



## Legislation Details (With Text)

<b>File #:</b>	19-0665	<b>Version:</b>	1	<b>Name:</b>	Power Factor Correction
<b>Type:</b>	Agenda Item	<b>Status:</b>		<b>Status:</b>	Approved
<b>File created:</b>	12/3/2019	<b>In control:</b>		<b>In control:</b>	Public Works
<b>On agenda:</b>	12/17/2019	<b>Final action:</b>		<b>Final action:</b>	12/17/2019
<b>Title:</b>	Consider and take action on a resolution authorizing an agreement with Hillhouse Power Solution, Inc. to provide and install power factor correction equipment in an amount not to exceed \$79,900 (Director of Public Works)				

### Sponsors:

### Indexes:

### Code sections:

**Attachments:** 1. Data Sheet, 2. Proposed Resolution, 3. Exhibit A - Agreement with Hillhouse Power Solutions Inc., 4. Power Factor Description

Date	Ver.	Action By	Action	Result
12/17/2019	1	City Council	Approved	Pass

Consider and take action on a resolution authorizing an agreement with Hillhouse Power Solution, Inc. to provide and install power factor correction equipment in an amount not to exceed \$79,900 (Director of Public Works)

Approval of this resolution will authorize an agreement with Hillhouse Power Solutions, Inc. to install power factor correction equipment in an amount not to exceed \$79,900. The turn-key project includes the installation of four (4) power factor correction systems at the following locations: 555 W. Walker (Public Safety Building), 701 N. Wisconsin Ave and 904 Satsuma (Dallas Salmon Wastewater Treatment Plant), and 4200 Grissom Rd (North Service Area Booster Pump Station). This service was performed as a turn-key engineering level study with installation of applicable power factor correction equipment. The engineering study was performed in late 2018 and funding for the follow-up hardware and installation was addressed during the FY2020 budget development process. The purchase of the power factor equipment will be procured through The Interlocal Purchasing System (TIPS), Contract No. 170905. Hillhouse Power Solutions, Inc. confirmed that no cost mark-up will be applied to any hardware purchases.

A preliminary engineering study was performed and identified the strategies and equipment to correct the power factor at the aforementioned locations, along with projected cost, savings, and payback. Power Factor charges were utilized and calculated on recent 12-months of power usage from November 2018 to October 2019. The project will result in a simple payback of 70 months.

To eliminate the monthly power factor charge, the Power Factor that is recorded for each electric meter during the 15-minute period of maximum demand each month should be elevated to above 95 percent for the three (3) locations served by Texas New Mexico Power Company. For the location served by Centerpoint, the Power Factor would be elevated to near 100 percent. This will require that a capacitor system be installed downstream of each of the utility billing meters. The capacitor would supply reactive power, and if power usage remains consistent to historical usage, then the new equipment will maintain power factor above 95 percent. A layman's term analogy is provided on page 2 of the attached power factor description. Itemized component detail is available in Exhibit A.

### Attachments:

1. Data Sheet
2. Proposed Resolution
3. Exhibit A - Agreement with Hillhouse Power Solutions, Inc.

#### 4. Power Factor Description

##### FUNDING

{X} Funds in the amount of \$79,900 will be split between Water Production and Wastewater Departments Account #52620 Utility System & Repair; and Police Department Account #52400 Equipment Repair & Maintenance. The split will consist of \$18,672 from Water Production (10207300-52620), \$42,009 from Wastewater (10207500-52620) and \$19,219 from Police Department (2100000-52400).

##### STRATEGIC PLANNING

{X} Develop and Maintain Infrastructure