lanes of Interstate 5 and west of the wash is a pad of land referred to locally as the "old sod farm". This area encompasses approximately 200 acres and is the basis for considerations of commercial development to be known as the Honor Ranch development site. Commercial development of Honor Ranch would be structured to provide the County with grounds rents from a private sector developer of new facilities on these County–owned lands. The improvements could also yield much needed infrastructure improvements to both PDC as well as the surrounding community.

Integration of Development Strategies

Honor Ranch – PDC is an important demonstration of the benefits the County derives from comprehensive strategic planning of County assets. The validation of integrating disparate yet complimentary development strategies throughout the County is showcased in this multi-benefit proposal. Synergies of revenue sources, savings and better utilization of assets assure delivery of Board priorities that include: small business development, workforce development, production and distribution of clean energy, expedient elimination of blight and opportunities for the private sector to accept risk in exchange for the certainty of timely project delivery.

Project Goals

- Integrate development of land, infrastructure and production of surplus renewable power into a single project to secure maximum economic benefit for both the County and **LASD**

- Recognize integrated development of land, infrastructure and surplus renewable power can resolve the deterioration of the water system and relieve the County and **LASD** of the impending higher cost and regulatory burdens of using the existing power supply
- Recognize the critical timeline to avoid diminishing water resources and impending regulatory penalties at PDC is addressed through the synergies for revenues, savings and expediency of project delivery
- Identify revenue to the County possibly in excess of $500,000 monthly
- Identify O&M savings for **LASD** at PDC in excess of $500,000 monthly
- Identify O&M savings are sufficient to debt service infrastructure enhancements at PDC in excess of $80,000,000
- Attract private investment in project area in excess of $250,000,000

Recommendations

Honor Ranch – PDC provides key opportunities for the County to realize new revenue streams, showcase net-zero sustainable development and produce significant renewable energy for broader benefit of the County. This will be accomplished at one of the largest County facilities and would align with current Board priorities for economic development and public safety.

To advance this project, the Commission will immediately pursue the following process:

- Engage more detailed analysis specific to the stated project goals
- Engage feasibility for geotechnical, commercial rental markets, energy markets and developer interest
- Engage more detailed integration for other potential sustainability options for the water systems including greywater retention, recharge etc.
- Identify the basis for project components upon which a scope of work can be drafted
- Apply funding from July 12 Board motion of $455,000 for Commission staff and necessary consultants
- Contract necessary consultants for feasibility and analysis by September 30, 2016
- Feasibility and scope of work for contract award to be completed within 150 days of contracting consultants

c: Each CDC Deputy
Sachi A. Hamai, Chief Executive Officer